

FreeWRL / FreeX3D

4.3.0

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Chapter 1

cson JSON API

cson (pronounced "season") is an object-oriented C API for generating and consuming JSON (<http://www.json.org>) data.

Its main claim to fame is that it can parse JSON from, and output it to, damned near anywhere. The i/o routines use a callback function to fetch/emit JSON data, allowing clients to easily plug in their own implementations. Implementations are provided for string- and FILE-based i/o.

Project home page: <http://fossil.wanderinghorse.net/repos/cson>

Author: Stephan Beal (<http://www.wanderinghorse.net/home/stephan/>)

License: Dual Public Domain/MIT

The full license text is at the bottom of the main header file (cson.h).

Examples of how to use the library are scattered throughout the API documentation, in the test.c file in the source repo, and in the wiki on the project's home page.

Chapter 2

Hierarchical Index

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Chapter 4

Data Structure Documentation

4.1 `_AnyNative` Struct Reference

Data Fields

- `int type`
- `int gc`
- `int * valueChanged`
- `union anyVrml * v`

4.1.1 Detailed Description

Definition at line 45 of file `jsNative.h`.

The documentation for this struct was generated from the following file:

- `src/lib/world_script/jsNative.h`

4.2 `_Atlas` Struct Reference

Data Fields

- `char * name`
- `int type`
- `unsigned char * texture`
- `int bytesperpixel`
- `ivec2 size`
- `int rowheight`
- `ivec2 pen`

4.2.1 Detailed Description

Definition at line 2264 of file Component_Text.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component_Text.c

4.3 _AtlasEntry Struct Reference

Data Fields

- char * **name**
- int **type**
- ivec2 **apos**
- ivec2 **size**
- int **ichar**
- ivec2 **pos**
- ivec2 **advance**

4.3.1 Detailed Description

Definition at line 2243 of file Component_Text.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component_Text.c

4.4 _AtlasFont Struct Reference

Data Fields

- char * **name**
- int **type**
- char * **path**
- FT_Face **fontFace**
- int **EMsize**
- **AtlasEntrySet** * **set**

4.4.1 Detailed Description

Definition at line 2287 of file Component_Text.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component_Text.c

4.5 `_BrowserNative` Struct Reference

Data Fields

- `int dummyEntry`

4.5.1 Detailed Description

Definition at line 39 of file `jsNative.h`.

The documentation for this struct was generated from the following file:

- `src/lib/world_script/jsNative.h`

4.6 `_BUTitem` Struct Reference

Data Fields

- `unsigned char * B`
- `BUTitem * prev`
- `BUTitem * next`

4.6.1 Detailed Description

Definition at line 816 of file `MainLoop.c`.

The documentation for this struct was generated from the following file:

- `src/lib/main/MainLoop.c`

4.7 `_cd_list_t` Struct Reference

Data Fields

- `void * elem`
- `struct _cd_list_t * next`
- `struct _cd_list_t * prev`

4.7.1 Detailed Description

Definition at line 85 of file `list.h`.

The documentation for this struct was generated from the following file:

- `src/lib/list.h`

4.8 `_contenttype` Struct Reference

Data Fields

- `tcontenttype t1`

4.8.1 Detailed Description

Definition at line 458 of file `MainLoop.c`.

The documentation for this struct was generated from the following file:

- `src/lib/main/MainLoop.c`

4.9 `_CRnodeStruct` Struct Reference

Data Fields

- struct `X3D_Node` * `routeToNode`
- int `foffset`

4.9.1 Detailed Description

Definition at line 38 of file `CRoutes.h`.

The documentation for this struct was generated from the following file:

- `src/lib/vrml_parser/CRoutes.h`

4.10 `_FW_PluginInstance` Struct Reference

Data Fields

- int `interfaceFile` [2]
- Display * `display`
- int32 `x`
- int32 `y`
- uint32 `width`
- uint32 `height`
- Window `mozwindow`
- Window `fwwindow`
- pid_t `childPID`
- char * `fName`
- int `freewrl_running`
- int `interfacePipe` [2]
- char * `cacheFileName`
- int `cacheFileNameLen`
- FILE * `logFile`
- char * `logFileName`

4.10.1 Detailed Description

Definition at line 96 of file `plugin_main.c`.

The documentation for this struct was generated from the following file:

- `src/plugin/plugin_main.c`

4.11 `_geosys` Struct Reference

Data Fields

- int `spatial_system`
- int `ellipsoid`
- int `xm_zone`
- int `xm_northing_first`
- int `utm_northern_hemisphere`
- int `gd_latitude_first`
- int `geoid_height`
- int `gd_degrees`
- int `relativeHeight`

4.11.1 Detailed Description

Definition at line 301 of file `Component_Geospatial.c`.

The documentation for this struct was generated from the following file:

- `src/lib/scenegraph/Component_Geospatial.c`

4.12 `_GLwDrawingAreaClassPart` Struct Reference

Data Fields

- `caddr_t` `extension`

4.12.1 Detailed Description

Definition at line 49 of file `GLwDrawAP.h`.

The documentation for this struct was generated from the following file:

- `src/lib/ui/GLwDrawAP.h`

4.13 **_GLwDrawingAreaClassRec Struct Reference**

Data Fields

- CoreClassPart **core_class**
- **GLwDrawingAreaClassPart** glwDrawingArea_class

4.13.1 Detailed Description

Definition at line 68 of file GLwDrawAP.h.

The documentation for this struct was generated from the following file:

- src/lib/ui/GLwDrawAP.h

4.14 **_GLwDrawingAreaRec Struct Reference**

Data Fields

- CorePart **core**
- **GLwDrawingAreaPart** glwDrawingArea

4.14.1 Detailed Description

Definition at line 123 of file GLwDrawAP.h.

The documentation for this struct was generated from the following file:

- src/lib/ui/GLwDrawAP.h

4.15 **_GUIElement Struct Reference**

Data Fields

- char * **name**
- GUIElementType **type**
- void * **userData**

4.15.1 Detailed Description

Definition at line 2301 of file Component_Text.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component_Text.c

4.16 `_intX3D_MFBool` Struct Reference

Data Fields

- `int type`
- `int n`
- `_intX3D_SFBool * p`

4.16.1 Detailed Description

Definition at line 81 of file `X3DNode.h`.

The documentation for this struct was generated from the following file:

- `src/libeai/X3DNode.h`

4.17 `_intX3D_MFColor` Struct Reference

Data Fields

- `int type`
- `int n`
- `_intX3D_SFColor * p`

4.17.1 Detailed Description

Definition at line 72 of file `X3DNode.h`.

The documentation for this struct was generated from the following file:

- `src/libeai/X3DNode.h`

4.18 `_intX3D_MFColorRGBA` Struct Reference

Data Fields

- `int type`
- `int n`
- `_intX3D_SFColorRGBA * p`

4.18.1 Detailed Description

Definition at line 73 of file `X3DNode.h`.

The documentation for this struct was generated from the following file:

- `src/libeai/X3DNode.h`

4.19 `_intX3D_MFFloat` Struct Reference

Data Fields

- `int type`
- `int n`
- `_intX3D_SFFloat * p`

4.19.1 Detailed Description

Definition at line 74 of file `X3DNode.h`.

The documentation for this struct was generated from the following file:

- `src/libeai/X3DNode.h`

4.20 `_intX3D_MFImage` Struct Reference

Data Fields

- `int type`
- `int n`
- `_intX3D_SFImage * p`

4.20.1 Detailed Description

Definition at line 85 of file `X3DNode.h`.

The documentation for this struct was generated from the following file:

- `src/libeai/X3DNode.h`

4.21 `_intX3D_MFInt32` Struct Reference

Data Fields

- `int type`
- `int n`
- `_intX3D_SFInt32 * p`

4.21.1 Detailed Description

Definition at line 82 of file `X3DNode.h`.

The documentation for this struct was generated from the following file:

- `src/libeai/X3DNode.h`

4.22 _intX3D_MFNode Struct Reference

Data Fields

- int **type**
- int **n**
- _intX3D_SFNode * **p**

4.22.1 Detailed Description

Definition at line 83 of file X3DNode.h.

The documentation for this struct was generated from the following file:

- src/libeai/X3DNode.h

4.23 _intX3D_MFRotation Struct Reference

Data Fields

- int **type**
- int **n**
- _intX3D_SFRotation * **p**

4.23.1 Detailed Description

Definition at line 76 of file X3DNode.h.

The documentation for this struct was generated from the following file:

- src/libeai/X3DNode.h

4.24 _intX3D_MFString Struct Reference

Data Fields

- int **type**
- int **n**
- _intX3D_SFString * **p**

4.24.1 Detailed Description

Definition at line 84 of file X3DNode.h.

The documentation for this struct was generated from the following file:

- src/libeai/X3DNode.h

4.25 `_intX3D_MFTime` Struct Reference

Data Fields

- `int type`
- `int n`
- `_intX3D_SFTime * p`

4.25.1 Detailed Description

Definition at line 75 of file X3DNode.h.

The documentation for this struct was generated from the following file:

- `src/libeai/X3DNode.h`

4.26 `_intX3D_MFVec2d` Struct Reference

Data Fields

- `int type`
- `int n`
- `_intX3D_SFVec2d * p`

4.26.1 Detailed Description

Definition at line 78 of file X3DNode.h.

The documentation for this struct was generated from the following file:

- `src/libeai/X3DNode.h`

4.27 `_intX3D_MFVec2f` Struct Reference

Data Fields

- `int type`
- `int n`
- `_intX3D_SFVec2f * p`

4.27.1 Detailed Description

Definition at line 80 of file X3DNode.h.

The documentation for this struct was generated from the following file:

- `src/libeai/X3DNode.h`

4.28 `_intX3D_MFVec3d` Struct Reference

Data Fields

- `int type`
- `int n`
- `_intX3D_SFVec3d * p`

4.28.1 Detailed Description

Definition at line 77 of file `X3DNode.h`.

The documentation for this struct was generated from the following file:

- `src/libeai/X3DNode.h`

4.29 `_intX3D_MFVec3f` Struct Reference

Data Fields

- `int type`
- `int n`
- `_intX3D_SFVec3f * p`

4.29.1 Detailed Description

Definition at line 79 of file `X3DNode.h`.

The documentation for this struct was generated from the following file:

- `src/libeai/X3DNode.h`

4.30 `_intX3D_SFBool` Struct Reference

Data Fields

- `int type`
- `int value`

4.30.1 Detailed Description

Definition at line 57 of file `X3DNode.h`.

The documentation for this struct was generated from the following file:

- `src/libeai/X3DNode.h`

4.31 `_intX3D_SFColor` Struct Reference

Data Fields

- int **type**
- float **c** [3]

4.31.1 Detailed Description

Definition at line 65 of file X3DNode.h.

The documentation for this struct was generated from the following file:

- src/libeai/X3DNode.h

4.32 `_intX3D_SFColorRGBA` Struct Reference

Data Fields

- int **type**
- float **r** [4]

4.32.1 Detailed Description

Definition at line 68 of file X3DNode.h.

The documentation for this struct was generated from the following file:

- src/libeai/X3DNode.h

4.33 `_intX3D_SFFloat` Struct Reference

Data Fields

- int **type**
- float **value**

4.33.1 Detailed Description

Definition at line 58 of file X3DNode.h.

The documentation for this struct was generated from the following file:

- src/libeai/X3DNode.h

4.34 _intX3D_SFImage Struct Reference

Data Fields

- int **type**
- int **len**
- char * **strptr**

4.34.1 Detailed Description

Definition at line 70 of file X3DNode.h.

The documentation for this struct was generated from the following file:

- src/libeai/X3DNode.h

4.35 _intX3D_SFInt32 Struct Reference

Data Fields

- int **type**
- int **value**

4.35.1 Detailed Description

Definition at line 60 of file X3DNode.h.

The documentation for this struct was generated from the following file:

- src/libeai/X3DNode.h

4.36 _intX3D_SFNode Struct Reference

Data Fields

- int **type**
- int **adr**

4.36.1 Detailed Description

Definition at line 61 of file X3DNode.h.

The documentation for this struct was generated from the following file:

- src/libeai/X3DNode.h

4.37 `_intX3D_SFRotation` Struct Reference

Data Fields

- `int type`
- `float r [4]`

4.37.1 Detailed Description

Definition at line 62 of file X3DNode.h.

The documentation for this struct was generated from the following file:

- `src/libeai/X3DNode.h`

4.38 `_intX3D_SFString` Struct Reference

Data Fields

- `int type`
- `int len`
- `char * strptr`

4.38.1 Detailed Description

Definition at line 69 of file X3DNode.h.

The documentation for this struct was generated from the following file:

- `src/libeai/X3DNode.h`

4.39 `_intX3D_SFTime` Struct Reference

Data Fields

- `int type`
- `double value`

4.39.1 Detailed Description

Definition at line 59 of file X3DNode.h.

The documentation for this struct was generated from the following file:

- `src/libeai/X3DNode.h`

4.40 `_intX3D_SFVec2d` Struct Reference

Data Fields

- `int type`
- `double c` [2]

4.40.1 Detailed Description

Definition at line 64 of file `X3DNode.h`.

The documentation for this struct was generated from the following file:

- `src/libeai/X3DNode.h`

4.41 `_intX3D_SFVec2f` Struct Reference

Data Fields

- `int type`
- `float c` [2]

4.41.1 Detailed Description

Definition at line 63 of file `X3DNode.h`.

The documentation for this struct was generated from the following file:

- `src/libeai/X3DNode.h`

4.42 `_intX3D_SFVec3d` Struct Reference

Data Fields

- `int type`
- `double c` [3]

4.42.1 Detailed Description

Definition at line 67 of file `X3DNode.h`.

The documentation for this struct was generated from the following file:

- `src/libeai/X3DNode.h`

4.43 `_intX3D_SFVec3f` Struct Reference

Data Fields

- `int type`
- `float c [3]`

4.43.1 Detailed Description

Definition at line 66 of file `X3DNode.h`.

The documentation for this struct was generated from the following file:

- `src/libeai/X3DNode.h`

4.44 `_intX3DEventIn` Struct Reference

Data Fields

- `int nodeptr`
- `int offset`
- `int datatype`
- `int datasize`
- `int scripttype`
- `char * field`

4.44.1 Detailed Description

Definition at line 133 of file `X3DNode.h`.

The documentation for this struct was generated from the following file:

- `src/libeai/X3DNode.h`

4.45 `_NPByteRange` Struct Reference

Data Fields

- `int32_t offset`
- `uint32_t length`
- `struct _NPByteRange * next`

4.45.1 Detailed Description

Definition at line 176 of file npapi.h.

The documentation for this struct was generated from the following file:

- src/plugin_win32/include/npapi.h

4.46 **_NPEmbedPrint Struct Reference**

Data Fields

- **NPWindow window**
- void * **platformPrint**

4.46.1 Detailed Description

Definition at line 441 of file npapi.h.

The documentation for this struct was generated from the following file:

- src/plugin_win32/include/npapi.h

4.47 **_NPFullPrint Struct Reference**

Data Fields

- NPBool **pluginPrinted**
- NPBool **printOne**
- void * **platformPrint**

4.47.1 Detailed Description

Definition at line 433 of file npapi.h.

The documentation for this struct was generated from the following file:

- src/plugin_win32/include/npapi.h

4.48 **_NPImageExpose** Struct Reference

Data Fields

- char * **data**
- int32_t **stride**
- int32_t **depth**
- int32_t **x**
- int32_t **y**
- uint32_t **width**
- uint32_t **height**
- **NPSize** **dataSize**
- float **translateX**
- float **translateY**
- float **scaleX**
- float **scaleY**

4.48.1 Detailed Description

Definition at line 417 of file npapi.h.

The documentation for this struct was generated from the following file:

- src/plugin_win32/include/npapi.h

4.49 **_NPNetscapeFuncs** Struct Reference

Data Fields

- uint16_t **size**
- uint16_t **version**
- NPN_GetURLProcPtr **geturl**
- NPN_PostURLProcPtr **posturl**
- NPN_RequestReadProcPtr **requestread**
- NPN_NewStreamProcPtr **newstream**
- NPN_WriteProcPtr **write**
- NPN_DestroyStreamProcPtr **destroystream**
- NPN_StatusProcPtr **status**
- NPN_UserAgentProcPtr **uagent**
- NPN_MemAllocProcPtr **memalloc**
- NPN_MemFreeProcPtr **memfree**
- NPN_MemFlushProcPtr **memflush**
- NPN_ReloadPluginsProcPtr **reloadplugins**
- NPN_GetJavaEnvProcPtr **getJavaEnv**
- NPN_GetJavaPeerProcPtr **getJavaPeer**
- NPN_GetURLNotifyProcPtr **geturlnotify**
- NPN_PostURLNotifyProcPtr **posturlnotify**
- NPN_GetValueProcPtr **getvalue**
- NPN_SetValueProcPtr **setvalue**
- NPN_InvalidateRectProcPtr **invalidaterect**

- NPN_InvalidateRegionProcPtr **invalidateregion**
- NPN_ForceRedrawProcPtr **forcedredraw**
- NPN_GetStringIdentifierProcPtr **getstringidentifier**
- NPN_GetStringIdentifiersProcPtr **getstringidentifiers**
- NPN_GetIntIdentifierProcPtr **getintidentifier**
- NPN_IdentifierIsStringProcPtr **identifierisstring**
- NPN_UTF8FromIdentifierProcPtr **utf8fromidentifier**
- NPN_IntFromIdentifierProcPtr **intfromidentifier**
- NPN_CreateObjectProcPtr **createobject**
- NPN_RetainObjectProcPtr **retainobject**
- NPN_ReleaseObjectProcPtr **releaseobject**
- NPN_InvokeProcPtr **invoke**
- NPN_InvokeDefaultProcPtr **invokeDefault**
- NPN_EvaluateProcPtr **evaluate**
- NPN_GetPropertyProcPtr **getproperty**
- NPN_SetPropertyProcPtr **setproperty**
- NPN_RemovePropertyProcPtr **removeproperty**
- NPN_HasPropertyProcPtr **hasproperty**
- NPN_HasMethodProcPtr **hasmethod**
- NPN_ReleaseVariantValueProcPtr **releasevariantvalue**
- NPN_SetExceptionProcPtr **setexception**
- NPN_PushPopupsEnabledStateProcPtr **pushpopupsenabledstate**
- NPN_PopPopupsEnabledStateProcPtr **poppopupsenabledstate**
- NPN_EnumerateProcPtr **enumerate**
- NPN_PluginThreadAsyncCallProcPtr **pluginthreadasynccall**
- NPN_ConstructProcPtr **construct**
- NPN_GetValueForURLPtr **getvalueforurl**
- NPN_SetValueForURLPtr **setvalueforurl**
- NPN_GetAuthenticationInfoPtr **getauthenticationinfo**

4.49.1 Detailed Description

Definition at line 139 of file npfunctions.h.

The documentation for this struct was generated from the following file:

- src/plugin_win32/include/npfunctions.h

4.50 **_NPP Struct Reference**

Data Fields

- void * **pdata**
- void * **ndata**

4.50.1 Detailed Description

Definition at line 148 of file npapi.h.

The documentation for this struct was generated from the following file:

- src/plugin_win32/include/npapi.h

4.51 `_NPPPluginFuncs` Struct Reference

Data Fields

- `uint16_t` **size**
- `uint16_t` **version**
- `NPP_NewProcPtr` **newp**
- `NPP_DestroyProcPtr` **destroy**
- `NPP_SetWindowProcPtr` **setwindow**
- `NPP_NewStreamProcPtr` **newstream**
- `NPP_DestroyStreamProcPtr` **destroystream**
- `NPP_StreamAsFileProcPtr` **asfile**
- `NPP_WriteReadyProcPtr` **writeready**
- `NPP_WriteProcPtr` **write**
- `NPP_PrintProcPtr` **print**
- `NPP_HandleEventProcPtr` **event**
- `NPP_URLNotifyProcPtr` **urlnotify**
- `void *` **javaClass**
- `NPP_GetValueProcPtr` **getvalue**
- `NPP_SetValueProcPtr` **setvalue**

4.51.1 Detailed Description

Definition at line 120 of file `npfunctions.h`.

The documentation for this struct was generated from the following file:

- `src/plugin_win32/include/npfunctions.h`

4.52 `_NPPrint` Struct Reference

Data Fields

- `uint16_t` **mode**
- - union {
 - `NPFullPrint` **fullPrint**
 - `NPEmbedPrint` **embedPrint**
 - } **print**

4.52.1 Detailed Description

Definition at line 447 of file `npapi.h`.

The documentation for this struct was generated from the following file:

- `src/plugin_win32/include/npapi.h`

4.53 **_NRect Struct Reference**

Data Fields

- uint16_t **top**
- uint16_t **left**
- uint16_t **bottom**
- uint16_t **right**

4.53.1 Detailed Description

Definition at line 189 of file npapi.h.

The documentation for this struct was generated from the following file:

- src/plugin_win32/include/npapi.h

4.54 **_NPSavedData Struct Reference**

Data Fields

- int32_t **len**
- void * **buf**

4.54.1 Detailed Description

Definition at line 183 of file npapi.h.

The documentation for this struct was generated from the following file:

- src/plugin_win32/include/npapi.h

4.55 **_NPSize Struct Reference**

Data Fields

- int32_t **width**
- int32_t **height**

4.55.1 Detailed Description

Definition at line 197 of file npapi.h.

The documentation for this struct was generated from the following file:

- src/plugin_win32/include/npapi.h

4.56 `_NPStream` Struct Reference

Data Fields

- void * **pdata**
- void * **ndata**
- const char * **url**
- uint32_t **end**
- uint32_t **lastmodified**
- void * **notifyData**
- const char * **headers**

4.56.1 Detailed Description

Definition at line 156 of file npapi.h.

The documentation for this struct was generated from the following file:

- src/plugin_win32/include/npapi.h

4.57 `_NPString` Struct Reference

Data Fields

- const NPUTF8 * **UTF8Characters**
- uint32_t **UTF8Length**

4.57.1 Detailed Description

Definition at line 117 of file npruntime.h.

The documentation for this struct was generated from the following file:

- src/plugin_win32/include/npruntime.h

4.58 `_NPVariant` Struct Reference

Data Fields

- NPVariantType **type**
- union {
 bool **boolValue**
 int32_t **intValue**
 double **doubleValue**
 NPString **stringValue**
 NPObject * **objectValue**
} **value**

4.58.1 Detailed Description

Definition at line 132 of file npruntime.h.

The documentation for this struct was generated from the following file:

- src/plugin_win32/include/npruntime.h

4.59 _NPWindow Struct Reference

Data Fields

- void * **window**
- int32_t **x**
- int32_t **y**
- uint32_t **width**
- uint32_t **height**
- **NPRect clipRect**
- NPWindowType **type**

4.59.1 Detailed Description

Definition at line 400 of file npapi.h.

The documentation for this struct was generated from the following file:

- src/plugin_win32/include/npapi.h

4.60 _s_list_t Struct Reference

Data Fields

- void * **elem**
- struct _s_list_t * **next**

4.60.1 Detailed Description

Definition at line 37 of file list.h.

The documentation for this struct was generated from the following file:

- src/lib/list.h

4.61 freeWRLSAI_cpp::_SAIParameter Class Reference

Data Fields

- void * **interactor**

4.61.1 Detailed Description

Definition at line 31 of file SAIGlobals.h.

The documentation for this class was generated from the following file:

- src/SAI_Cpp/SAIGlobals.h

4.62 _SFColorNative Struct Reference

Data Fields

- int **valueChanged**
- struct **SFColor** **v**

4.62.1 Detailed Description

Definition at line 83 of file jsNative.h.

The documentation for this struct was generated from the following file:

- src/lib/world_script/jsNative.h

4.63 _SFColorRGBANative Struct Reference

Data Fields

- int **valueChanged**
- struct **SFColorRGBA** **v**

4.63.1 Detailed Description

Definition at line 88 of file jsNative.h.

The documentation for this struct was generated from the following file:

- src/lib/world_script/jsNative.h

4.64 _SfImageNative Struct Reference

Data Fields

- int **valueChanged**

4.64.1 Detailed Description

Definition at line 79 of file jsNative.h.

The documentation for this struct was generated from the following file:

- src/lib/world_script/jsNative.h

4.65 _SfNodeNative Struct Reference

Data Fields

- int **valueChanged**
- struct **X3D_Node** * **handle**
- char * **X3DString**
- int **fieldsExpanded**

4.65.1 Detailed Description

Definition at line 52 of file jsNative.h.

The documentation for this struct was generated from the following file:

- src/lib/world_script/jsNative.h

4.66 _SfRotationNative Struct Reference

Data Fields

- int **valueChanged**
- struct **SfRotation** v

4.66.1 Detailed Description

Definition at line 59 of file jsNative.h.

The documentation for this struct was generated from the following file:

- src/lib/world_script/jsNative.h

4.67 **_SFVec2fNative Struct Reference**

Data Fields

- int **valueChanged**
- struct **SFVec2f v**

4.67.1 Detailed Description

Definition at line 64 of file jsNative.h.

The documentation for this struct was generated from the following file:

- src/lib/world_script/jsNative.h

4.68 **_SFVec3dNative Struct Reference**

Data Fields

- int **valueChanged**
- struct **SFVec3d v**

4.68.1 Detailed Description

Definition at line 74 of file jsNative.h.

The documentation for this struct was generated from the following file:

- src/lib/world_script/jsNative.h

4.69 **_SFVec3fNative Struct Reference**

Data Fields

- int **valueChanged**
- struct **SFColor v**

4.69.1 Detailed Description

Definition at line 69 of file jsNative.h.

The documentation for this struct was generated from the following file:

- src/lib/world_script/jsNative.h

4.70 `_SFVec4dNative` Struct Reference

Data Fields

- int **valueChanged**
- struct **SFVec4d** **v**

4.70.1 Detailed Description

Definition at line 98 of file `jsNative.h`.

The documentation for this struct was generated from the following file:

- `src/lib/world_script/jsNative.h`

4.71 `_SFVec4fNative` Struct Reference

Data Fields

- int **valueChanged**
- struct **SFVec4f** **v**

4.71.1 Detailed Description

Definition at line 93 of file `jsNative.h`.

The documentation for this struct was generated from the following file:

- `src/lib/world_script/jsNative.h`

4.72 `_urlRequest` Struct Reference

Data Fields

- char **url** [FILENAME_MAX]
- void * **instance**
- unsigned int **notifyCode**

4.72.1 Detailed Description

Definition at line 57 of file `pluginUtils.h`.

The documentation for this struct was generated from the following files:

- `src/lib/plugin/pluginUtils.h`
- `src/plugin/plugin_utils.h`

4.73 `_X3DNode` Union Reference

Data Fields

- `int type`
- `_intX3D_MFBool X3D_MFBool`
- `_intX3D_SFBool X3D_SFBool`
- `_intX3D_SFFloat X3D_SFFloat`
- `_intX3D_SFTime X3D_SFTime`
- `_intX3D_SFInt32 X3D_SFInt32`
- `_intX3D_MFColor X3D_MFColor`
- `_intX3D_MFColorRGBA X3D_MFColorRGBA`
- `_intX3D_SFString X3D_SFString`
- `_intX3D_SFNode X3D_SFNode`
- `_intX3D_SFRotation X3D_SFRotation`
- `_intX3D_SFVec2f X3D_SFVec2f`
- `_intX3D_SFVec2d X3D_SFVec2d`
- `_intX3D_SFColor X3D_SFColor`
- `_intX3D_SFColor X3D_SFVec3f`
- `_intX3D_SFVec3d X3D_SFVec3d`
- `_intX3D_SFColorRGBA X3D_SFColorRGBA`
- `_intX3D_MFFloat X3D_MFFloat`
- `_intX3D_MFTime X3D_MFTime`
- `_intX3D_MFInt32 X3D_MFInt32`
- `_intX3D_MFString X3D_MFString`
- `_intX3D_MFNode X3D_MFNode`
- `_intX3D_MFRotation X3D_MFRotation`
- `_intX3D_MFVec2f X3D_MFVec2f`
- `_intX3D_MFVec3f X3D_MFVec3f`
- `_intX3D_MFImage X3D_MFImage`
- `_intX3D_MFVec3d X3D_MFVec3d`

4.73.1 Detailed Description

Definition at line 87 of file `X3DNode.h`.

The documentation for this union was generated from the following file:

- `src/libeai/X3DNode.h`

4.74 `AcknowledgePdu` Struct Reference

Data Fields

- struct **SimulationManagementFamilyPdu** `mySimulationManagementFamilyPdu`
- unsigned short **acknowledgeFlag**
type of message being acknowledged
- unsigned short **responseFlag**
Whether or not the receiving entity was able to comply with the request.
- unsigned int **requestID**
Request ID that is unique.

4.74.1 Detailed Description

Definition at line 1044 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.75 AcknowledgeReliablePdu Struct Reference

Data Fields

- struct **SimulationManagementWithReliabilityFamilyPdu** **mySimulationManagementWithReliability**↔
FamilyPdu
- unsigned short **acknowledgeFlag**
ack flags
- unsigned short **responseFlag**
response flags
- unsigned int **requestID**
Request ID.

4.75.1 Detailed Description

Definition at line 1502 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.76 AcousticBeamData Struct Reference

Data Fields

- unsigned short **beamDataLength**
beam data length
- unsigned char **beamIDNumber**
beamIDNumber
- unsigned short **pad2**
padding
- struct **AcousticBeamFundamentalParameter** **fundamentalDataParameters**
fundamental data parameters

4.76.1 Detailed Description

Definition at line 885 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.77 AcousticBeamFundamentalParameter Struct Reference

Data Fields

- unsigned short **activeEmissionParameterIndex**
parameter index
- unsigned short **scanPattern**
scan pattern
- float **beamCenterAzimuth**
beam center azimuth
- float **azimuthalBeamwidth**
azimuthal beamwidth
- float **beamCenterDE**
beam center
- float **deBeamwidth**
DE beamwidth (vertical beamwidth)

4.77.1 Detailed Description

Definition at line 462 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.78 AcousticEmitter Struct Reference

Data Fields

- unsigned short **acousticName**
the system for a particular UA emitter, and an enumeration
- unsigned char **function**
The function of the acoustic system.
- unsigned char **acousticIdNumber**
The UA emitter identification number relative to a specific system.

4.78.1 Detailed Description

Definition at line 543 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.79 AcousticEmitterSystem Struct Reference

Data Fields

- unsigned short **acousticName**
This field shall specify the system for a particular UA emitter.
- unsigned char **acousticFunction**
This field shall describe the function of the acoustic system.
- unsigned char **acousticID**
This field shall specify the UA emitter identification number relative to a specific system.

4.79.1 Detailed Description

Definition at line 193 of file DIS.h.

4.79.2 Field Documentation

4.79.2.1 acousticFunction

```
unsigned char AcousticEmitterSystem::acousticFunction
```

This field shall describe the function of the acoustic system.

Definition at line 197 of file DIS.h.

4.79.2.2 acousticID

```
unsigned char AcousticEmitterSystem::acousticID
```

This field shall specify the UA emitter identification number relative to a specific system.

This field shall be represented by an 8-bit unsigned integer. This field allows the differentiation of multiple systems on an entity, even if in some instances two or more of the systems may be identical UA emitter types. Numbering of systems shall begin with the value 1.

Definition at line 199 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.80 AcousticEmitterSystemData Struct Reference

Data Fields

- unsigned char **emitterSystemDataLength**
Length of emitter system data.
- unsigned char **numberOfBeams**
Number of beams.
- unsigned short **pad2**
padding
- struct **AcousticEmitterSystem** **acousticEmitterSystem**
This field shall specify the system for a particular UA emitter.
- struct **Vector3Float** **emitterLocation**
Represents the location wrt the entity.
- void * **beamRecords**
For each beam in numberOfBeams, an emitter system.

4.80.1 Detailed Description

Definition at line 767 of file DIS.h.

4.80.2 Field Documentation

4.80.2.1 beamRecords

```
void* AcousticEmitterSystemData::beamRecords
```

For each beam in numberOfBeams, an emitter system.

This is not right—the beam records need to be at the end of the PDU, rather than attached to each system.

Definition at line 779 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.81 ActionRequestPdu Struct Reference

Data Fields

- struct **SimulationManagementFamilyPdu** mySimulationManagementFamilyPdu
- unsigned int **requestID**
Request ID that is unique.
- unsigned int **actionID**
identifies the action being requested
- unsigned int **numberOfFixedDatumRecords**
Number of fixed datum records.
- unsigned int **numberOfVariableDatumRecords**
Number of variable datum records.
- void * **fixedDatums**
variable length list of fixed datums
- void * **variableDatums**
variable length list of variable length datums

4.81.1 Detailed Description

Definition at line 1019 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.82 ActionRequestReliablePdu Struct Reference

Data Fields

- struct **SimulationManagementWithReliabilityFamilyPdu** **mySimulationManagementWithReliabilityFamilyPdu**
- unsigned char **requiredReliabilityService**
level of reliability service used for this transaction
- unsigned short **pad1**
padding
- unsigned char **pad2**
padding
- unsigned int **requestID**
request ID
- unsigned int **actionID**
request ID
- unsigned int **numberOfFixedDatumRecords**
Fixed datum record count.
- unsigned int **numberOfVariableDatumRecords**
variable datum record count
- void * **fixedDatumRecords**
Fixed datum records.
- void * **variableDatumRecords**
Variable datum records.

4.82.1 Detailed Description

Definition at line 1086 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.83 ActionResponsePdu Struct Reference

Data Fields

- struct **SimulationManagementFamilyPdu** **mySimulationManagementFamilyPdu**
- unsigned int **requestID**
Request ID that is unique.
- unsigned int **requestStatus**
Status of response.
- unsigned int **numberOfFixedDatumRecords**
Number of fixed datum records.
- unsigned int **numberOfVariableDatumRecords**
Number of variable datum records.
- void * **fixedDatums**
variable length list of fixed datums
- void * **variableDatums**
variable length list of variable length datums

4.83.1 Detailed Description

Definition at line 1819 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.84 ActionResponseReliablePdu Struct Reference

Data Fields

- struct **SimulationManagementWithReliabilityFamilyPdu** mySimulationManagementWithReliability↔
FamilyPdu
- unsigned int **requestID**
request ID
- unsigned int **responseStatus**
status of response
- unsigned int **numberOfFixedDatumRecords**
Fixed datum record count.
- unsigned int **numberOfVariableDatumRecords**
variable datum record count
- void * **fixedDatumRecords**
Fixed datum records.
- void * **variableDatumRecords**
Variable datum records.

4.84.1 Detailed Description

Definition at line 2074 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.85 ActiveRegion Struct Reference

Data Fields

- GLUhalfEdge * **eUp**
- DictNode * **nodeUp**
- int **windingNumber**
- GLboolean **inside**
- GLboolean **sentinel**
- GLboolean **dirty**
- GLboolean **fixUpperEdge**

4.85.1 Detailed Description

Definition at line 59 of file sweep.h.

The documentation for this struct was generated from the following file:

- src/libtess/sweep.h

4.86 AggregateID Struct Reference

Data Fields

- unsigned short **site**
The site ID.
- unsigned short **application**
The application ID.
- unsigned short **aggregateID**
the aggregate ID

4.86.1 Detailed Description

Definition at line 296 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.87 AggregateMarking Struct Reference

Data Fields

- unsigned char **characterSet**
The character set.
- char **characters** [31]
The characters.

4.87.1 Detailed Description

Definition at line 563 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.88 AggregateStatePdu Struct Reference

Data Fields

- struct **EntityManagementFamilyPdu** **myEntityManagementFamilyPdu**
- struct **EntityID** **aggregateID**
ID of aggregated entities.
- unsigned char **forceID**
force ID
- unsigned char **aggregateState**
state of aggregate
- struct **EntityType** **aggregateType**
entity type of the aggregated entities
- unsigned int **formation**
formation of aggregated entities
- struct **AggregateMarking** **aggregateMarking**
marking for aggregate; first char is charset type, rest is char data
- struct **Vector3Float** **dimensions**
dimensions of bounding box for the aggregated entities, origin at the center of mass
- struct **Orientation** **orientation**
orientation of the bounding box
- struct **Vector3Double** **centerOfMass**
center of mass of the aggregation
- struct **Vector3Float** **velocity**
velocity of aggregation
- unsigned short **numberOfDisAggregates**
number of aggregates
- unsigned short **numberOfDisEntities**
number of entities
- unsigned short **numberOfSilentAggregateTypes**
number of silent aggregate types
- unsigned short **numberOfSilentEntityTypes**
number of silent entity types
- void * **aggregateIDList**
aggregates list
- void * **entityIDList**
entity ID list
- unsigned char **pad2**
^^^padding to put the start of the next list on a 32 bit boundary.
- void * **silentAggregateSystemList**
silent entity types
- void * **silentEntitySystemList**
silent entity types
- unsigned int **numberOfVariableDatumRecords**
number of variable datum records
- void * **variableDatumList**
variableDatums

4.88.1 Detailed Description

Definition at line 1593 of file DIS.h.

4.88.2 Field Documentation

4.88.2.1 pad2

```
unsigned char AggregateStatePdu::pad2
```

^^^padding to put the start of the next list on a 32 bit boundary.

This needs to be fixed

Definition at line 1628 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.89 AggregateType Struct Reference

Data Fields

- unsigned char **aggregateKind**
Kind of entity.
- unsigned char **domain**
Domain of entity (air, surface, subsurface, space, etc)
- unsigned short **country**
country to which the design of the entity is attributed
- unsigned char **category**
category of entity
- unsigned char **subcategory**
subcategory of entity
- unsigned char **specific**
specific info based on subcategory field
- unsigned char **extra**

4.89.1 Detailed Description

Definition at line 382 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.90 AngularVelocityVector Struct Reference

Data Fields

- float **x**
velocity about the x axis
- float **y**
velocity about the y axis
- float **z**
velocity about the z axis

4.90.1 Detailed Description

Definition at line 553 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.91 AntennaLocation Struct Reference

Data Fields

- struct **Vector3Double** **antennaLocation**
Location of the radiating portion of the antenna in world coordinates.
- struct **Vector3Float** **relativeAntennaLocation**
Location of the radiating portion of the antenna in entity coordinates.

4.91.1 Detailed Description

Definition at line 807 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.92 anyVrml Union Reference

Data Fields

- int **nothing**

4.92.1 Detailed Description

Definition at line 55 of file CParseGeneral.h.

The documentation for this union was generated from the following files:

- src/lib/vrml_parser/CParseGeneral.h
- src/lib/world_script/JScript_stub.c

4.93 ApaData Struct Reference

Data Fields

- unsigned short **parameterIndex**
Index of APA parameter.
- short **parameterValue**
Index of APA parameter.

4.93.1 Detailed Description

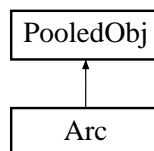
Definition at line 519 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.94 Arc Class Reference

Inheritance diagram for Arc:



Public Member Functions

- **Arc** (**Arc** *, **PwlArc** *)
- **Arc** (arc_side, long)
- Arc_ptr **append** (Arc_ptr)
- int **check** (void)
- int **isMonotone** (void)
- int **isDisconnected** (void)
- int **numpts** (void)
- void **markverts** (void)
- void **getextrema** (Arc_ptr[4])
- void **print** (void)
- void **show** (void)
- void **makeSide** (**PwlArc** *, arc_side)
- int **isTessellated** ()
- long **isbezier** ()
- void **setbezier** ()
- void **clearbezier** ()
- long **npts** ()
- **TrimVertex** * **pts** ()
- REAL * **tail** ()
- REAL * **head** ()
- REAL * **rhead** ()
- long **ismarked** ()
- void **setmark** ()
- void **clearmark** ()
- void **clearside** ()
- void **setside** (arc_side s)
- arc_side **getside** ()
- int **getitail** ()
- void **setitail** ()
- void **clearitail** ()

Data Fields

- Arc_ptr **prev**
- Arc_ptr **next**
- Arc_ptr **link**
- **BezierArc** * **bezierArc**
- **PwlArc** * **pwlArc**
- long **type**
- long **nuid**

Static Public Attributes

- static const int **bezier_tag** = (1<<13)
- static const int **arc_tag** = (1<<3)
- static const int **tail_tag** = (1<<6)

4.94.1 Detailed Description

Definition at line 55 of file arc.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/arc.h
- src/libnurbs/internals/arc.cc

4.95 ArcSdirSorter Class Reference

Inheritance diagram for ArcSdirSorter:



Public Member Functions

- ArcSdirSorter (Subdivider &)

Additional Inherited Members

4.95.1 Detailed Description

Definition at line 58 of file arcsorter.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/arcsorter.h
- src/libnurbs/internals/arcsorter.cc

4.96 ArcSorter Class Reference

Inheritance diagram for ArcSorter:



Public Member Functions

- **ArcSorter** (**Subdivider** &)
- void **qsort** (**Arc** **a, int n)

Protected Member Functions

- virtual int **qscmp** (char *, char *)

Protected Attributes

- **Subdivider** & **subdivider**

4.96.1 Detailed Description

Definition at line 45 of file arcsorter.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/arcsorter.h
- src/libnurbs/internals/arcsorter.cc

4.97 ArcTdirSorter Class Reference

Inheritance diagram for ArcTdirSorter:



Public Member Functions

- **ArcTdirSorter** (**Subdivider** &)

Additional Inherited Members

4.97.1 Detailed Description

Definition at line 66 of file arcsorter.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/arcsorter.h
- src/libnurbs/internals/arcsorter.cc

4.98 ArcTessellator Class Reference

Public Member Functions

- **ArcTessellator** (**TrimVertexPool** &, **Pool** &)
- void **bezier** (Arc_ptr, REAL, REAL, REAL, REAL)
- void **pwl** (Arc_ptr, REAL, REAL, REAL, REAL, REAL)
- void **pwl_left** (Arc_ptr, REAL, REAL, REAL, REAL)
- void **pwl_right** (Arc_ptr, REAL, REAL, REAL, REAL)
- void **pwl_top** (Arc_ptr, REAL, REAL, REAL, REAL)
- void **pwl_bottom** (Arc_ptr, REAL, REAL, REAL, REAL)
- void **tessellateLinear** (Arc_ptr, REAL, REAL, int)
- void **tessellateNonlinear** (Arc_ptr, REAL, REAL, int)

4.98.1 Detailed Description

Definition at line 47 of file arctess.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/arctess.h
- src/libnurbs/internals/arctess.cc

4.99 ArealObjectStatePdu Struct Reference

Data Fields

- struct **SyntheticEnvironmentFamilyPdu** **mySyntheticEnvironmentFamilyPdu**
- struct **EntityID** **objectID**
Object in synthetic environment.
- struct **EntityID** **referencedObjectID**
Object with which this point object is associated.
- unsigned short **updateNumber**
unique update number of each state transition of an object
- unsigned char **forceID**
force ID
- unsigned char **modifications**
modifications enumeration
- struct **EntityType** **objectType**
Object type.
- struct **SixByteChunk** **objectAppearance**
Object appearance.
- unsigned short **numberOfPoints**
Number of points.
- struct **SimulationAddress** **requesterID**
requesterID
- struct **SimulationAddress** **receivingID**
receiver ID
- void * **objectLocation**
location of object

4.99.1 Detailed Description

Definition at line 1543 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.100 ArgListType Struct Reference

Data Fields

- char **nfixedArg**
- char **iVarArgStartsAt**
- char **fillMissingFixedWithZero**
- char * **argtypes**

4.100.1 Detailed Description

Definition at line 40 of file FWTYPE.h.

The documentation for this struct was generated from the following file:

- src/lib/world_script/FWTYPE.h

4.101 ArticulationParameter Struct Reference

Data Fields

- unsigned char **parameterTypeDesignator**
- unsigned char **changeIndicator**
- unsigned short **partAttachedTo**
- int **parameterType**
- double **parameterValue**

4.101.1 Detailed Description

Definition at line 625 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.102 AtlasEntrySet Struct Reference

Data Fields

- char * **name**
- int **type**
- int **EMpixels**
- int **maxadvancepx**
- int **rowheight**
- int **lastascii**
- char * **atlasName**
- **Atlas** * **atlas**
- AtlasFont * **font**
- **AtlasEntry** * **ascii** [128]
- struct **Vector** * **entries**

4.102.1 Detailed Description

Definition at line 2227 of file Component_Text.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component_Text.c

4.103 Backend Class Reference

Public Member Functions

- **Backend** (**BasicCurveEvaluator** &c, **BasicSurfaceEvaluator** &e)
- void **bgnsurf** (int, int, long)
- void **patch** (REAL, REAL, REAL, REAL)
- void **surfpts** (long, REAL *, long, long, int, int, REAL, REAL, REAL, REAL)
- void **surfbbox** (long, REAL *, REAL *)
- void **surfgrid** (REAL, REAL, long, REAL, REAL, long)
- void **surfmesh** (long, long, long, long)
- void **bgntmesh** (const char *)
- void **endtmesh** (void)
- void **swaptmesh** (void)
- void **tmeshvert** (**GridTrimVertex** *)
- void **tmeshvert** (**TrimVertex** *)
- void **tmeshvert** (**GridVertex** *)
- void **tmeshvert** (REAL u, REAL v)
- void **linevert** (**TrimVertex** *)
- void **linevert** (**GridVertex** *)
- void **bgnoutline** (void)
- void **endoutline** (void)
- void **endsurf** (void)
- void **triangle** (**TrimVertex** *, **TrimVertex** *, **TrimVertex** *)
- void **bgntfan** ()
- void **endtfan** ()

- void **bgnqstrip** ()
- void **endqstrip** ()
- void **evalUStrip** (int n_upper, REAL v_upper, REAL *upper_val, int n_lower, REAL v_lower, REAL *lower_val)
- void **evalVStrip** (int n_left, REAL u_left, REAL *left_val, int n_right, REAL v_right, REAL *right_val)
- void **tmeshvertNOGE** (TrimVertex *t)
- void **tmeshvertNOGE_BU** (TrimVertex *t)
- void **tmeshvertNOGE_BV** (TrimVertex *t)
- void **preEvaluateBU** (REAL u)
- void **preEvaluateBV** (REAL v)
- void **bgncurv** (void)
- void **segment** (REAL, REAL)
- void **curvpts** (long, REAL *, long, int, REAL, REAL)
- void **curvgrid** (REAL, REAL, long)
- void **curvmesh** (long, long)
- void **curvpt** (REAL)
- void **bgndline** (void)
- void **endline** (void)
- void **endcurv** (void)

4.103.1 Detailed Description

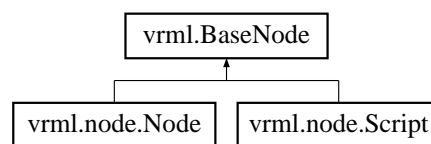
Definition at line 46 of file backend.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/backend.h
- src/libnurbs/internals/backend.cc

4.104 vrml.BaseNode Class Reference

Inheritance diagram for vrml.BaseNode:



Public Member Functions

- **BaseNode** (String id)
- void **_set_nodeid** (String id)
- String **_get_nodeid** ()
- String **getType** ()
- **Browser** **getBrowser** ()

4.104.1 Detailed Description

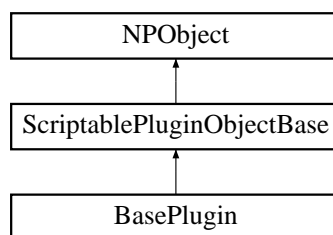
Definition at line 5 of file BaseNode.java.

The documentation for this class was generated from the following file:

- src/java/vrml/BaseNode.java

4.105 BasePlugin Class Reference

Inheritance diagram for BasePlugin:



Public Member Functions

- **BasePlugin** (**NPP** npp)
- virtual bool **HasMethod** (NPIdentifier name)
- virtual bool **HasProperty** (NPIdentifier name)
Returns true if the NPIdentifier passed is managed as a scriptable property.
- virtual bool **GetProperty** (NPIdentifier name, **NPVariant** *result)
Returns true if the scriptable property is managed and fills the NPVariant pointer with the value.
- virtual bool **Invoke** (NPIdentifier name, const **NPVariant** *args, uint32_t argCount, **NPVariant** *result)
returns true if the invoked method is managed and executes the appropriate code filling the NPVariant pointer with data if needed
- virtual bool **InvokeDefault** (const **NPVariant** *args, uint32_t argCount, **NPVariant** *result)
Manages the invocation of the default '()' method.

Additional Inherited Members

4.105.1 Detailed Description

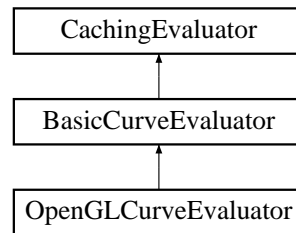
Definition at line 62 of file BasePlugin.h.

The documentation for this class was generated from the following files:

- src/plugin_win32/BasePlugin.h
- src/plugin_win32/BasePlugin.cpp

4.106 BasicCurveEvaluator Class Reference

Inheritance diagram for BasicCurveEvaluator:



Public Member Functions

- virtual void **domain1f** (REAL, REAL)
- virtual void **range1f** (long, REAL *, REAL *)
- virtual void **enable** (long)
- virtual void **disable** (long)
- virtual void **bgnmap1f** (long)
- virtual void **map1f** (long, REAL, REAL, long, long, REAL *)
- virtual void **mapgrid1f** (long, REAL, REAL)
- virtual void **mapmesh1f** (long, long, long)
- virtual void **evalcoord1f** (long, REAL)
- virtual void **endmap1f** (void)
- virtual void **bgnline** (void)
- virtual void **endline** (void)

Additional Inherited Members

4.106.1 Detailed Description

Definition at line 43 of file basiccrveval.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/basiccrveval.h
- src/libnurbs/internals/basiccrveval.cc

4.107 BasicSurfaceEvaluator Class Reference

Inheritance diagram for BasicSurfaceEvaluator:



Public Member Functions

- virtual void **range2f** (long, REAL *, REAL *)
- virtual void **domain2f** (REAL, REAL, REAL, REAL)
- virtual void **enable** (long)
- virtual void **disable** (long)
- virtual void **bgnmap2f** (long)
- virtual void **map2f** (long, REAL, REAL, long, long, REAL, REAL, long, long, REAL *)
- virtual void **mapgrid2f** (long, REAL, REAL, long, REAL, REAL)
- virtual void **mapmesh2f** (long, long, long, long, long)
- virtual void **evalcoord2f** (long, REAL, REAL)
- virtual void **evalpoint2f** (long, long)
- virtual void **endmap2f** (void)
- virtual void **polymode** (long)
- virtual void **bgnline** (void)
- virtual void **endline** (void)
- virtual void **bgnclosedline** (void)
- virtual void **endclosedline** (void)
- virtual void **bgntmesh** (void)
- virtual void **swaptmesh** (void)
- virtual void **endtmesh** (void)
- virtual void **bgnqstrip** (void)
- virtual void **endqstrip** (void)
- virtual void **bgntfan** (void)
- virtual void **endtfan** (void)
- virtual void **evalUStrip** (int n_upper, REAL v_upper, REAL *upper_val, int n_lower, REAL v_lower, REAL *lower_val)=0
- virtual void **evalVStrip** (int n_left, REAL u_left, REAL *left_val, int n_right, REAL u_right, REAL *right_val)=0
- virtual void **inDoEvalCoord2NOGE** (REAL u, REAL v, REAL *ret_point, REAL *ret_normal)=0
- virtual void **inDoEvalCoord2NOGE_BU** (REAL u, REAL v, REAL *ret_point, REAL *ret_normal)=0
- virtual void **inDoEvalCoord2NOGE_BV** (REAL u, REAL v, REAL *ret_point, REAL *ret_normal)=0
- virtual void **inPreEvaluateBV_intfac** (REAL v)=0
- virtual void **inPreEvaluateBU_intfac** (REAL u)=0

Additional Inherited Members

4.107.1 Detailed Description

Definition at line 43 of file basicsurfeval.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/basicsurfeval.h
- src/libnurbs/internals/basicsurfeval.cc

4.108 BeamAntennaPattern Struct Reference

Data Fields

- struct **Orientation** **beamDirection**

The rotation that transformst he reference coordinate sytem into the beam coordinate system.

- float **azimuthBeamwidth**
- float **referenceSystem**
- short **padding1**
- char **padding2**
- float **ez**

Magnigute of the z-component in beam coordinates at some arbitrary single point in the mainbeam and in the far field of the antenna.

- float **ex**

Magnigute of the x-component in beam coordinates at some arbitrary single point in the mainbeam and in the far field of the antenna.

- float **phase**

The phase angle between Ez and Ex in radians.

4.108.1 Detailed Description

Definition at line 746 of file DIS.h.

4.108.2 Field Documentation

4.108.2.1 beamDirection

```
struct Orientation BeamAntennaPattern::beamDirection
```

The rotation that transformst he reference coordinate sytem into the beam coordinate system.

Either world coordinates or entity coordinates may be used as the reference coordinate system, as specified by teh reference system field of the antenna pattern record.

Definition at line 738 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.109 BeamData Struct Reference

Data Fields

- float **beamAzimuthCenter**
Specifies the beam azimuth an elevation centers and corresponding half-angles to describe the scan volume.
- float **beamAzimuthSweep**
Specifies the beam azimuth sweep to determine scan volume.
- float **beamElevationCenter**
Specifies the beam elevation center to determine scan volume.
- float **beamElevationSweep**
Specifies the beam elevation sweep to determine scan volume.
- float **beamSweepSync**
allows receiver to synchronize its regenerated scan pattern to that of the emmitter.

4.109.1 Detailed Description

Definition at line 399 of file DIS.h.

4.109.2 Field Documentation

4.109.2.1 beamSweepSync

```
float BeamData::beamSweepSync
```

allows receiver to synchronize its regenerated scan pattern to that of the emmitter.

Specifies the percentage of time a scan is through its pattern from its origion.

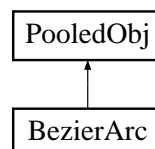
Definition at line 409 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.110 BezierArc Struct Reference

Inheritance diagram for BezierArc:



Data Fields

- REAL * **cpts**
- int **order**
- int **stride**
- long **type**
- Mapdesc * **mapdesc**

Additional Inherited Members

4.110.1 Detailed Description

Definition at line 43 of file bezierarc.h.

The documentation for this struct was generated from the following file:

- src/libnurbs/internals/bezierarc.h

4.111 bezierPatch Struct Reference

Data Fields

- float **umin**
- float **vmin**
- float **umax**
- float **vmax**
- int **uorder**
- int **vorder**
- int **dimension**
- float * **ctlpoints**
- struct **bezierPatch** * **next**

4.111.1 Detailed Description

Definition at line 36 of file bezierPatch.h.

The documentation for this struct was generated from the following file:

- src/libnurbs/interface/bezierPatch.h

4.112 bezierPatchMesh Struct Reference

Data Fields

- **bezierPatch** * **bpatch**
- **bezierPatch** * **bpatch_normal**
- **bezierPatch** * **bpatch_texcoord**
- **bezierPatch** * **bpatch_color**
- float * **UVarray**
- int * **length_array**
- GLenum * **type_array**
- int **size_UVarray**
- int **index_UVarray**
- int **size_length_array**
- int **index_length_array**
- int **counter**
- GLenum **type**
- float * **vertex_array**
- float * **normal_array**
- float * **color_array**
- float * **texcoord_array**
- struct **bezierPatchMesh** * **next**

4.112.1 Detailed Description

Definition at line 38 of file bezierPatchMesh.h.

The documentation for this struct was generated from the following file:

- src/libnurbs/interface/bezierPatchMesh.h

4.113 Bin Class Reference

Public Member Functions

- Arc_ptr **firstarc** (void)
- Arc_ptr **nextarc** (void)
- Arc_ptr **removearc** (void)
- int **isnonempty** (void)
- void **addarc** (Arc_ptr)
- void **remove_this_arc** (Arc_ptr)
- int **numarcs** (void)
- void **adopt** (void)
- void **markall** (void)
- void **show** (char *)
- void **listBezier** (void)

4.113.1 Detailed Description

Definition at line 43 of file bin.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/bin.h
- src/libnurbs/internals/bin.cc

4.114 bindablestack Struct Reference

Data Fields

- void * **background**
- void * **viewpoint**
- void * **fog**
- void * **navigation**
- int **layerId**
- double **screenorientationmatrix** [16]
- double **viewtransformmatrix** [16]
- double **viewmatrix** [16]
- double **posorimatrix** [16]
- double **stereooffsetmatrix** [2][16]
- double **backgroundmatrix** [16]
- int **isStereo**
- int **iside**
- int **nodetype**
- void * **viewer**
- double **pickraymatrix** [2][16]

4.114.1 Detailed Description

Definition at line 64 of file Bindable.h.

The documentation for this struct was generated from the following file:

- src/lib/x3d_parser/Bindable.h

4.115 block Struct Reference

Data Fields

- short int **dct_recon** [8][8]
- short int **dct_dc_y_past**
- short int **dct_dc_cr_past**
- short int **dct_dc_cb_past**

4.115.1 Detailed Description

Definition at line 182 of file mpeg_berkley.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/mpeg_berkley.h

4.116 Breakpt Struct Reference

Data Fields

- Knot **value**
- int **multi**
- int **def**

4.116.1 Detailed Description

Definition at line 48 of file tobezier.cc.

The documentation for this struct was generated from the following file:

- src/libnurbs/internals/tobezier.cc

4.117 brotoDefpair Struct Reference

Data Fields

- struct **X3D_Node** * **node**
- char * **name**

4.117.1 Detailed Description

Definition at line 236 of file CParseParser.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml_parser/CParseParser.h

4.118 brotoIS Struct Reference

Data Fields

- struct **X3D_Proto** * **proto**
- char * **protofieldname**
- int **pmode**
- int **iprotofield**
- int **pBuiltin**
- int **type**
- struct **X3D_Node** * **node**
- char * **nodefieldname**
- int **mode**
- int **ifield**
- int **builtin**
- int **source**

4.118.1 Detailed Description

Definition at line 4699 of file CParseParser.c.

The documentation for this struct was generated from the following file:

- src/lib/vrml_parser/CParseParser.c

4.119 brotoRoute Struct Reference

Data Fields

- struct **brouteEnd from**
- struct **brouteEnd to**
- int **lastCommand**
- int **ft**

4.119.1 Detailed Description

Definition at line 74 of file CRoutes.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml_parser/CRoutes.h

4.120 brouteEnd Struct Reference

Data Fields

- int **weak**
- char * **cnode**
- char * **cfield**
- struct **X3D_Node** * **node**
- int **ifield**
- int **builtin**
- int **ftype**

4.120.1 Detailed Description

Definition at line 62 of file CRoutes.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml_parser/CRoutes.h

4.121 org.web3d.x3d.sai.Browser Interface Reference

Inheritance diagram for org.web3d.x3d.sai.Browser:



Public Member Functions

- **X3DScene importDocument** (Node element) throws InvalidBrowserException, InvalidDocumentException, NotSupportedException, ConnectionException
- String **getName** () throws InvalidBrowserException, ConnectionException
- String **getVersion** () throws InvalidBrowserException, ConnectionException
- **ProfileInfo getProfile** (String name) throws InvalidBrowserException, NotSupportedException, ConnectionException
- **ProfileInfo[] getSupportedProfiles** () throws InvalidBrowserException, ConnectionException
- **ComponentInfo[] getSupportedComponents** () throws InvalidBrowserException, ConnectionException
- **ComponentInfo getComponent** (String name, int level) throws InvalidBrowserException, NotSupportedException, ConnectionException
- **X3DExecutionContext getExecutionContext** () throws InvalidBrowserException, ConnectionException
- **X3DScene createScene** (**ProfileInfo** profile, **ComponentInfo[]** components) throws InvalidBrowserException, ConnectionException
- float **getCurrentSpeed** () throws InvalidBrowserException, ConnectionException
- float **getCurrentFrameRate** () throws InvalidBrowserException, ConnectionException

- void **replaceWorld** (**X3DScene** scene) throws InvalidBrowserException, ConnectionException
- void **loadURL** (String[] url, Map parameters) throws InvalidBrowserException, InvalidURLException, ConnectionException
- String **getDescription** () throws InvalidBrowserException, ConnectionException
- void **setDescription** (String desc) throws InvalidBrowserException, ConnectionException
- **X3DScene createX3DFromString** (String scene) throws InvalidBrowserException, InvalidX3DException, NotSupportedException, ConnectionException
- **X3DScene createX3DFromStream** (java.io.InputStream is) throws InvalidBrowserException, InvalidX3DException, NotSupportedException, java.io.IOException, ConnectionException
- **X3DScene createX3DFromURL** (String[] url) throws InvalidBrowserException, InvalidX3DException, ConnectionException, java.io.IOException
- java.util.Map **getRenderingProperties** () throws InvalidBrowserException, ConnectionException
- java.util.Map **getBrowserProperties** () throws InvalidBrowserException, ConnectionException
- void **nextViewpoint** () throws InvalidBrowserException, ConnectionException
- void **previousViewpoint** () throws InvalidBrowserException, ConnectionException
- void **firstViewpoint** () throws InvalidBrowserException, ConnectionException
- void **lastViewpoint** () throws InvalidBrowserException, ConnectionException
- void **print** (Object obj) throws InvalidBrowserException, ConnectionException
- void **println** (Object obj) throws InvalidBrowserException, ConnectionException
- void **dispose** ()

4.121.1 Detailed Description

Definition at line 5 of file Browser.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/Browser.java

4.122 vrml.Browser Class Reference

Public Member Functions

- String **toString** ()
- String **getName** ()
- String **getVersion** ()
- float **getCurrentSpeed** ()
- float **getCurrentFrameRate** ()
- **BaseNode[] createX3DFromString** (String x3dSyntax) throws InvalidX3DSyntaxException
- **BaseNode[] createVrmlFromString** (String vrmlSyntax) throws InvalidVRMLSyntaxException

4.122.1 Detailed Description

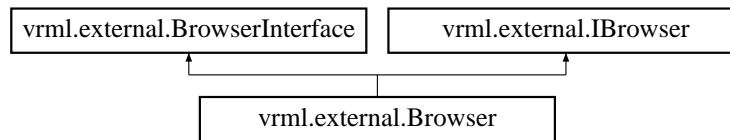
Definition at line 4 of file Browser.java.

The documentation for this class was generated from the following file:

- src/java/vrml/Browser.java

4.123 vrml.external.Browser Class Reference

Inheritance diagram for vrml.external.Browser:



Public Member Functions

- int **get_Browser_EVtype** (int event)
- **EventOutObserver** **get_Browser_EVObserver** (int eventno)
- void **Browser_RL_Async_send** (String EVentreply, int eventno)
- **Browser** (Applet pApplet, int portnum)
- **Browser** (Applet pApplet)
- **Browser** (Applet pApplet, String frameName, int index)
- String **getName** ()
- String **getVersion** ()
- int **getEncoding** ()
- float **getCurrentSpeed** ()
- float **getCurrentFrameRate** ()
- String **getWorldURL** ()
- String **getRenderingProperties** ()
- void **replaceWorld** (**Node**[] nodes) throws IllegalArgumentException
- void **loadURL** (String[] url, String[] parameter)
- void **firstViewpoint** ()
- void **lastViewpoint** ()
- void **nextViewpoint** ()
- void **previousViewpoint** ()
- void **setDescription** (String description)
- String **getDescription** ()
- **Node**[] **createX3DFromString** (String vrmlSyntax) throws InvalidVrmlException
- **Node**[] **createVrmlFromString** (String vrmlSyntax) throws InvalidVrmlException
- String **createNode** (String name)
- String **createProto** (String name)
- String **updateNamedNode** (String name, **Node** node)
- String **removeNamedNode** (String name)
- String **getProtoDeclaration** (String name)
- String **updateProtoDeclaration** (String name, String newProtoDecl)
- String **removeProtoDeclaration** (String name)
- String **getNodeFieldDefs** (**Node** myn)
- String **getNodeDEFName** (**Node** myn)
- String **getRoutes** ()
- String **getNodeType** (**Node** myn)
- void **createVrmlFromURL** (String[] url, **Node** node, String event)
- void **addRoute** (**Node** fromNode, String fromEventOut, **Node** toNode, String toEventIn) throws IllegalArgument←
- void **deleteRoute** (**Node** fromNode, String fromEventOut, **Node** toNode, String toEventIn) throws IllegalArgument←
- void **beginUpdate** ()
- void **endUpdate** ()
- void **initialize** ()
- void **shutdown** ()
- **Node** **getNode** (String getName) throws InvalidNodeException
- void **close** ()

Static Public Member Functions

- static **Browser** **getBrowser** (Applet pApplet)
- static **Browser** **getBrowser** (Applet pApplet, int portnum)
- static **Browser** **getBrowser** (Applet pApplet, String frameName, int index)
- static void **SendChildEvent** (int parent, int offset, String FieldName, int Child)
- static void **newSendEvent** (**EventIn** node, String Value)
- static String **SendEventOut** (int nodeptr, int offset, int datasize, String datatype, String **command**)
- static void **RegisterListener** (**EventOutObserver** f, Object userData, int nodeptr, int offset, String datatype, int datasize, int EventType)
- static void **unRegisterListener** (**EventOutObserver** f, int nodeptr, int offset, String datatype, int datasize, int EventType)

Static Protected Member Functions

- static String **SendNodeEAType** (int nodeptr)
- static String **SendEventType** (int nodeptr, String FieldName, String direction)
- static synchronized String **getVRMLreply** (int queryno)

4.123.1 Detailed Description

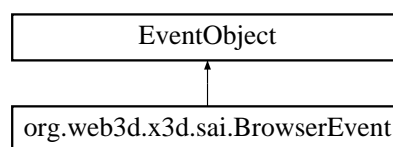
Definition at line 27 of file Browser.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/Browser.java

4.124 org.web3d.x3d.sai.BrowserEvent Class Reference

Inheritance diagram for org.web3d.x3d.sai.BrowserEvent:



Public Member Functions

- **BrowserEvent** (Object b, int a)
- int **getID** ()

Static Public Attributes

- static final int **INITIALIZED** = 0
- static final int **SHUTDOWN** = 1
- static final int **URL_ERROR** = 2
- static final int **CONNECTION_ERROR** = 10
- static final int **LAST_IDENTIFIER** = 100

4.124.1 Detailed Description

Definition at line 5 of file BrowserEvent.java.

The documentation for this class was generated from the following file:

- src/java/org/web3d/x3d/sai/BrowserEvent.java

4.125 sai.BrowserFactory Class Reference

Static Public Member Functions

- static void **setBrowserFactoryImpl** (**BrowserFactoryImpl** fac) throws IllegalArgumentException, X3DException, SecurityException
- static **X3DComponent** **createX3DComponent** (Map params) throws NotSupportedException
- static **ExternalBrowser** **getBrowser** (Applet applet) throws NotSupportedException, NoSuchBrowserException
- static **ExternalBrowser** **getBrowser** (Applet applet, String frameName, int index) throws NotSupportedException, NoSuchBrowserException
- static **ExternalBrowser** **getBrowser** (InetAddress address, int port) throws NotSupportedException, NoSuchBrowserException, UnknownHostException, ConnectionException

4.125.1 Detailed Description

Definition at line 8 of file BrowserFactory.java.

The documentation for this class was generated from the following file:

- src/java/sai/BrowserFactory.java

4.126 org.web3d.x3d.sai.BrowserFactoryImpl Interface Reference

Inherited by sai.FreeWRLFactory.

Public Member Functions

- **ExternalBrowser** **getBrowser** (Applet applet) throws NotSupportedException, NoSuchBrowserException, ConnectionException
- **ExternalBrowser** **getBrowser** (Applet applet, String frameName, int index) throws NotSupportedException, NoSuchBrowserException, ConnectionException
- **ExternalBrowser** **getBrowser** (InetAddress add, int port) throws NotSupportedException, NoSuchBrowserException, UnknownHostException, ConnectionException
- **X3DComponent** **createX3DComponent** (Map args) throws NotSupportedException

4.126.1 Detailed Description

Definition at line 8 of file BrowserFactoryImpl.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/BrowserFactoryImpl.java

4.127 sai.BrowserGlobals Class Reference

Static Public Attributes

- static double **TickTime** = 0.0
- static int **EVno** = 0
- static int **EVarray** [] = new int[256]
- static int **EVtype** [] = new int[256]
- static Object **EVObject** [] = new Object[256]
- static **X3DFieldEventListener** **EObserver** [] = new **X3DFieldEventListener**[256]
- static **EAIAsyncThread** **RL_Async**
- static int **queryno** = 1

4.127.1 Detailed Description

Definition at line 7 of file BrowserGlobals.java.

The documentation for this class was generated from the following file:

- src/java/sai/BrowserGlobals.java

4.128 vrml.external.BrowserGlobals Class Reference

Static Public Attributes

- static double **TickTime** = 0.0
- static int **EVno** = 0
- static int **EVarray** [] = new int[256]
- static int **EVtype** [] = new int[256]
- static Object **EVObject** [] = new Object[256]
- static **EventOutObserver** **EObserver** [] = new **EventOutObserver**[256]
- static **EAIAsyncThread** **RL_Async**
- static int **queryno** = 1

4.128.1 Detailed Description

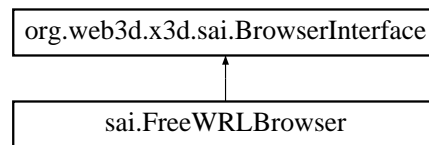
Definition at line 4 of file BrowserGlobals.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/BrowserGlobals.java

4.129 org.web3d.x3d.sai.BrowserInterface Interface Reference

Inheritance diagram for org.web3d.x3d.sai.BrowserInterface:



Public Member Functions

- int **get_Browser_EVtype** (int event)
- X3DFieldEventListener **get_Browser_EVObserver** (int eventno)
- void **Browser_RL_Async_send** (String EVentreply, int eventno)

4.129.1 Detailed Description

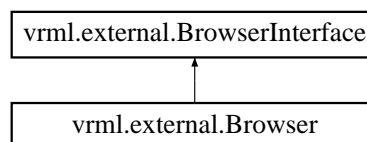
Definition at line 6 of file BrowserInterface.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/BrowserInterface.java

4.130 vrml.external.BrowserInterface Interface Reference

Inheritance diagram for vrml.external.BrowserInterface:



Public Member Functions

- int **get_Browser_EVtype** (int event)
- EventOutObserver **get_Browser_EVObserver** (int eventno)
- void **Browser_RL_Async_send** (String EVentreply, int eventno)

4.130.1 Detailed Description

Definition at line 8 of file BrowserInterface.java.

The documentation for this interface was generated from the following file:

- src/java/vrml/external/BrowserInterface.java

4.131 org.web3d.x3d.sai.BrowserListener Interface Reference

Inheritance diagram for org.web3d.x3d.sai.BrowserListener:



Public Member Functions

- void **browserChanged** (**BrowserEvent** evt)

4.131.1 Detailed Description

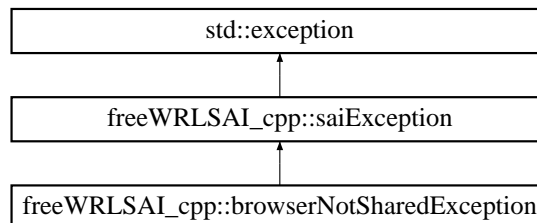
Definition at line 6 of file `BrowserListener.java`.

The documentation for this interface was generated from the following file:

- `src/java/org/web3d/x3d/sai/BrowserListener.java`

4.132 freeWRLSAI_cpp::browserNotSharedException Class Reference

Inheritance diagram for `freeWRLSAI_cpp::browserNotSharedException`:



Public Member Functions

- virtual const char * **what** ()

Additional Inherited Members

4.132.1 Detailed Description

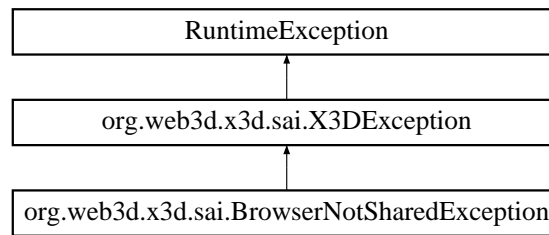
Definition at line 218 of file `SAlexception.h`.

The documentation for this class was generated from the following file:

- `src/SAI_Cpp/SAlexception.h`

4.133 org.web3d.x3d.sai.BrowserNotSharedException Class Reference

Inheritance diagram for org.web3d.x3d.sai.BrowserNotSharedException:



Public Member Functions

- **BrowserNotSharedException** (String msg)

4.133.1 Detailed Description

Definition at line 3 of file BrowserNotSharedException.java.

The documentation for this class was generated from the following file:

- src/java/org/web3d/x3d/sai/BrowserNotSharedException.java

4.134 Buffer Class Reference

Friends

- class **Pool**

4.134.1 Detailed Description

Definition at line 45 of file bufpool.h.

The documentation for this class was generated from the following file:

- src/libnurbs/internals/bufpool.h

4.135 BurstDescriptor Struct Reference

Data Fields

- struct **EntityType** **munition**
What munition was used in the burst.
- unsigned short **warhead**
type of warhead
- unsigned short **fuse**
type of fuse used
- unsigned short **quantity**
how many of the munition were fired
- unsigned short **rate**
rate at which the munition was fired

4.135.1 Detailed Description

Definition at line 832 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.136 CachedVertex Struct Reference

Data Fields

- GLdouble **coords** [3]
- void * **data**

4.136.1 Detailed Description

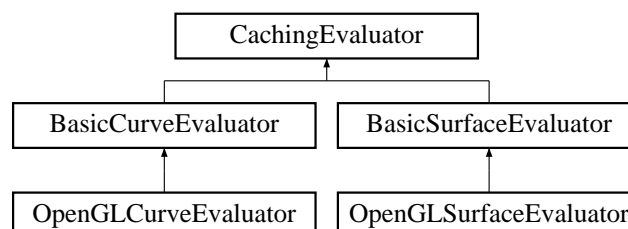
Definition at line 54 of file tess.h.

The documentation for this struct was generated from the following file:

- src/libtess/tess.h

4.137 CachingEvaluator Class Reference

Inheritance diagram for CachingEvaluator:



Public Types

- enum **ServiceMode** { **play** , **record** , **playAndRecord** }

Public Member Functions

- virtual int **canRecord** (void)
- virtual int **canPlayAndRecord** (void)
- virtual int **createHandle** (int handle)
- virtual void **beginOutput** (ServiceMode, int handle)
- virtual void **endOutput** (void)
- virtual void **discardRecording** (int handle)
- virtual void **playRecording** (int handle)

4.137.1 Detailed Description

Definition at line 39 of file cachingeval.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/cachingeval.h
- src/libnurbs/internals/cachingeval.cc

4.138 cbDataExactName Struct Reference

Data Fields

- char * **fname**
- union **anyVrml** * **fieldValue**
- int **mode**
- int **type**
- int **jfield**
- int **source**
- BOOL **publicfield**

4.138.1 Detailed Description

Definition at line 5828 of file CParseParser.c.

The documentation for this struct was generated from the following file:

- src/lib/vrml_parser/CParseParser.c

4.139 cbDataRootNameAndRouteDir Struct Reference

Data Fields

- char * **fname**
- int **PKW_eventType**
- union **anyVrml** * **fieldValue**
- int **mode**
- int **type**
- int **jfield**
- int **builtin**
- int **source**
- BOOL **publicfield**

4.139.1 Detailed Description

Definition at line 5870 of file CParseParser.c.

The documentation for this struct was generated from the following file:

- src/lib/vrml_parser/CParseParser.c

4.140 CdlIFreeWRL Class Reference

Public Types

- enum **KeyAction** { **KEYDOWN** =2 , **KEYUP** =3 , **KEYPRESS** =1 }
- enum **MouseButton** { **MOUSEMOVE** =6 , **MOUSEDOWN** =4 , **MOUSEUP** =5 }
- enum **MouseButton** { **LEFT** =1 , **MIDDLE** =2 , **RIGHT** =3 , **NONE** =0 }
- enum **resource_status** {
ress_none , **ress_starts_good** , **ress_invalid** , **ress_downloaded** ,
ress_failed , **ress_loaded** , **ress_not_loaded** , **ress_parsed** ,
ress_not_parsed }
- enum **resource_media_type** {
resm_unknown , **resm_vrml** , **resm_x3d** , **resm_image** ,
resm_movie , **resm_script** , **resm_pshader** , **resm_fshader** ,
resm_audio , **resm_x3z** , **resm_external** }

Public Member Functions

- **CdlIFreeWRL** (int width, int height, void *windowhandle=0, bool bEai=false)
- **CdlIFreeWRL** (char *scene_url, int width, int height, void *windowhandle=0, bool bEai=false)
- void **setDensityFactor** (float density_factor)
- void **onInit** (int width, int height, void *windowhandle=0, bool bEai=false, bool frontend_handles_display_thread=false)
- void **onInitArgv** (int argc, char **argv, bool frontend_handles_display_thread)
- void **onLoad** (char *scene_url)
- void **onResize** (int width, int height)
- int **onMouse** (int mouseAction, int mouseButton, int x, int y)

- int **onTouch** (int touchAction, unsigned int ID, int x, int y)
- void **onGyro** (float rx, float ry, float rz)
- void **onAccelerometer** (float ax, float ay, float az)
- void **onMagnetic** (float azimuth, float pitch, float roll)
- void **onKey** (int keyAction, int keyValue)
- void **onDraw** ()
- void **onClose** ()
- void **print** (char *str)
- void **setTempFolder** (char *tmpFolder)
- void **setFontFolder** (char *fontFolder)
- int **getUpdatedCursorStyle** ()
- void * **frontenditem_dequeue** ()
- char * **resitem_getURL** (void *res)
- int **resitem_getStatus** (void *res)
- void **resitem_setStatus** (void *res, int status)
- int **resitem_getType** (void *res)
- int **resitem_getMediaType** (void *res)
- void **resitem_enqueueNextMulti** (void *res)
- void **resitem_setLocalPath** (void *res, char *path)
- void **resitem_enqueue** (void *res)
- void **resitem_load** (void *res)
- void **commandline** (char *cmdline)

4.140.1 Detailed Description

Definition at line 18 of file dllFreeWRL.h.

The documentation for this class was generated from the following files:

- src/dllFreeWRL/dllFreeWRL.h
- src/dllFreeWRL/dllFreeWRL.cpp

4.141 chardata Struct Reference

Data Fields

- unsigned int **iglyph**
- double **advance**
- double **x**
- double **y**
- double **sx**
- double **sy**

4.141.1 Detailed Description

Definition at line 203 of file Component_Text.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component_Text.c

4.142 chaser_ptr Struct Reference

Data Fields

- void * **value_changed**
- void * **initialDestination**
- void * **initialValue**
- void * **set_destination**
- void * **set_value**
- void * **_buffer**
- void * **_previousValue**
- void * **_destination**

4.142.1 Detailed Description

Definition at line 164 of file Component_Followers.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component_Followers.c

4.143 cline Struct Reference

Data Fields

- int **n**
- GLfloat **p** [6]

4.143.1 Detailed Description

Definition at line 235 of file CursorDraw.c.

The documentation for this struct was generated from the following file:

- src/lib/ui/CursorDraw.c

4.144 ClockTime Struct Reference

Data Fields

- int **hour**
Hours in UTC.
- unsigned int **timePastHour**
Time past the hour.

4.144.1 Detailed Description

Definition at line 312 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.145 coded_block_pattern_entry Struct Reference

Data Fields

- unsigned int **cbp**
- int **num_bits**

4.145.1 Detailed Description

Definition at line 768 of file mpeg_berkley.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/mpeg_berkley.h

4.146 CollisionElasticPdu Struct Reference

Data Fields

- struct **EntityInformationFamilyPdu** **myEntityInformationFamilyPdu**
- struct **EntityID** **issuingEntityID**
ID of the entity that issued the collision PDU.
- struct **EntityID** **collidingEntityID**
ID of entity that has collided with the issuing entity ID.
- struct **EventID** **collisionEventID**
ID of event.
- short **pad**
some padding
- struct **Vector3Float** **contactVelocity**
velocity at collision
- float **mass**
mass of issuing entity
- struct **Vector3Float** **location**
Location with respect to entity the issuing entity collided with.
- float **collisionResultXX**
tensor values
- float **collisionResultXY**
tensor values

- float **collisionResultXZ**
tensor values
- float **collisionResultYY**
tensor values
- float **collisionResultYZ**
tensor values
- float **collisionResultZZ**
tensor values
- struct **Vector3Float unitSurfaceNormal**
This record shall represent the normal vector to the surface at the point of collision detection.
- float **coefficientOfRestitution**
This field shall represent the degree to which energy is conserved in a collision.

4.146.1 Detailed Description

Definition at line 2039 of file DIS.h.

4.146.2 Field Documentation

4.146.2.1 unitSurfaceNormal

```
struct Vector3Float CollisionElasticPdu::unitSurfaceNormal
```

This record shall represent the normal vector to the surface at the point of collision detection.

The surface normal shall be represented in world coordinates.

Definition at line 2066 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.147 CollisionPdu Struct Reference

Data Fields

- struct **EntityInformationFamilyPdu myEntityInformationFamilyPdu**
- struct **EntityID issuingEntityID**
ID of the entity that issued the collision PDU.
- struct **EntityID collidingEntityID**
ID of entity that has collided with the issuing entity ID.
- struct **EventID eventID**
ID of event.
- unsigned char **collisionType**
ID of event.
- char **pad**
some padding
- struct **Vector3Float velocity**
velocity at collision
- float **mass**
mass of issuing entity
- struct **Vector3Float location**
Location with respect to entity the issuing entity collided with.

4.147.1 Detailed Description

Definition at line 1798 of file DIS.h.

The documentation for this struct was generated from the following file:

- `src/lib/DIS/DIS.h`

4.148 colorScheme Struct Reference

Data Fields

- `char * name`
- `char * panel`
- `char * menuIcon`
- `char * statusText`
- `char * messageText`

4.148.1 Detailed Description

Definition at line 407 of file common.c.

The documentation for this struct was generated from the following file:

- `src/lib/ui/common.c`

4.149 command Struct Reference

Data Fields

- `char * key`
- `int(* cmdfunc)()`
- `int(* valfunc)(char *val)`
- `char * helpstring`

4.149.1 Detailed Description

Definition at line 764 of file common.c.

The documentation for this struct was generated from the following file:

- `src/lib/ui/common.c`

4.150 CommentPdu Struct Reference

Data Fields

- struct **SimulationManagementFamilyPdu** **mySimulationManagementFamilyPdu**
- unsigned int **numberOfFixedDatumRecords**
Number of fixed datum records.
- unsigned int **numberOfVariableDatumRecords**
Number of variable datum records.
- void * **fixedDatums**
variable length list of fixed datums
- void * **variableDatums**
variable length list of variable length datums

4.150.1 Detailed Description

Definition at line 1710 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.151 CommentReliablePdu Struct Reference

Data Fields

- struct **SimulationManagementWithReliabilityFamilyPdu** **mySimulationManagementWithReliability**↔
FamilyPdu
- unsigned int **numberOfFixedDatumRecords**
Fixed datum record count.
- unsigned int **numberOfVariableDatumRecords**
variable datum record count
- void * **fixedDatumRecords**
Fixed datum records.
- void * **variableDatumRecords**
Variable datum records.

4.151.1 Detailed Description

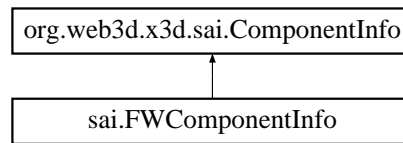
Definition at line 1723 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.152 org.web3d.x3d.sai.ComponentInfo Interface Reference

Inheritance diagram for org.web3d.x3d.sai.ComponentInfo:



Public Member Functions

- String **getName** ()
- int **getLevel** ()
- String **getTitle** ()
- String **getProviderURL** ()
- String **toX3DString** ()

4.152.1 Detailed Description

Definition at line 3 of file ComponentInfo.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/ComponentInfo.java

4.153 connection_info_struct Struct Reference

Data Fields

- int **connectiontype**
- char * **answerstring**
- int **len**
- struct MHD_PostProcessor * **postprocessor**

4.153.1 Detailed Description

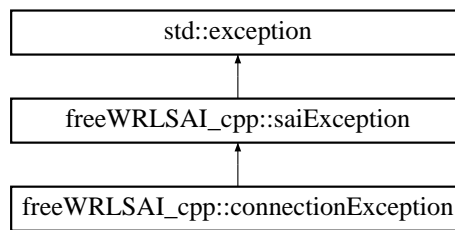
Definition at line 811 of file SSRServer.c.

The documentation for this struct was generated from the following file:

- src/SSR/SSRServer.c

4.154 freeWRLSAI_cpp::connectionException Class Reference

Inheritance diagram for freeWRLSAI_cpp::connectionException:



Public Member Functions

- virtual const char * **what** ()

Additional Inherited Members

4.154.1 Detailed Description

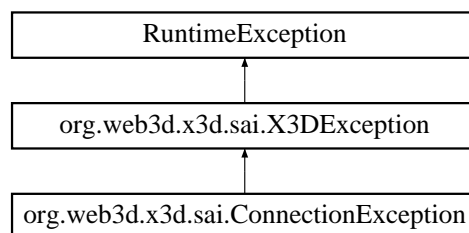
Definition at line 85 of file SAexception.h.

The documentation for this class was generated from the following file:

- src/SAI_Cpp/SAexception.h

4.155 org.web3d.x3d.sai.ConnectionException Class Reference

Inheritance diagram for org.web3d.x3d.sai.ConnectionException:



Public Member Functions

- **ConnectionException** (String msg)

4.155.1 Detailed Description

Definition at line 3 of file ConnectionException.java.

The documentation for this class was generated from the following file:

- src/java/org/web3d/x3d/sai/ConnectionException.java

4.156 consoleLine Struct Reference

Data Fields

- char * **line**
- int **len**
- int **endline**

4.156.1 Detailed Description

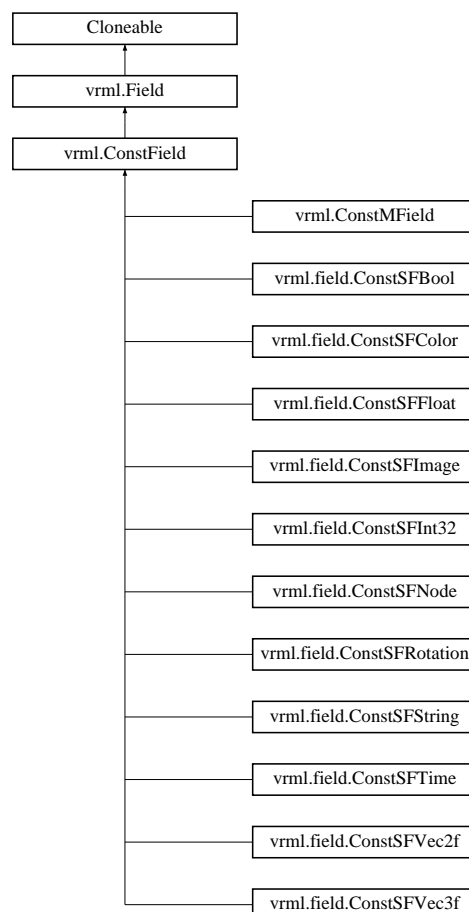
Definition at line 808 of file MainLoop.c.

The documentation for this struct was generated from the following file:

- src/lib/main/MainLoop.c

4.157 vrml.ConstField Class Reference

Inheritance diagram for vrml.ConstField:



Additional Inherited Members

4.157.1 Detailed Description

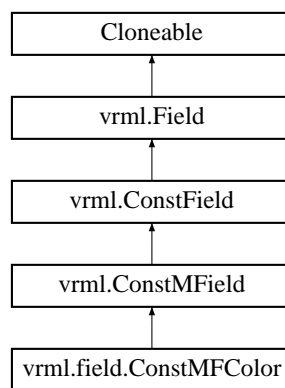
Definition at line 3 of file ConstField.java.

The documentation for this class was generated from the following file:

- src/java/vrml/ConstField.java

4.158 vrml.field.ConstMFCOLOR Class Reference

Inheritance diagram for vrml.field.ConstMFCOLOR:



Public Member Functions

- **ConstMFCOLOR** (float[] colors)
- **ConstMFCOLOR** (int size, float[] colors)
- **ConstMFCOLOR** (float[][] colors)
- void **getValue** (float[] colors)
- void **getValue** (float[][] colors)
- void **get1Value** (int index, float[] colors)
- void **get1Value** (int index, **SFCOLOR** sfColor)
- String **toString** ()
- void **__fromPerl** (BufferedReader in) throws IOException
- void **__toPerl** (PrintWriter out) throws IOException

Additional Inherited Members

4.158.1 Detailed Description

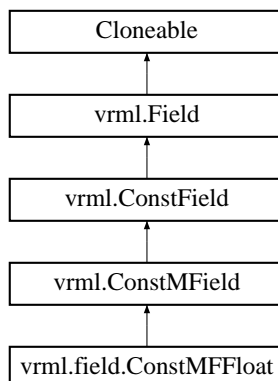
Definition at line 10 of file ConstMFCOLOR.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/ConstMFCOLOR.java

4.159 vrml.field.ConstMFFloat Class Reference

Inheritance diagram for vrml.field.ConstMFFloat:



Public Member Functions

- **ConstMFFloat** (float[] f)
- **ConstMFFloat** (int size, float[] f)
- void **getValue** (float[] f)
- float **get1Value** (int index)
- String **toString** ()
- void **__fromPerl** (BufferedReader in) throws IOException
- void **__toPerl** (PrintWriter out) throws IOException

Additional Inherited Members

4.159.1 Detailed Description

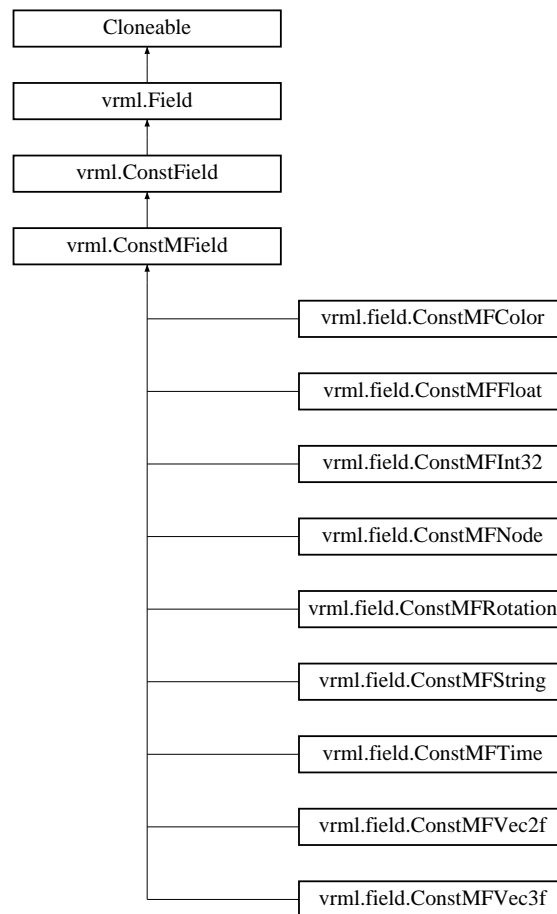
Definition at line 10 of file `ConstMFFloat.java`.

The documentation for this class was generated from the following file:

- `src/java/vrml/field/ConstMFFloat.java`

4.160 vrml.ConstMField Class Reference

Inheritance diagram for `vrml.ConstMField`:



Public Member Functions

- `int getSize ()`

Data Fields

- `Vector __vect = new Vector()`

Protected Member Functions

- `final void __update1Read (int index)`

4.160.1 Detailed Description

Definition at line 4 of file ConstMField.java.

The documentation for this class was generated from the following file:

- `src/java/vrml/ConstMField.java`

4.161 vrml.field.ConstMInt32 Class Reference

Inheritance diagram for vrml.field.ConstMInt32:



Public Member Functions

- **ConstMInt32** (int[] value)
- **ConstMInt32** (int size, int[] value)
- void **getValue** (int[] value)
- int **get1Value** (int index)
- String **toString** ()
- void **__fromPerl** (BufferedReader in) throws IOException
- void **__toPerl** (PrintWriter out) throws IOException

Additional Inherited Members

4.161.1 Detailed Description

Definition at line 10 of file ConstMInt32.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/ConstMInt32.java

4.162 vrml.field.ConstMFNode Class Reference

Inheritance diagram for vrml.field.ConstMFNode:



Public Member Functions

- **ConstMFNode** (**BaseNode**[] node)
- **ConstMFNode** (int size, **BaseNode**[] node)
- void **getValue** (**BaseNode**[] node)
- **BaseNode** **get1Value** (int index)
- String **toString** ()
- void **__fromPerl** (BufferedReader in) throws IOException
- void **__toPerl** (PrintWriter out) throws IOException

Additional Inherited Members

4.162.1 Detailed Description

Definition at line 10 of file ConstMFNode.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/ConstMFNode.java

4.163 vrml.field.ConstMFRotation Class Reference

Inheritance diagram for vrml.field.ConstMFRotation:



Public Member Functions

- **ConstMFRotation** (float[] rotations)
- **ConstMFRotation** (int size, float[] rotations)
- **ConstMFRotation** (float[][] rotations)
- void **getValue** (float[] rotations)
- void **getValue** (float[][] rotations)
- void **get1Value** (int index, float[] rotations)
- void **get1Value** (int index, **SFRotation** sfRotation)
- String **toString** ()
- void **__fromPerl** (BufferedReader in) throws IOException
- void **__toPerl** (PrintWriter out) throws IOException

Additional Inherited Members

4.163.1 Detailed Description

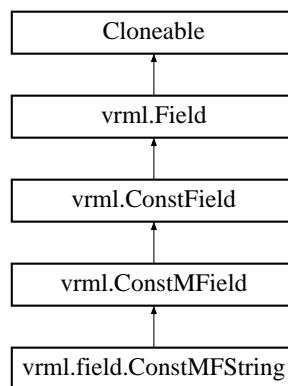
Definition at line 10 of file ConstMFRotation.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/ConstMFRotation.java

4.164 vrml.field.ConstMFString Class Reference

Inheritance diagram for vrml.field.ConstMFString:



Public Member Functions

- **ConstMFString** (String[] s)
- **ConstMFString** (int size, String[] s)
- void **getValue** (String[] s)
- String **get1Value** (int index)
- String **toString** ()
- void **__fromPerl** (BufferedReader in) throws IOException
- void **__toPerl** (PrintWriter out) throws IOException

Additional Inherited Members

4.164.1 Detailed Description

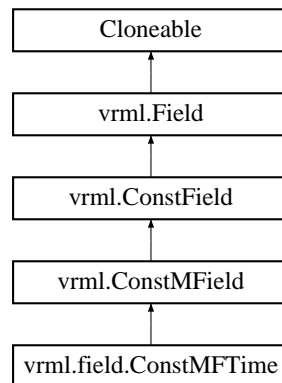
Definition at line 10 of file ConstMFString.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/ConstMFString.java

4.165 vrml.field.ConstMFTIME Class Reference

Inheritance diagram for vrml.field.ConstMFTIME:



Public Member Functions

- **ConstMFTIME** (double[] value)
- **ConstMFTIME** (int size, double[] value)
- void **getValue** (double[] value)
- double **get1Value** (int index)
- String **toString** ()
- void **__fromPerl** (BufferedReader in) throws IOException
- void **__toPerl** (PrintWriter out) throws IOException

Additional Inherited Members

4.165.1 Detailed Description

Definition at line 10 of file ConstMFTIME.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/ConstMFTIME.java

4.166 vrml.field.ConstMFVec2f Class Reference

Inheritance diagram for vrml.field.ConstMFVec2f:



Public Member Functions

- **ConstMFVec2f** (float[] vec2fs)
- **ConstMFVec2f** (int size, float[] vec2fs)
- **ConstMFVec2f** (float[][] vec2fs)
- void **getValue** (float[] vec2fs)
- void **getValue** (float[][] vec2fs)
- void **get1Value** (int index, float[] vec2fs)
- void **get1Value** (int index, **SFVec2f** sfVec2f)
- String **toString** ()
- void **__fromPerl** (BufferedReader in) throws IOException
- void **__toPerl** (PrintWriter out) throws IOException

Additional Inherited Members

4.166.1 Detailed Description

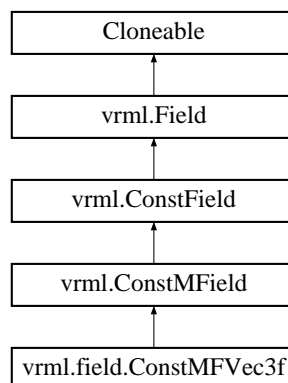
Definition at line 10 of file ConstMFVec2f.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/ConstMFVec2f.java

4.167 vrml.field.ConstMFVec3f Class Reference

Inheritance diagram for vrml.field.ConstMFVec3f:



Public Member Functions

- **ConstMFVec3f** (float[] vec3fs)
- **ConstMFVec3f** (int size, float[] vec3fs)
- **ConstMFVec3f** (float[][] vec3fs)
- void **getValue** (float[] vec3fs)
- void **getValue** (float[][] vec3fs)
- void **get1Value** (int index, float[] vec3fs)
- void **get1Value** (int index, **SFVec3f** sfVec3f)
- String **toString** ()
- void **__fromPerl** (BufferedReader in) throws IOException
- void **__toPerl** (PrintWriter out) throws IOException

Additional Inherited Members

4.167.1 Detailed Description

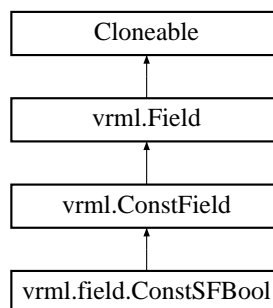
Definition at line 10 of file ConstMFVec3f.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/ConstMFVec3f.java

4.168 vrml.field.ConstSFBool Class Reference

Inheritance diagram for vrml.field.ConstSFBool:



Public Member Functions

- **ConstSFBool** (boolean value)
- boolean **getValue** ()
- String **toString** ()
- void **__fromPerl** (BufferedReader in) throws IOException
- void **__toPerl** (PrintWriter out) throws IOException

Additional Inherited Members

4.168.1 Detailed Description

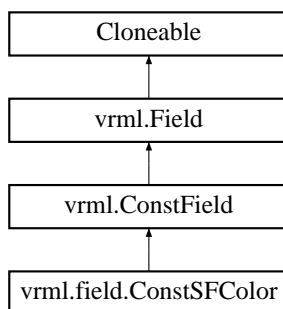
Definition at line 10 of file ConstSFBool.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/ConstSFBool.java

4.169 vrml.field.ConstSFCOLOR Class Reference

Inheritance diagram for vrml.field.ConstSFCOLOR:



Public Member Functions

- **ConstSFCOLOR** (float red, float green, float blue)
- void **getValue** (float[] values)
- float **getRed** ()
- float **getGreen** ()
- float **getBlue** ()
- String **toString** ()
- void **__fromPerl** (BufferedReader in) throws IOException
- void **__toPerl** (PrintWriter out) throws IOException

Additional Inherited Members

4.169.1 Detailed Description

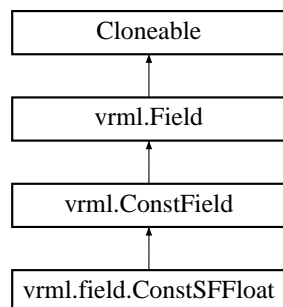
Definition at line 10 of file ConstSFCOLOR.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/ConstSFCOLOR.java

4.170 vrml.field.ConstSFFloat Class Reference

Inheritance diagram for vrml.field.ConstSFFloat:



Public Member Functions

- **ConstSFFloat** (float f)
- float **getValue** ()
- String **toString** ()
- void **__fromPerl** (BufferedReader in) throws IOException
- void **__toPerl** (PrintWriter out) throws IOException

Additional Inherited Members

4.170.1 Detailed Description

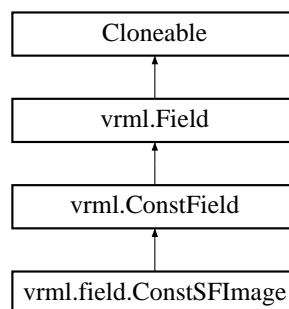
Definition at line 10 of file ConstSFFloat.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/ConstSFFloat.java

4.171 vrml.field.ConstSFImage Class Reference

Inheritance diagram for vrml.field.ConstSFImage:



Public Member Functions

- **ConstSFImage** (int width, int height, int components, byte[] pixels)
- int **getWidth** ()
- int **getHeight** ()
- int **getComponents** ()
- byte[] **getPixels** ()
- String **toString** ()
- void **__fromPerl** (BufferedReader in) throws IOException
- void **__toPerl** (PrintWriter out) throws IOException

Additional Inherited Members

4.171.1 Detailed Description

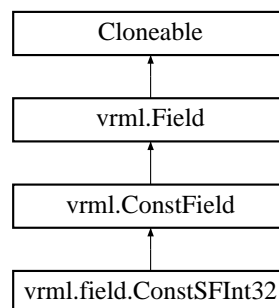
Definition at line 10 of file ConstSFImage.java.

The documentation for this class was generated from the following file:

- `src/java/vrml/field/ConstSFImage.java`

4.172 vrml.field.ConstSFInt32 Class Reference

Inheritance diagram for vrml.field.ConstSFInt32:



Public Member Functions

- **ConstSFInt32** (int value)
- int **getValue** ()
- String **toString** ()
- void **__fromPerl** (BufferedReader in) throws IOException
- void **__toPerl** (PrintWriter out) throws IOException

Additional Inherited Members

4.172.1 Detailed Description

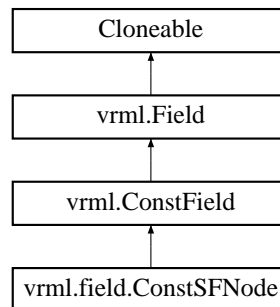
Definition at line 10 of file ConstSFInt32.java.

The documentation for this class was generated from the following file:

- `src/java/vrml/field/ConstSFInt32.java`

4.173 vrml.field.ConstSFNode Class Reference

Inheritance diagram for vrml.field.ConstSFNode:



Public Member Functions

- **ConstSFNode** (**BaseNode** node)
- **BaseNode** **getValue** ()
- String **toString** ()
- void **__fromPerl** (BufferedReader in) throws IOException
- void **__toPerl** (PrintWriter out) throws IOException

Additional Inherited Members

4.173.1 Detailed Description

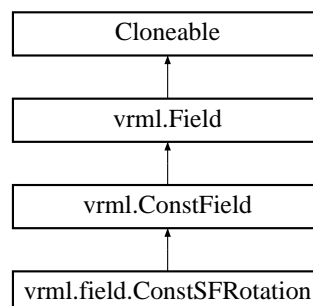
Definition at line 10 of file ConstSFNode.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/ConstSFNode.java

4.174 vrml.field.ConstSFRotation Class Reference

Inheritance diagram for vrml.field.ConstSFRotation:



Public Member Functions

- **ConstSFRotation** (float axisX, float axisY, float axisZ, float angle)
- void **getValue** (float[] values)
- String **toString** ()
- void **__fromPerl** (BufferedReader in) throws IOException
- void **__toPerl** (PrintWriter out) throws IOException

Additional Inherited Members

4.174.1 Detailed Description

Definition at line 10 of file ConstSFRotation.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/ConstSFRotation.java

4.175 vrml.field.ConstSFString Class Reference

Inheritance diagram for vrml.field.ConstSFString:



Public Member Functions

- **ConstSFString** (String s)
- String **getValue** ()
- String **toString** ()
- void **__fromPerl** (BufferedReader in) throws IOException
- void **__toPerl** (PrintWriter out) throws IOException

Additional Inherited Members

4.175.1 Detailed Description

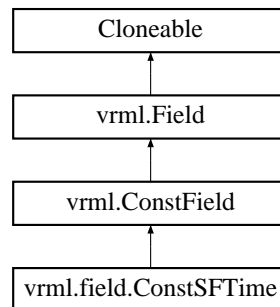
Definition at line 10 of file ConstSFString.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/ConstSFString.java

4.176 vrml.field.ConstSFTTime Class Reference

Inheritance diagram for vrml.field.ConstSFTTime:



Public Member Functions

- **ConstSFTTime** (double value)
- double **getValue** ()
- String **toString** ()
- void **__fromPerl** (BufferedReader in) throws IOException
- void **__toPerl** (PrintWriter out) throws IOException

Additional Inherited Members

4.176.1 Detailed Description

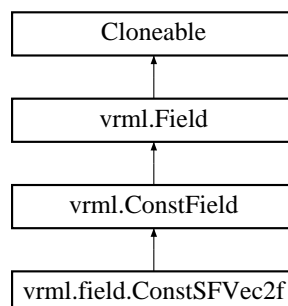
Definition at line 10 of file ConstSFTTime.java.

The documentation for this class was generated from the following file:

- `src/java/vrml/field/ConstSFTTime.java`

4.177 vrml.field.ConstSFVec2f Class Reference

Inheritance diagram for vrml.field.ConstSFVec2f:



Public Member Functions

- **ConstSFVec2f** (float x, float y)
- void **getValue** (float[] values)
- float **getX** ()
- float **getY** ()
- String **toString** ()
- void **__fromPerl** (BufferedReader in) throws IOException
- void **__toPerl** (PrintWriter out) throws IOException

Additional Inherited Members

4.177.1 Detailed Description

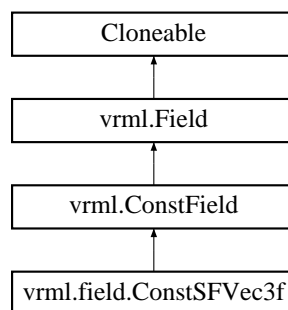
Definition at line 10 of file ConstSFVec2f.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/ConstSFVec2f.java

4.178 vrml.field.ConstSFVec3f Class Reference

Inheritance diagram for vrml.field.ConstSFVec3f:



Public Member Functions

- **ConstSFVec3f** (float x, float y, float z)
- void **getValue** (float[] values)
- float **getX** ()
- float **getY** ()
- float **getZ** ()
- String **toString** ()
- void **__fromPerl** (BufferedReader in) throws IOException
- void **__toPerl** (PrintWriter out) throws IOException

Additional Inherited Members

4.178.1 Detailed Description

Definition at line 10 of file ConstSFVec3f.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/ConstSFVec3f.java

4.179 contenttype_captiontext Struct Reference

Data Fields

- **tcontenttype t1**
- char * **caption**
- int **len**
- int * **utf32**
- int **len32**
- int **nalloc**
- AtlasFont * **font**
- char * **fontname**
- int **fontSize**
- **AtlasEntrySet * set**
- float **percentSize**
- int **EMpixels**
- int **maxadvancepx**
- float **angle**
- **vec4 color**

4.179.1 Detailed Description

Definition at line 731 of file MainLoop.c.

The documentation for this struct was generated from the following file:

- src/lib/main/MainLoop.c

4.180 contenttype_e3dmouse Struct Reference

Data Fields

- **tcontenttype t1**
- int **sphericalmode**
- int **navigationMode**
- int **dragMode**
- int **waste**

4.180.1 Detailed Description

Definition at line 1411 of file MainLoop.c.

The documentation for this struct was generated from the following file:

- src/lib/main/MainLoop.c

4.181 contenttype_layer Struct Reference

Data Fields

- tcontenttype t1

4.181.1 Detailed Description

Definition at line 1276 of file MainLoop.c.

The documentation for this struct was generated from the following file:

- src/lib/main/MainLoop.c

4.182 contenttype_multitouch Struct Reference

Data Fields

- tcontenttype t1
- struct Touch touchlist [20]
- int ntouch
- int IDD
- int lastbut

4.182.1 Detailed Description

Definition at line 1336 of file MainLoop.c.

The documentation for this struct was generated from the following file:

- src/lib/main/MainLoop.c

4.183 contenttype_orientation Struct Reference

Data Fields

- **tcontenttype t1**
- int **nx**
- int **ny**
- int **nelements**
- int **nvert**
- GLushort * **index**
- GLfloat * **vert**
- GLfloat * **vert2**
- GLfloat * **tex**
- GLfloat * **norm**
- GLfloat **dx**
- GLfloat **tx**
- GLuint **textureID**

4.183.1 Detailed Description

Definition at line 2706 of file MainLoop.c.

The documentation for this struct was generated from the following file:

- src/lib/main/MainLoop.c

4.184 contenttype_quadrant Struct Reference

Data Fields

- **tcontenttype t1**
- float **offset_fraction** [2]

4.184.1 Detailed Description

Definition at line 1519 of file MainLoop.c.

The documentation for this struct was generated from the following file:

- src/lib/main/MainLoop.c

4.185 contenttype_scene Struct Reference

Data Fields

- **tcontenttype t1**

4.185.1 Detailed Description

Definition at line 504 of file MainLoop.c.

The documentation for this struct was generated from the following file:

- src/lib/main/MainLoop.c

4.186 contenttype_splitter Struct Reference

Data Fields

- **tcontenttype t1**
- float **offset_fraction**
- int **offset_pixels**
- int **orientation**

4.186.1 Detailed Description

Definition at line 2112 of file MainLoop.c.

The documentation for this struct was generated from the following file:

- src/lib/main/MainLoop.c

4.187 contenttype_statusbar Struct Reference

Data Fields

- **tcontenttype t1**
- int **clipplane**

4.187.1 Detailed Description

Definition at line 549 of file MainLoop.c.

The documentation for this struct was generated from the following file:

- src/lib/main/MainLoop.c

4.188 contenttype_stereo_anaglyph Struct Reference

Data Fields

- **tcontenttype t1**

4.188.1 Detailed Description

Definition at line 1801 of file MainLoop.c.

The documentation for this struct was generated from the following file:

- src/lib/main/MainLoop.c

4.189 contenttype_stereo_shutter Struct Reference

Data Fields

- tcontenttype t1

4.189.1 Detailed Description

Definition at line 2002 of file MainLoop.c.

The documentation for this struct was generated from the following file:

- src/lib/main/MainLoop.c

4.190 contenttype_stereo_sidebyside Struct Reference

Data Fields

- tcontenttype t1

4.190.1 Detailed Description

Definition at line 1649 of file MainLoop.c.

The documentation for this struct was generated from the following file:

- src/lib/main/MainLoop.c

4.191 contenttype_stereo_updown Struct Reference

Data Fields

- tcontenttype t1

4.191.1 Detailed Description

Definition at line 1894 of file MainLoop.c.

The documentation for this struct was generated from the following file:

- src/lib/main/MainLoop.c

4.192 contenttype_switch Struct Reference

Data Fields

- **tcontenttype t1**
- int **whichCase**
- int * **whichPtr**

4.192.1 Detailed Description

Definition at line 647 of file MainLoop.c.

The documentation for this struct was generated from the following file:

- src/lib/main/MainLoop.c

4.193 contenttype_textpanel Struct Reference

Data Fields

- **tcontenttype t1**
- **AtlasEntrySet * set**
- **AtlasFont * font**
- char * **fontname**
- int **fontSize**
- int **maxadvancepx**
- **vec4 color**
- int **maxlines**
- int **maxlen**
- int **wrap**
- unsigned char * **Ablob**
- int **blobsize**
- unsigned char * **S**
- unsigned char * **E**
- unsigned char * **Z**
- unsigned char * **z**
- **BUTitem * Blist**
- **BUTitem * bhead**
- int **added**
- int **rowSize**
- unsigned char * **row**
- int **initialized**

4.193.1 Detailed Description

Definition at line 821 of file MainLoop.c.

The documentation for this struct was generated from the following file:

- src/lib/main/MainLoop.c

4.194 contenttype_texturegrid Struct Reference

Data Fields

- **tcontenttype t1**
- int **nx**
- int **ny**
- int **nelements**
- int **nvert**
- GLushort * **index**
- GLfloat * **vert**
- GLfloat * **vert2**
- GLfloat * **tex**
- GLfloat * **norm**
- GLfloat **dx**
- GLfloat **tx**
- float **k1**
- float **xc**
- int **usingDistortions**
- GLuint **textureID**

4.194.1 Detailed Description

Definition at line 2333 of file MainLoop.c.

The documentation for this struct was generated from the following file:

- src/lib/main/MainLoop.c

4.195 CoveAndTiler Class Reference

Inheritance diagram for CoveAndTiler:



Public Member Functions

- **CoveAndTiler** (**Backend** &)
- void **coveAndTile** (void)

Additional Inherited Members

4.195.1 Detailed Description

Definition at line 46 of file coveandtiler.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/coveandtiler.h
- src/libnurbs/internals/coveandtiler.cc

4.196 CPlugin Class Reference

Public Member Functions

- **CPlugin** (**NPP** pNPInstance)
CPlugin (p. 158) *class.constructor.*
- NPBool **init** (**NPWindow** *pNPWindow)
- void **shut** ()
- NPBool **isInitialized** ()
- int16_t **handleEvent** (void *event)
- void **showVersion** ()
- void **clear** ()
- void **getVersion** (char **aVersion)
- void **setSceneUrl** (char *sceneUrl)
- void **setEAIFlag** ()
- **NPObject** * **GetScriptableObject** ()

Data Fields

- char **m_String** [128]
- UINT_PTR **m_pTimerID**

4.196.1 Detailed Description

Definition at line 46 of file plugin.h.

4.196.2 Constructor & Destructor Documentation

4.196.2.1 CPlugin()

```
CPlugin::CPlugin (
    NPP pNPInstance )
```

CPlugin (p. 158) class.constructor.

Base initialization goes here.

Definition at line 73 of file plugin.cpp.

The documentation for this class was generated from the following files:

- src/plugin_win32/plugin.h
- src/plugin_win32/plugin.cpp

4.197 CR_RegStruct Struct Reference

Data Fields

- int **adrem**
- struct **X3D_Node** * **from**
- int **fromoffset**
- struct **X3D_Node** * **to**
- int **toOfs**
- int **fieldType**
- void * **intptr**
- int **sccdir**
- void * **extra**

4.197.1 Detailed Description

Definition at line 177 of file CRoutes.c.

The documentation for this struct was generated from the following file:

- src/lib/vrml_parser/CRoutes.c

4.198 CreateEntityPdu Struct Reference

Data Fields

- struct **SimulationManagementFamilyPdu** mySimulationManagementFamilyPdu
- unsigned int **requestID**
Identifier for the request.

4.198.1 Detailed Description

Definition at line 869 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.199 CreateEntityReliablePdu Struct Reference

Data Fields

- struct **SimulationManagementWithReliabilityFamilyPdu** mySimulationManagementWithReliability↔
FamilyPdu
- unsigned char **requiredReliabilityService**
level of reliability service used for this transaction
- unsigned short **pad1**
padding
- unsigned char **pad2**
padding
- unsigned int **requestID**
Request ID.

4.199.1 Detailed Description

Definition at line 1977 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.200 CRjsnameStruct Struct Reference

Data Fields

- int **type**
- int **kind**
- char **name** [MAXJSVARIABLELENGTH]
- void * **eventInFunction**

4.200.1 Detailed Description

Definition at line 186 of file CScripts.h.

The documentation for this struct was generated from the following file:

- src/lib/world_script/CScripts.h

4.201 CRscriptStruct Struct Reference

Data Fields

- int **thisScriptType**
- int **_initialized**
- void * **cx**
- void * **glob**
- void * **eventsProcessed**
- char * **scriptText**
- struct **ScriptParamList** * **paramList**
- int **scriptOK**
- struct **Shader_Script** * **script**
- int **scr_act**

4.201.1 Detailed Description

Definition at line 154 of file CScripts.h.

The documentation for this struct was generated from the following file:

- src/lib/world_script/CScripts.h

4.202 CRStruct Struct Reference

Data Fields

- struct **X3D_Node** * **routeFromNode**
- int **fnptr**
- int **tonode_count**
- **CRnodeStruct** * **tonodes**
- int **isActive**
- int **len**
- void(* **interpptr**)(void *)
- int **direction_flag**
- void * **extra**
- int **intTimeStamp**

4.202.1 Detailed Description

Definition at line 44 of file CRoutes.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml_parser/CRoutes.h

4.203 cson_array Struct Reference

cson_array (p. 162) is an opaque handle to an Array value.

```
#include <cson_amalgamation_core.h>
```

Data Fields

- **cson_value_list** list

4.203.1 Detailed Description

cson_array (p. 162) is an opaque handle to an Array value.

They are used like:

```
cson_array * obj = cson_value_get_array(myValue);  
...
```

They can be created like:

```
cson_value * arV = cson_value_new_array();  
cson_array * ar = cson_value_get_array(arV);  
// ar is owned by arV and arV must eventually be freed  
// using cson_value_free() or added to a container  
// object/array (which transfers ownership to that container).
```

See also

```
cson_value_new_array()  
cson_value_get_array()  
cson_value_free()
```

Definition at line 2142 of file cson_amalgamation_core.c.

The documentation for this struct was generated from the following file:

- src/SSR/cson/cson_amalgamation_core.c

4.204 cson_buffer Struct Reference

A generic buffer class.

```
#include <cson_amalgamation_core.h>
```

Data Fields

- **cson_size_t** **capacity**
The number of bytes allocated for this object.
- **cson_size_t** **used**
The number of bytes "used" by this object.
- **cson_size_t** **timesExpanded**
This is a debugging/metric-counting value intended to help certain malloc()-conscious clients tweak their memory reservation sizes.
- **unsigned char *** **mem**
The memory allocated for and owned by this buffer.

4.204.1 Detailed Description

A generic buffer class.

They can be used like this:

```
cson_buffer b = cson_buffer_empty;
int rc = cson_buffer_reserve( &buf, 100 );
if( 0 != rc ) { ... allocation error ... }
... use buf.mem ...
... then free it up ...
cson_buffer_reserve( &buf, 0 );
```

To take over ownership of a buffer's memory:

```
void * mem = b.mem;
// mem is b.capacity bytes long, but only b.used
// bytes of it has been "used" by the API.
b = cson_buffer_empty;
```

The memory now belongs to the caller and must eventually be free()d.

Definition at line 1826 of file cson_amalgamation_core.h.

4.204.2 Field Documentation

4.204.2.1 capacity

```
cson_size_t cson_buffer::capacity
```

The number of bytes allocated for this object.

Use cson_buffer_reserve() to change its value.

Definition at line 1832 of file cson_amalgamation_core.h.

4.204.2.2 mem

```
unsigned char* cson_buffer::mem
```

The memory allocated for and owned by this buffer.

Use cson_buffer_reserve() to change its size or free it. To take over ownership, do:

```
void * myptr = buf.mem;
buf = cson_buffer_empty;
```

(You might also need to store buf.used and buf.capacity, depending on what you want to do with the memory.)

When doing so, the memory must eventually be passed to free() to deallocate it.

Definition at line 1868 of file cson_amalgamation_core.h.

4.204.2.3 timesExpanded

```
cson_size_t cson_buffer::timesExpanded
```

This is a debugging/metric-counting value intended to help certain malloc()-conscious clients tweak their memory reservation sizes.

Each time `cson_buffer_reserve()` expands the buffer, it increments this value by 1.

Definition at line 1850 of file `cson_amalgamation_core.h`.

4.204.2.4 used

```
cson_size_t cson_buffer::used
```

The number of bytes "used" by this object.

It is not needed for all use cases, and management of this value (if needed) is up to the client. The **`cson_buffer`** (p. 162) public API does not use this member. The intention is that this can be used to track the length of strings which are allocated via **`cson_buffer`** (p. 162), since they need an explicit length and/or null terminator.

Definition at line 1841 of file `cson_amalgamation_core.h`.

The documentation for this struct was generated from the following file:

- `src/SSR/cson/cson_amalgamation_core.h`

4.205 cson_data_source_StringSource_ Struct Reference

Internal type to hold state for a JSON input string.

Data Fields

- `char const * str`
Start of input string.
- `char const * pos`
Current iteration position.
- `char const * end`
Logical EOF, one-past-the-end of str.

4.205.1 Detailed Description

Internal type to hold state for a JSON input string.

Definition at line 4325 of file `cson_amalgamation_core.c`.

4.205.2 Field Documentation

4.205.2.1 pos

```
char const* cson_data_source_StringSource_::pos
```

Current iteration position.

Must initially be == str.

Definition at line 4330 of file cson_amalgamation_core.c.

The documentation for this struct was generated from the following file:

- src/SSR/cson/cson_amalgamation_core.c

4.206 cson_kvp Struct Reference

A key/value pair collection.

```
#include <cson_amalgamation_core.h>
```

Data Fields

- **cson_value * key**
- **cson_value * value**

4.206.1 Detailed Description

A key/value pair collection.

This class represents a key/value pair and is used for storing object properties.

Each of these objects owns its key/value pointers, and they are cleaned up by cson_kvp_clean().

It is opaque to client code, and the public API only uses this type for purposes of iterating over **cson_object** (p. 166) properties using the **cson_object_iterator** (p. 167) interfaces.

Definition at line 2022 of file cson_amalgamation_core.c.

The documentation for this struct was generated from the following file:

- src/SSR/cson/cson_amalgamation_core.c

4.207 cson_kvp_list Struct Reference

Data Fields

- **cson_kvp** ** list
- unsigned int **count**
- unsigned int **allocated**

4.207.1 Detailed Description

Definition at line 2114 of file cson_amalgamation_core.c.

The documentation for this struct was generated from the following file:

- src/SSR/cson/cson_amalgamation_core.c

4.208 cson_object Struct Reference

cson_object (p. 166) is an opaque handle to an Object value.

```
#include <cson_amalgamation_core.h>
```

Data Fields

- **cson_kvp_list** kvp

4.208.1 Detailed Description

cson_object (p. 166) is an opaque handle to an Object value.

They are used like:

```
cson_object * obj = cson_value_get_object(myValue);  
...
```

They can be created like:

```
cson_value * objV = cson_value_new_object();  
cson_object * obj = cson_value_get_object(objV);  
// obj is owned by objV and objV must eventually be freed  
// using cson_value_free() or added to a container  
// object/array (which transfers ownership to that container).
```

See also

```
cson_value_new_object()  
cson_value_get_object()  
cson_value_free()
```

Definition at line 2124 of file cson_amalgamation_core.c.

The documentation for this struct was generated from the following file:

- src/SSR/cson/cson_amalgamation_core.c

4.209 cson_object_iterator Struct Reference

An iterator type for traversing object properties.

```
#include <cson_amalgamation_core.h>
```

Data Fields

- **cson_object** const * **obj**
- unsigned int **pos**

4.209.1 Detailed Description

An iterator type for traversing object properties.

Its values must be considered private, not to be touched by client code.

See also

```
cson_object_iter_init()
cson_object_iter_next()
```

Definition at line 1699 of file cson_amalgamation_core.h.

The documentation for this struct was generated from the following file:

- src/SSR/cson/cson_amalgamation_core.h

4.210 cson_output_opt Struct Reference

Client-configurable options for the cson_output() family of functions.

```
#include <cson_amalgamation_core.h>
```

Data Fields

- unsigned char **indentation**
Specifies how to indent (or not) output.
- unsigned short **maxDepth**
Maximum object/array depth to traverse.
- char **addNewline**
If true, a newline will be added to generated output, else not.
- char **addSpaceAfterColon**
If true, a space will be added after the colon operator in objects' key/value pairs.
- char **indentSingleMemberValues**
If set to 1 then objects/arrays containing only a single value will not indent an extra level for that value (but will indent on subsequent levels if that value contains multiple values).
- char **escapeForwardSlashes**
The JSON format allows, but does not require, JSON generators to backslash-escape forward slashes.

4.210.1 Detailed Description

Client-configurable options for the `cson_output()` family of functions.

Definition at line 517 of file `cson_amalgamation_core.h`.

4.210.2 Field Documentation

4.210.2.1 `escapeForwardSlashes`

```
char cson_output_opt::escapeForwardSlashes
```

The JSON format allows, but does not require, JSON generators to backslash-escape forward slashes.

This option enables/disables that feature. According to JSON's inventor, Douglas Crockford:

<quote> It is allowed, not required. It is allowed so that JSON can be safely embedded in HTML, which can freak out when seeing strings containing "</". JSON tolerates "<\\" for this reason. </quote>

(from an email on 2011-04-08)

The default value is 0 (because it's just damned ugly).

Definition at line 572 of file `cson_amalgamation_core.h`.

4.210.2.2 `indentation`

```
unsigned char cson_output_opt::indentation
```

Specifies how to indent (or not) output.

The values are:

(0) == no extra indentation.

(1) == 1 TAB character for each level.

(>1) == that number of SPACES for each level.

Definition at line 529 of file `cson_amalgamation_core.h`.

4.210.2.3 maxDepth

```
unsigned short cson_output_opt::maxDepth
```

Maximum object/array depth to traverse.

Traversing deeply can be indicative of cycles in the object/array tree, and this value is used to figure out when to abort the traversal.

Definition at line 536 of file cson_amalgamation_core.h.

The documentation for this struct was generated from the following file:

- src/SSR/cson/cson_amalgamation_core.h

4.211 cson_parse_info Struct Reference

A class for holding JSON parser information.

```
#include <cson_amalgamation_core.h>
```

Data Fields

- unsigned int **line**
1-based line number.
- unsigned int **col**
0-based column number.
- unsigned int **length**
Length, in bytes.
- int **errorCode**
Error code of the parse run (0 for no error).
- unsigned int **totalKeyCount**
The total number of object keys successfully processed by the parser.
- unsigned int **totalValueCount**
The total number of object/array values successfully processed by the parser, including the root node.

4.211.1 Detailed Description

A class for holding JSON parser information.

It is primarily intended for finding the position of a parse error.

Definition at line 458 of file cson_amalgamation_core.h.

The documentation for this struct was generated from the following file:

- src/SSR/cson/cson_amalgamation_core.h

4.212 cson_parse_opt Struct Reference

Client-configurable options for the cson_parse() family of functions.

```
#include <cson_amalgamation_core.h>
```

Data Fields

- unsigned short **maxDepth**
Maximum object/array depth to traverse.
- char **allowComments**
Whether or not to allow C-style comments.

4.212.1 Detailed Description

Client-configurable options for the cson_parse() family of functions.

Definition at line 433 of file cson_amalgamation_core.h.

4.212.2 Field Documentation

4.212.2.1 allowComments

```
char cson_parse_opt::allowComments
```

Whether or not to allow C-style comments.

Do not rely on this option being available. If the underlying parser is replaced, this option might no longer be supported.

Definition at line 444 of file cson_amalgamation_core.h.

The documentation for this struct was generated from the following file:

- src/SSR/cson/cson_amalgamation_core.h

4.213 cson_parser Struct Reference

Data Fields

- **JSON_parser** p
- **cson_value** * root
- **cson_value** * node
- **cson_array** stack
- **cson_string** * ckey
- int **errNo**
- unsigned int **totalKeyCount**
- unsigned int **totalValueCount**

4.213.1 Detailed Description

Definition at line 2151 of file cson_amalgamation_core.c.

The documentation for this struct was generated from the following file:

- src/SSR/cson/cson_amalgamation_core.c

4.214 cson_string Struct Reference

Strings are allocated as an instances of this class with N+1 trailing bytes, where N is the length of the string being allocated.

```
#include <cson_amalgamation_core.h>
```

Data Fields

- unsigned int **length**

4.214.1 Detailed Description

Strings are allocated as an instances of this class with N+1 trailing bytes, where N is the length of the string being allocated.

cson-internal string type, opaque to client code.

To convert a **cson_string** (p. 171) to c-string we simply increment the **cson_string** (p. 171) pointer. To do the opposite we use (cstr - sizeof(cson_string)). Zero-length strings are a special case handled by a couple of the **cson_string** (p. 171) functions.

Strings in cson are immutable and allocated only by library internals, never directly by client code.

The actual string bytes are to be allocated together in the same memory chunk as the **cson_string** (p. 171) object, which saves us 1 malloc() and 1 pointer member in this type (because we no longer have a direct pointer to the memory).

Potential TODOs:

See also

`cson_string_cstr()`

Definition at line 1578 of file cson_amalgamation_core.c.

The documentation for this struct was generated from the following file:

- src/SSR/cson/cson_amalgamation_core.c

4.215 cson_value Struct Reference

The core value type of this API.

```
#include <cson_amalgamation_core.h>
```

Data Fields

- **cson_value_api** const * **api**
The "vtbl" of type-specific operations.
- void * **value**
The raw value.
- cson_counter_t **refcount**
*We use this to allow us to store **cson_value** (p. 172) instances in multiple containers or multiple times within a single container (provided no cycles are introduced).*

4.215.1 Detailed Description

The core value type of this API.

It is opaque to clients, and only the cson public API should be used for setting or inspecting their values.

This class is opaque because stack-based usage can easily cause leaks if one does not intimately understand the underlying internal memory management (which sometimes changes).

It is (as of 20110323) legal to insert a given value instance into multiple containers (they will share ownership using reference counting) as long as those insertions do not cause cycles. However, be very aware that such value re-use uses a reference to the original copy, meaning that if its value is changed once, it is changed everywhere. Also beware that multi-threaded write operations on such references leads to undefined behaviour.

PLEASE read the ACHTUNGEN below...

ACHTUNG #1:

cson_values MUST NOT form cycles (e.g. via object or array entries).

Not abiding th Holy Law Of No Cycles will lead to double-frees and the like (i.e. undefined behaviour, likely crashes due to infinite recursion or stepping on invalid (freed) pointers).

ACHTUNG #2:

ALL cson_values returned as non-const **cson_value** (p. 172) pointers from any public functions in the cson API are to be treated as if they are heap-allocated, and MUST be freed by client by doing ONE of:

- Passing it to cson_value_free().
- Adding it to an Object or Array, in which case the object/array takes over ownership. As of 20110323, a value may be inserted into a single container multiple times, or into multiple containers, in which case they all share ownership (via reference counting) of the original value (meaning any changes to it are visible in all references to it).

Each call to `cson_value_new_xxx()` MUST eventually be followed up by one of those options.

Some `cson_value_new_XXX()` implementations do not actually allocate memory, but this is an internal implementation detail. Client code MUST NOT rely on this behaviour and MUST treat each object returned by such a function as if it was a freshly-allocated copy (even if their pointer addresses are the same).

ACHTUNG #3:

Note that ACHTUNG #2 tells us that we must always free (or transfer ownership of) all pointers returned by `cson_value_new_xxx()`, but that two calls to (e.g.) `cson_value_new_bool(1)` will (or might) return the same address. The client must not rely on the "non-allocation" policy of such special cases, and must pass each returned value to `cson_value_free()`, even if two of them have the same address. Some special values (e.g. null, true, false, integer 0, double 0.0, and empty strings) use shared copies and in other places reference counting is used internally to figure out when it is safe to destroy an object.

See also

- `cson_value_new_array()`
- `cson_value_new_object()`
- `cson_value_new_string()`
- `cson_value_new_integer()`
- `cson_value_new_double()`
- `cson_value_new_bool()`
- `cson_value_true()`
- `cson_value_false()`
- `cson_value_null()`
- `cson_value_free()`
- `cson_value_type_id()`

Definition at line 1486 of file `cson_amalgamation_core.c`.

4.215.2 Field Documentation

4.215.2.1 api

```
cson_value_api const* cson_value::api
```

The "vtbl" of type-specific operations.

All instances of a given logical value type share a single `api` instance.

Results are undefined if this value is NULL.

Definition at line 1493 of file `cson_amalgamation_core.c`.

4.215.2.2 refcount

```
cson_counter_t cson_value::refcount
```

We use this to allow us to store **cson_value** (p. 172) instances in multiple containers or multiple times within a single container (provided no cycles are introduced).

Notes about the rc implementation:

- The refcount is for the **cson_value** (p. 172) instance itself, not its value pointer.
- Instances start out with a refcount of 0 (not 1). Adding them to a container will increase the refcount. Cleaning up the container will decrement the count.
- `cson_value_free()` decrements the refcount (if it is not already 0) and cleans/frees the value only when the refcount is 0.
- Some places in the internals add an "extra" reference to objects to avoid a premature deletion. Don't try this at home.

Definition at line 1526 of file `cson_amalgamation_core.c`.

4.215.2.3 value

```
void* cson_value::value
```

The raw value.

Its interpretation depends on the value of the `api` member. Some value types require dynamically-allocated memory, so one must always call `cson_value_free()` to destroy a value when it is no longer needed. For stack-allocated values (which client could **SHOULD NOT USE** unless they are intimately familiar with the memory management rules and don't mind an occasional leak or crash), use `cson_value_clean()` instead of `cson_value_free()`.

Definition at line 1504 of file `cson_amalgamation_core.c`.

The documentation for this struct was generated from the following file:

- `src/SSR/cson/cson_amalgamation_core.c`

4.216 cson_value_api Struct Reference

This type holds the "vtbl" for type-specific operations when working with **cson_value** (p. 172) objects.

Data Fields

- `const cson_type_id typeId`
The logical JavaScript/JSON type associated with this object.
- `void(* cleanup)(cson_value *self)`
Must free any memory associated with self, but not free self.

4.216.1 Detailed Description

This type holds the "vtbl" for type-specific operations when working with **cson_value** (p. 172) objects.

All **cson_value**s of a given logical type share a pointer to a single library-internal instance of this class.

Definition at line 1443 of file `cson_amalgamation_core.c`.

4.216.2 Field Documentation

4.216.2.1 cleanup

```
void(* cson_value_api::cleanup) ( cson_value *self)
```

Must free any memory associated with `self`, but not free `self`.

If `self` is `NULL` then this function must do nothing.

Definition at line 1455 of file `cson_amalgamation_core.c`.

The documentation for this struct was generated from the following file:

- `src/SSR/cson/cson_amalgamation_core.c`

4.217 cson_value_list Struct Reference

Data Fields

- **cson_value ** list**
- unsigned int **count**
- unsigned int **allocated**

4.217.1 Detailed Description

Definition at line 2132 of file `cson_amalgamation_core.c`.

The documentation for this struct was generated from the following file:

- `src/SSR/cson/cson_amalgamation_core.c`

4.218 curfile64_info Struct Reference

Data Fields

- z_stream **stream**
- int **stream_initialised**
- ulInt **pos_in_buffered_data**
- ZPOS64_T **pos_local_header**
- char * **central_header**
- uLong **size_centralExtra**
- uLong **size_centralheader**
- uLong **size_centralExtraFree**
- uLong **flag**
- int **method**
- int **raw**
- Byte **buffered_data** [Z_BUFSIZE]
- uLong **dosDate**
- uLong **crc32**
- int **encrypt**
- int **zip64**
- ZPOS64_T **pos_zip64extrainfo**
- ZPOS64_T **totalCompressedData**
- ZPOS64_T **totalUncompressedData**
- unsigned long **keys** [3]
- const unsigned long * **pcrc_32_tab**
- int **crypt_header_size**

4.218.1 Detailed Description

Definition at line 130 of file zip.c.

The documentation for this struct was generated from the following file:

- src/libminizip/zip.c

4.219 currayhit Struct Reference

Data Fields

- struct **X3D_Node** * **hitNode**
- GLDOUBLE **modelMatrix** [16]
- GLDOUBLE **projMatrix** [16]
- GLDOUBLE **justModel** [16]

4.219.1 Detailed Description

Definition at line 39 of file RenderFuncs.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/RenderFuncs.h

4.220 Curve Class Reference

Public Member Functions

- **Curve** (**Quilt** *, **REAL**, **REAL**, **Curve** *)
- **Curve** (**Curve** &, **REAL**, **Curve** *)

Data Fields

- **Curve** * **next**

Friends

- class **Curvelist**

4.220.1 Detailed Description

Definition at line 46 of file curve.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/curve.h
- src/libnurbs/internals/curve.cc

4.221 curveEvalMachine Struct Reference

Data Fields

- **REAL** **uprime**
- **int** **k**
- **REAL** **u1**
- **REAL** **u2**
- **int** **ustride**
- **int** **uorder**
- **REAL** **ctlpoints** [**IN_MAX_BEZIER_ORDER** * **IN_MAX_DIMENSION**]
- **REAL** **ucoeff** [**IN_MAX_BEZIER_ORDER**]

4.221.1 Detailed Description

Definition at line 56 of file glcurveval.h.

The documentation for this struct was generated from the following file:

- src/libnurbs/interface/glcurveval.h

4.222 Curvelist Class Reference

Public Member Functions

- **Curvelist** (**Quilt** *, **REAL**, **REAL**)
- **Curvelist** (**Curvelist** &, **REAL**)
- **int cullCheck** (void)
- **void getstepsize** (void)
- **int needsSamplingSubdivision** ()

Friends

- class **Subdivider**

4.222.1 Detailed Description

Definition at line 46 of file curvelist.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/curvelist.h
- src/libnurbs/internals/curvelist.cc

4.223 damper_ptr Struct Reference

Data Fields

- void * **value_changed**
- void * **initialDestination**
- void * **initialValue**
- void * **set_destination**
- void * **set_value**
- void * **_values**
- void * **_input**

4.223.1 Detailed Description

Definition at line 176 of file Component_Followers.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component_Followers.c

4.224 DataPdu Struct Reference

Data Fields

- struct **SimulationManagementFamilyPdu** mySimulationManagementFamilyPdu
- unsigned int **requestID**
ID of request.
- unsigned int **padding1**
padding
- unsigned int **numberOfFixedDatumRecords**
Number of fixed datum records.
- unsigned int **numberOfVariableDatumRecords**
Number of variable datum records.
- void * **fixedDatums**
variable length list of fixed datums
- void * **variableDatums**
variable length list of variable length datums

4.224.1 Detailed Description

Definition at line 1407 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.225 DataQueryPdu Struct Reference

Data Fields

- struct **SimulationManagementFamilyPdu** mySimulationManagementFamilyPdu
- unsigned int **requestID**
ID of request.
- unsigned int **timeInterval**
time issues between issues of Data PDUs.
- unsigned int **numberOfFixedDatumRecords**
Number of fixed datum records.
- unsigned int **numberOfVariableDatumRecords**
Number of variable datum records.
- void * **fixedDatums**
variable length list of fixed datums
- void * **variableDatums**
variable length list of variable length datums

4.225.1 Detailed Description

Definition at line 815 of file DIS.h.

4.225.2 Field Documentation

4.225.2.1 timeInterval

```
unsigned int DataQueryPdu::timeInterval
```

time issues between issues of Data PDUs.

Zero means send once only.

Definition at line 820 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.226 DataQueryReliablePdu Struct Reference

Data Fields

- struct **SimulationManagementWithReliabilityFamilyPdu** **mySimulationManagementWithReliability**↔
FamilyPdu
- unsigned char **requiredReliabilityService**
level of reliability service used for this transaction
- unsigned short **pad1**
padding
- unsigned char **pad2**
padding
- unsigned int **requestID**
request ID
- unsigned int **timeInterval**
time interval between issuing data query PDUs
- unsigned int **numberOfFixedDatumRecords**
Fixed datum record count.
- unsigned int **numberOfVariableDatumRecords**
variable datum record count
- void * **fixedDatumRecords**
Fixed datum records.
- void * **variableDatumRecords**
Variable datum records.

4.226.1 Detailed Description

Definition at line 1570 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.227 DataReliablePdu Struct Reference

Data Fields

- struct **SimulationManagementWithReliabilityFamilyPdu** **mySimulationManagementWithReliabilityFamilyPdu**↔
- unsigned int **requestID**
Request ID.
- unsigned char **requiredReliabilityService**
level of reliability service used for this transaction
- unsigned short **pad1**
padding
- unsigned char **pad2**
padding
- unsigned int **numberOfFixedDatumRecords**
Fixed datum record count.
- unsigned int **numberOfVariableDatumRecords**
variable datum record count
- void * **fixedDatumRecords**
Fixed datum records.
- void * **variableDatumRecords**
Variable datum records.

4.227.1 Detailed Description

Definition at line 1689 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.228 datChnk Struct Reference

Data Fields

- char **chunkID** [4]
- int32_t **chunkSize**

4.228.1 Detailed Description

Definition at line 65 of file soundheader.h.

The documentation for this struct was generated from the following file:

- src/sound/soundheader.h

4.229 dct_dc_size_entry Struct Reference

Data Fields

- unsigned int **value**
- int **num_bits**

4.229.1 Detailed Description

Definition at line 795 of file mpeg_berkley.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/mpeg_berkley.h

4.230 DDS_header Union Reference

Data Fields

- ```

struct {
 unsigned int dwMagic
 unsigned int dwSize
 unsigned int dwFlags
 unsigned int dwHeight
 unsigned int dwWidth
 unsigned int dwPitchOrLinearSize
 unsigned int dwDepth
 unsigned int dwMipMapCount
 unsigned int dwReserved1 [11]
 struct {
 unsigned int dwSize
 unsigned int dwFlags
 unsigned int dwFourCC
 unsigned int dwRGBBitCount
 unsigned int dwRBitMask
 unsigned int dwGBitMask
 unsigned int dwBBitMask
 unsigned int dwAlphaBitMask
 } sPixelFormat
 struct {
 unsigned int dwCaps1
 unsigned int dwCaps2
 unsigned int dwDD SX
 unsigned int dwReserved
 } sCaps
 unsigned int dwReserved2
};

• char data [128]
```

### 4.230.1 Detailed Description

Definition at line 460 of file Component\_CubeMapTexturing.c.

The documentation for this union was generated from the following file:

- src/lib/scenegraph/Component\_CubeMapTexturing.c

## 4.231 DdsLoadInfo Struct Reference

### Data Fields

- bool **compressed**
- bool **swap**
- bool **palette**
- unsigned int **divSize**
- unsigned int **blockBytes**
- GLenum **internalFormat**
- GLenum **externalFormat**
- GLenum **type**

### 4.231.1 Detailed Description

Definition at line 499 of file Component\_CubeMapTexturing.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_CubeMapTexturing.c

## 4.232 DeadReckoningParameter Struct Reference

### Data Fields

- unsigned char **deadReckoningAlgorithm**  
*enumeration of what dead reckoning algorithm to use*
- char **otherParameters** [15]  
*other parameters to use in the dead reckoning algorithm*
- struct **Vector3Float** **entityLinearAcceleration**  
*Linear acceleration of the entity.*
- struct **Vector3Float** **entityAngularVelocity**  
*angular velocity of the entity*

### 4.232.1 Detailed Description

Definition at line 734 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.233 depth\_slice Struct Reference

### Data Fields

- double **znear**
- double **zfar**

### 4.233.1 Detailed Description

Definition at line 3241 of file OpenGL\_Utils.c.

The documentation for this struct was generated from the following file:

- src/lib/opengl/OpenGL\_Utils.c

## 4.234 DesignatorPdu Struct Reference

### Data Fields

- struct **DistributedEmissionsFamilyPdu** **myDistributedEmissionsFamilyPdu**
- struct **EntityID** **designatingEntityID**  
*ID of the entity designating.*
- unsigned short **codeName**  
*This field shall specify a unique emitter database number assigned to differentiate between otherwise similar or identical emitter beams within an emitter system.*
- struct **EntityID** **designatedEntityID**  
*ID of the entity being designated.*
- unsigned short **designatorCode**  
*This field shall identify the designator code being used by the designating entity*
- float **designatorPower**  
*This field shall identify the designator output power in watts.*
- float **designatorWavelength**  
*This field shall identify the designator wavelength in units of microns.*
- struct **Vector3Float** **designatorSpotWrtDesignated**  
*designator spot wrt the designated entity*
- struct **Vector3Double** **designatorSpotLocation**  
*designator spot wrt the designated entity*
- char **deadReckoningAlgorithm**  
*Dead reckoning algorithm.*
- unsigned short **padding1**  
*padding*
- char **padding2**  
*padding*
- struct **Vector3Float** **entityLinearAcceleration**  
*linear acceleration of entity*

### 4.234.1 Detailed Description

Definition at line 1109 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.235 DetonationPdu Struct Reference

### Data Fields

- struct **WarfareFamilyPdu** myWarfareFamilyPdu
- struct **EntityID** munitionID  
*ID of munition that was fired.*
- struct **EventID** eventID  
*ID firing event.*
- struct **Vector3Float** velocity  
*ID firing event.*
- struct **Vector3Double** locationInWorldCoordinates  
*where the detonation is, in world coordinates*
- struct **BurstDescriptor** burstDescriptor  
*Describes munition used.*
- struct **Vector3Float** locationInEntityCoordinates  
*location of the detonation or impact in the target entity's coordinate system.*
- unsigned char **detonationResult**  
*result of the explosion*
- unsigned char **numberOfArticulationParameters**  
*How many articulation parameters we have.*
- short **pad**  
*padding*
- void \* **articulationParameters**

### 4.235.1 Detailed Description

Definition at line 1736 of file DIS.h.

### 4.235.2 Field Documentation

#### 4.235.2.1 locationInEntityCoordinates

```
struct Vector3Float DetonationPdu::locationInEntityCoordinates
```

location of the detonation or impact in the target entity's coordinate system.

This information should be used for damage assessment.

Definition at line 1732 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.236 Dict Struct Reference

### Data Fields

- **DictNode** head
- void \* **frame**
- int(\* **leq** )(void \*frame, DictKey key1, DictKey key2)

#### 4.236.1 Detailed Description

Definition at line 94 of file dict-list.h.

The documentation for this struct was generated from the following files:

- src/libtess/dict-list.h
- src/libtess/dict.h

## 4.237 DictNode Struct Reference

### Data Fields

- DictKey **key**
- **DictNode** \* **next**
- **DictNode** \* **prev**

#### 4.237.1 Detailed Description

Definition at line 88 of file dict-list.h.

The documentation for this struct was generated from the following files:

- src/libtess/dict-list.h
- src/libtess/dict.h

## 4.238 directedLine Class Reference

### Public Member Functions

- **directedLine** (short dir, **sampledLine** \*sl)
- void **init** (short dir, **sampledLine** \*sl)
- **Real** \* **head** ()
- **Real** \* **tail** ()
- **Real** \* **getVertex** (Int i)
- Int **get\_npoints** ()
- **directedLine** \* **getPrev** ()
- **directedLine** \* **getNext** ()
- **directedLine** \* **getNextPolygon** ()
- **sampledLine** \* **getSampledLine** ()
- short **getDirection** ()
- void **putDirection** (short dir)
- void **putPrev** ( **directedLine** \*p)
- void **putNext** ( **directedLine** \*p)
- void **insert** ( **directedLine** \*nl)
- void **deletePolygonList** ()
- void **deleteSinglePolygon** ()
- void **deleteSinglePolygonWithSline** ()
- void **deletePolygonListWithSline** ()
- void **deleteSingleLine** ( **directedLine** \*dline)
- **directedLine** \* **deleteDegenerateLines** ()
- **directedLine** \* **deleteDegenerateLinesAllPolygons** ()
- **directedLine** \* **cutIntersectionAllPoly** (int &cutOccur)
- short **isPolygon** ()
- Int **complnY** ( **directedLine** \*nl)
- Int **complnX** ( **directedLine** \*nl)
- **directedLine** \*\* **sortAllPolygons** ()
- Int **numEdges** ()
- Int **numEdgesAllPolygons** ()
- Int **numPolygons** ()
- short **isConnected** ()
- **Real** **polyArea** ()
- void **printSingle** ()
- void **printList** ()
- void **printAllPolygons** ()
- void **writeAllPolygons** (char \*filename)
- **directedLine** \* **insertPolygon** ( **directedLine** \*newpolygon)
- **directedLine** \* **cutoffPolygon** ( **directedLine** \*p)
- Int **toArraySinglePolygon** ( **directedLine** \*\*array, Int index)
- **directedLine** \*\* **toArrayAllPolygons** (Int &total\_num\_edges)
- void **connectDiagonal** ( **directedLine** \*v1, **directedLine** \*v2, **directedLine** \*\*ret\_p1, **directedLine** \*\*ret\_p2, **sampledLine** \*\*generatedLine, **directedLine** \*list)
- void **connectDiagonal\_2slines** ( **directedLine** \*v1, **directedLine** \*v2, **directedLine** \*\*ret\_p1, **directedLine** \*\*ret\_p2, **directedLine** \*list)
- Int **samePolygon** ( **directedLine** \*v1, **directedLine** \*v2)
- void **setRootBit** ()
- void **resetRootBit** ()
- **directedLine** \* **findRoot** ()
- void **rootLinkSet** ( **directedLine** \*r)
- **directedLine** \* **rootLinkFindRoot** ()
- **directedLine** \* **deleteChain** ( **directedLine** \*begin, **directedLine** \*end)

### 4.238.1 Detailed Description

Definition at line 41 of file directedLine.h.

The documentation for this class was generated from the following files:

- src/libnurbs/nurbtess/directedLine.h
- src/libnurbs/nurbtess/directedLine.cc

## 4.239 dis\_class Struct Reference

### Data Fields

- struct **disfieldattr** \* **fields**
- unsigned char **pduType**
- unsigned char **protocolFamily**

### 4.239.1 Detailed Description

Definition at line 1421 of file DIS.c.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.c

## 4.240 dis\_socket Struct Reference

### Data Fields

- int **port**
- char \* **address**
- SOCKET **socket**
- struct sockaddr\_in **saddr**
- int **multicastRelayPort**
- char \* **multicastRelayHost**
- int **idir**
- struct **Vector** \* **registered**
- double **lasttime**

### 4.240.1 Detailed Description

Definition at line 101 of file socketutils.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/socketutils.c



## 4.241 disfieldattr Struct Reference

### Data Fields

- int **kind**
- int **type**
- char \* **name**
- char \* **comment**
- int **listLength**
- char \* **countfieldname**
- int **countfieldindex**
- int **dynamicListClassAttribute**
- double **defaultvalue**
- int **listkind**
- int **couldBeString**
- int **isBitField**
- int **size**
- int **offset**

### 4.241.1 Detailed Description

Definition at line 166 of file DIS.c.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.c

## 4.242 DisplayList Class Reference

### Public Member Functions

- **DisplayList** ( **NurbsTessellator** \*)
- void **play** (void)
- void **append** (PFVS work, void \*arg, PFVS cleanup)
- void **endList** (void)

### 4.242.1 Detailed Description

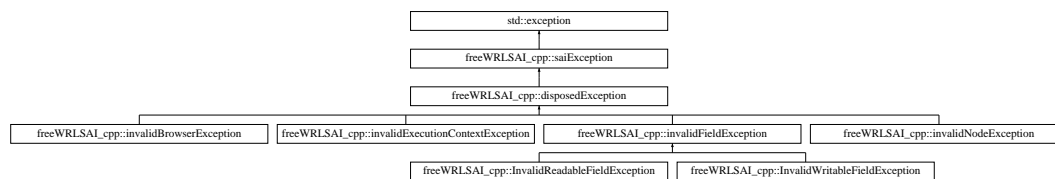
Definition at line 64 of file displaylist.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/displaylist.h
- src/libnurbs/internals/displaylist.cc

## 4.243 freeWRLSAI\_cpp::disposedException Class Reference

Inheritance diagram for freeWRLSAI\_cpp::disposedException:



### Public Member Functions

- virtual const char \* **what** ()

### Additional Inherited Members

#### 4.243.1 Detailed Description

Definition at line 96 of file SAlexception.h.

The documentation for this class was generated from the following file:

- src/SAI\_Cpp/SAlexception.h

## 4.244 DistributedEmissionsFamilyPdu Struct Reference

### Data Fields

- struct **Pdu** myPdu

#### 4.244.1 Detailed Description

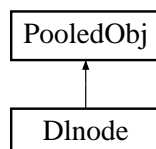
Definition at line 1055 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.245 Dlnode Struct Reference

Inheritance diagram for Dlnode:



## Public Member Functions

- **Dlnode** (PFVS, void \*, PFVS)

## Data Fields

- PFVS **work**
- void \* **arg**
- PFVS **cleanup**
- **Dlnode** \* **next**

### 4.245.1 Detailed Description

Definition at line 48 of file displaylist.h.

The documentation for this struct was generated from the following file:

- src/libnurbs/internals/displaylist.h

## 4.246 draw\_call\_params Struct Reference

### Data Fields

- int **calltype**
- union {  
    struct **arrays** {  
        int **arrays\_mode**  
        int **arrays\_count**  
        int **arrays\_first**  
    } **arrays**  
    struct **elements** {  
        int **elements\_mode**  
        int **elements\_count**  
        ushort \* **elements\_indices**  
    } **elements**  
};

### 4.246.1 Detailed Description

Definition at line 71 of file RenderFuncs.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/RenderFuncs.c

## 4.247 duk\_\_bigint Struct Reference

### Data Fields

- duk\_small\_int\_t **n**
- duk\_uint32\_t **v** [DUK\_\_BI\_MAX\_PARTS]

### 4.247.1 Detailed Description

Definition at line 79158 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/duktape/duktape.c

## 4.248 duk\_\_compile\_raw\_args Struct Reference

### Data Fields

- duk\_size\_t **src\_length**
- const duk\_uint8\_t \* **src\_buffer**
- duk\_uint\_t **flags**

### 4.248.1 Detailed Description

Definition at line 14477 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/duktape/duktape.c

## 4.249 duk\_\_compiler\_stkstate Struct Reference

### Data Fields

- duk\_small\_uint\_t **flags**
- duk\_compiler\_ctx **comp\_ctx\_alloc**
- duk\_lexer\_point **lex\_pt\_alloc**

### 4.249.1 Detailed Description

Definition at line 60564 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/duktape/duktape.c

## 4.250 duk\_\_decode\_context Struct Reference

### Data Fields

- duk\_codepoint\_t **codepoint**
- duk\_uint8\_t **upper**
- duk\_uint8\_t **lower**
- duk\_uint8\_t **needed**
- duk\_uint8\_t **bom\_handled**
- duk\_uint8\_t **fatal**
- duk\_uint8\_t **ignore\_bom**

### 4.250.1 Detailed Description

Definition at line 28998 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/duktape/duktape.c

## 4.251 duk\_\_encode\_context Struct Reference

### Data Fields

- duk\_uint8\_t \* **out**
- duk\_codepoint\_t **lead**

### 4.251.1 Detailed Description

Definition at line 28993 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/duktape/duktape.c

## 4.252 duk\_\_exp\_limits Struct Reference

### Data Fields

- duk\_int16\_t **upper**
- duk\_int16\_t **lower**

### 4.252.1 Detailed Description

Definition at line 79117 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/duktape/duktape.c

## 4.253 duk\_\_id\_lookup\_result Struct Reference

### Data Fields

- **duk\_hobject** \* holder
- **duk\_tval** \* value
- **duk\_int\_t** attrs
- **duk\_tval** \* this\_binding
- **duk\_hobject** \* env

### 4.253.1 Detailed Description

Definition at line 74922 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/duktape/duktape.c

## 4.254 duk\_\_numconv\_stringify\_ctx Struct Reference

### Data Fields

- **duk\_\_bigint** f
- **duk\_\_bigint** r
- **duk\_\_bigint** s
- **duk\_\_bigint** mp
- **duk\_\_bigint** mm
- **duk\_\_bigint** t1
- **duk\_\_bigint** t2
- **duk\_small\_int\_t** is\_s2n
- **duk\_small\_int\_t** is\_fixed
- **duk\_small\_int\_t** req\_digits
- **duk\_small\_int\_t** abs\_pos
- **duk\_small\_int\_t** e
- **duk\_small\_int\_t** b
- **duk\_small\_int\_t** B
- **duk\_small\_int\_t** k
- **duk\_small\_int\_t** low\_ok
- **duk\_small\_int\_t** high\_ok
- **duk\_small\_int\_t** unequal\_gaps
- **duk\_uint8\_t** digits [DUK\_\_MAX\_OUTPUT\_DIGITS]
- **duk\_small\_int\_t** count

### 4.254.1 Detailed Description

Definition at line 79713 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/duktape/duktape.c

## 4.255 duk\_\_objlit\_state Struct Reference

### Data Fields

- duk\_reg\_t **reg\_obj**
- duk\_reg\_t **temp\_start**
- duk\_small\_uint\_t **num\_pairs**

### 4.255.1 Detailed Description

Definition at line 63400 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/duktape/duktape.c

## 4.256 duk\_\_pcall\_prop\_args Struct Reference

### Data Fields

- duk\_idx\_t **obj\_idx**
- duk\_idx\_t **nargs**

### 4.256.1 Detailed Description

Definition at line 13370 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/duktape/duktape.c

## 4.257 duk\_\_re\_disjunction\_info Struct Reference

### Data Fields

- duk\_int32\_t **charlen**

### 4.257.1 Detailed Description

Definition at line 81390 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/duktape/duktape.c

## 4.258 duk\_\_transform\_context Struct Reference

### Data Fields

- **duk\_hthread** \* **thr**
- **duk\_hstring** \* **h\_str**
- **duk\_bufwriter\_ctx** **bw**
- const duk\_uint8\_t \* **p**
- const duk\_uint8\_t \* **p\_start**
- const duk\_uint8\_t \* **p\_end**

### 4.258.1 Detailed Description

Definition at line 30416 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/duktape/duktape.c

## 4.259 duk\_activation Struct Reference

### Data Fields

- **duk\_tval** **tv\_func**
- **duk\_hobject** \* **func**
- **duk\_hobject** \* **var\_env**
- **duk\_hobject** \* **lex\_env**
- duk\_instr\_t \* **curr\_pc**
- duk\_small\_uint\_t **flags**
- duk\_size\_t **idx\_bottom**
- duk\_size\_t **idx\_retval**

### 4.259.1 Detailed Description

Definition at line 6846 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/duktape/duktape.c



## 4.260 duk\_bitdecoder\_ctx Struct Reference

### Data Fields

- `const duk_uint8_t * data`
- `duk_size_t offset`
- `duk_size_t length`
- `duk_uint32_t currval`
- `duk_small_int_t currbits`

### 4.260.1 Detailed Description

Definition at line 1856 of file duktape.c.

The documentation for this struct was generated from the following file:

- `src/lib/world_script/duktape/duktape.c`

## 4.261 duk\_bitencoder\_ctx Struct Reference

### Data Fields

- `duk_uint8_t * data`
- `duk_size_t offset`
- `duk_size_t length`
- `duk_uint32_t currval`
- `duk_small_int_t currbits`
- `duk_small_int_t truncated`

### 4.261.1 Detailed Description

Definition at line 1870 of file duktape.c.

The documentation for this struct was generated from the following file:

- `src/lib/world_script/duktape/duktape.c`

## 4.262 duk\_breakpoint Struct Reference

### Data Fields

- `duk_hstring * filename`
- `duk_uint32_t line`

### 4.262.1 Detailed Description

Definition at line 7670 of file duktape.c.

The documentation for this struct was generated from the following file:

- `src/lib/world_script/duktape/duktape.c`

## 4.263 `duk_bufwriter_ctx` Struct Reference

### Data Fields

- `duk_uint8_t * p`
- `duk_uint8_t * p_base`
- `duk_uint8_t * p_limit`
- `duk_hbuffer_dynamic * buf`

### 4.263.1 Detailed Description

Definition at line 1941 of file duktape.c.

The documentation for this struct was generated from the following file:

- `src/lib/world_script/duktape/duktape.c`

## 4.264 `duk_catcher` Struct Reference

### Data Fields

- `duk_hstring * h_varname`
- `duk_instr_t * pc_base`
- `duk_size_t callstack_index`
- `duk_size_t idx_base`
- `duk_uint32_t flags`

### 4.264.1 Detailed Description

Definition at line 6898 of file duktape.c.

The documentation for this struct was generated from the following file:

- `src/lib/world_script/duktape/duktape.c`

## 4.265 duk\_compiler\_ctx Struct Reference

### Data Fields

- **duk\_hthread** \* thr
- **duk\_hstring** \* h\_filename
- **duk\_lexer\_ctx** lex
- **duk\_token** prev\_token
- **duk\_token** curr\_token
- **duk\_idx\_t** tok11\_idx
- **duk\_idx\_t** tok12\_idx
- **duk\_idx\_t** tok21\_idx
- **duk\_idx\_t** tok22\_idx
- **duk\_int\_t** recursion\_depth
- **duk\_int\_t** recursion\_limit
- **duk\_int\_t** emit\_jumpslot\_pc
- **duk\_compiler\_func** curr\_func

### 4.265.1 Detailed Description

Definition at line 3635 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/duktape/duktape.c

## 4.266 duk\_compiler\_func Struct Reference

### Data Fields

- **duk\_bufwriter\_ctx** bw\_code
- **duk\_hstring** \* h\_name
- **duk\_hobject** \* h\_consts
- **duk\_hobject** \* h\_funcs
- **duk\_hobject** \* h\_decls
- **duk\_hobject** \* h\_labelnames
- **duk\_hbuffer\_dynamic** \* h\_labelinfos
- **duk\_hobject** \* h\_argnames
- **duk\_hobject** \* h\_varmap
- **duk\_idx\_t** consts\_idx
- **duk\_idx\_t** funcs\_idx
- **duk\_idx\_t** decls\_idx
- **duk\_idx\_t** labelnames\_idx
- **duk\_idx\_t** labelinfos\_idx
- **duk\_idx\_t** argnames\_idx
- **duk\_idx\_t** varmap\_idx
- **duk\_reg\_t** temp\_first
- **duk\_reg\_t** temp\_next
- **duk\_reg\_t** temp\_max
- **duk\_reg\_t** shuffle1

- `duk_reg_t shuffle2`
- `duk_reg_t shuffle3`
- `duk_int_t nud_count`
- `duk_int_t led_count`
- `duk_int_t paren_level`
- `duk_bool_t expr_lhs`
- `duk_bool_t allow_in`
- `duk_int_t stmt_next`
- `duk_int_t label_next`
- `duk_int_t catch_depth`
- `duk_int_t with_depth`
- `duk_int_t fnum_next`
- `duk_int_t num_formals`
- `duk_reg_t reg_stmt_value`
- `duk_uint8_t is_function`
- `duk_uint8_t is_eval`
- `duk_uint8_t is_global`
- `duk_uint8_t is_namebinding`
- `duk_uint8_t is_constructable`
- `duk_uint8_t is_setget`
- `duk_uint8_t is_strict`
- `duk_uint8_t is_notail`
- `duk_uint8_t in_directive_prologue`
- `duk_uint8_t in_scanning`
- `duk_uint8_t may_direct_eval`
- `duk_uint8_t id_access_arguments`
- `duk_uint8_t id_access_slow`
- `duk_uint8_t id_access_slow_own`
- `duk_uint8_t is_arguments_shadowed`
- `duk_uint8_t needs_shuffle`
- `duk_uint8_t reject_regexp_in_adv`

#### 4.266.1 Detailed Description

Definition at line 3552 of file duktape.c.

The documentation for this struct was generated from the following file:

- `src/lib/world_script/duktape/duktape.c`

### 4.267 duk\_compiler\_instr Struct Reference

#### Data Fields

- `duk_instr_t ins`
- `duk_uint32_t line`

### 4.267.1 Detailed Description

Definition at line 3516 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/duktape/duktape.c

## 4.268 duk\_double\_union Union Reference

### Data Fields

- double **d**
- float **f** [2]
- duk\_uint32\_t **ui** [2]
- duk\_uint16\_t **us** [4]
- duk\_uint8\_t **uc** [8]

### 4.268.1 Detailed Description

Definition at line 1292 of file duktape.h.

The documentation for this union was generated from the following file:

- src/lib/world\_script/duktape/duktape.h

## 4.269 duk\_function\_list\_entry Struct Reference

### Data Fields

- const char \* **key**
- duk\_c\_function **value**
- duk\_idx\_t **nargs**

### 4.269.1 Detailed Description

Definition at line 224 of file duktape.h.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/duktape/duktape.h

## 4.270 duk\_harray Struct Reference

### Data Fields

- **duk\_hobject** obj
- **duk\_uint32\_t** length
- **duk\_bool\_t** length\_nonwritable

### 4.270.1 Detailed Description

Definition at line 7057 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/duktape/duktape.c

## 4.271 duk\_hbuffer Struct Reference

### Data Fields

- **duk\_heaphdr** hdr
- **duk\_size\_t** size

### 4.271.1 Detailed Description

Definition at line 7255 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/duktape/duktape.c

## 4.272 duk\_hbuffer\_dynamic Struct Reference

### Data Fields

- **duk\_heaphdr** hdr
- **duk\_size\_t** size
- **void \*** curr\_alloc

### 4.272.1 Detailed Description

Definition at line 7355 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/duktape/duktape.c

## 4.273 duk\_hbuffer\_external Struct Reference

### Data Fields

- **duk\_heaphdr** **hdr**
- **duk\_size\_t** **size**
- **void \*** **curr\_alloc**

### 4.273.1 Detailed Description

Definition at line 7384 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/duktape/duktape.c

## 4.274 duk\_hbuffer\_fixed Struct Reference

### Data Fields

- ```
union {  
    struct {  
        duk_heaphdr hdr  
        duk_size_t size  
    } s  
    duk_double_t dummy_for_align8  
} u
```

4.274.1 Detailed Description

Definition at line 7301 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.c

4.275 duk_hbufobj Struct Reference

Data Fields

- **duk_hobject** **obj**
- **duk_hbuffer *** **buf**
- **duk_hobject *** **buf_prop**
- **duk_uint_t** **offset**
- **duk_uint_t** **length**
- **duk_uint8_t** **shift**
- **duk_uint8_t** **elem_type**
- **duk_uint8_t** **is_typedarray**

4.275.1 Detailed Description

Definition at line 6593 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.c

4.276 duk_hcompfunc Struct Reference

Data Fields

- **duk_hobject** obj
- **duk_hbuffer** * data
- **duk_hobject** ** funcs
- **duk_instr_t** * bytecode
- **duk_hobject** * lex_env
- **duk_hobject** * var_env
- **duk_uint16_t** nregs
- **duk_uint16_t** nargs

4.276.1 Detailed Description

Definition at line 6334 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.c

4.277 duk_heap Struct Reference

Data Fields

- **duk_small_uint_t** flags
- **duk_alloc_function** alloc_func
- **duk_realloc_function** realloc_func
- **duk_free_function** free_func
- void * **heap_udata**
- **duk_fatal_function** fatal_func
- **duk_heaphdr** * heap_allocated
- **duk_heaphdr** * refzero_list
- **duk_heaphdr** * refzero_list_tail
- **duk_int_t** mark_and_sweep_trigger_counter
- **duk_int_t** mark_and_sweep_recursion_depth
- **duk_small_uint_t** mark_and_sweep_base_flags
- **duk_heaphdr** * finalize_list
- **duk_ljstate** lj
- **duk_bool_t** handling_error

- **duk_hthread** * heap_thread
- **duk_hthread** * curr_thread
- **duk_hobject** * heap_object
- duk_int_t call_recursion_depth
- duk_int_t call_recursion_limit
- duk_uint32_t hash_seed
- duk_uint32_t rnd_state
- duk_uint32_t sym_counter [2]
- **duk_hstring** ** strtable
- duk_uint32_t st_size
- duk_uint32_t st_used
- **duk_strcache** strcache [DUK_HEAP_STRCACHE_SIZE]
- **duk_hstring** * strs [DUK_HEAP_NUM_STRINGS]

4.277.1 Detailed Description

Definition at line 7751 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.c

4.278 duk_heaphdr Struct Reference

Data Fields

- duk_uint32_t h_flags
- duk_size_t h_refcount
- **duk_heaphdr** * h_next
- **duk_heaphdr** * h_prev

4.278.1 Detailed Description

Definition at line 3787 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.c

4.279 duk_heaphdr_string Struct Reference

Data Fields

- duk_uint32_t h_flags
- duk_size_t h_refcount

4.279.1 Detailed Description

Definition at line 3826 of file duktape.c.

The documentation for this struct was generated from the following file:

- `src/lib/world_script/duktape/duktape.c`

4.280 duk_hnatfunc Struct Reference

Data Fields

- **duk_hobject** **obj**
- **duk_c_function** **func**
- **duk_int16_t** **nargs**
- **duk_int16_t** **magic**

4.280.1 Detailed Description

Definition at line 6474 of file duktape.c.

The documentation for this struct was generated from the following file:

- `src/lib/world_script/duktape/duktape.c`

4.281 duk_hobject Struct Reference

Data Fields

- **duk_heaphdr** **hdr**
- **duk_uint8_t** * **props**
- **duk_hobject** * **prototype**
- **duk_uint32_t** **e_size**
- **duk_uint32_t** **e_next**
- **duk_uint32_t** **a_size**
- **duk_uint32_t** **h_size**

4.281.1 Detailed Description

Definition at line 5969 of file duktape.c.

The documentation for this struct was generated from the following file:

- `src/lib/world_script/duktape/duktape.c`

4.282 duk_hstring Struct Reference

Data Fields

- **duk_heaphdr_string** **hdr**
- duk_uint32_t **hash**
- duk_uarridx_t **arridx**
- duk_uint32_t **blen**
- duk_uint32_t **clen**

4.282.1 Detailed Description

Definition at line 5165 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.c

4.283 duk_hstring_external Struct Reference

Data Fields

- **duk_hstring** **str**
- const duk_uint8_t * **extdata**

4.283.1 Detailed Description

Definition at line 5216 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.c

4.284 duk_hthread Struct Reference

Data Fields

- **duk_hobject** obj
- duk_instr_t ** ptr_curr_pc
- **duk_heap** * heap
- duk_uint8_t strict
- duk_uint8_t state
- duk_uint8_t unused1
- duk_uint8_t unused2
- duk_size_t valstack_max
- duk_size_t callstack_max
- duk_size_t catchstack_max
- **duk_tval** * valstack
- **duk_tval** * valstack_end
- **duk_tval** * valstack_bottom
- **duk_tval** * valstack_top
- duk_size_t valstack_size
- **duk_activation** * callstack
- duk_size_t callstack_size
- duk_size_t callstack_top
- duk_size_t callstack_preventcount
- **duk_catcher** * catchstack
- duk_size_t catchstack_size
- duk_size_t catchstack_top
- **duk_hthread** * resumer
- **duk_compiler_ctx** * compile_ctx
- **duk_hobject** * builtins [DUK_NUM_BUILTINS]
- **duk_hstring** ** strs

4.284.1 Detailed Description

Definition at line 6907 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.c

4.285 duk_internal_thread_state Struct Reference

Data Fields

- **duk_ljstate** lj
- duk_bool_t handling_error
- **duk_hthread** * curr_thread
- duk_int_t call_recursion_depth

4.285.1 Detailed Description

Definition at line 14932 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.c

4.286 duk_ispec Struct Reference

Data Fields

- duk_small_uint_t t
- duk_regconst_t regconst
- duk_idx_t valstack_idx

4.286.1 Detailed Description

Definition at line 3489 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.c

4.287 duk_ivalue Struct Reference

Data Fields

- duk_small_uint_t t
- duk_small_uint_t op
- duk_ispec x1
- duk_ispec x2

4.287.1 Detailed Description

Definition at line 3495 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.c

4.288 duk_jmpbuf Struct Reference

Data Fields

- DUK_JMPBUF_TYPE jb

4.288.1 Detailed Description

Definition at line 229 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.c

4.289 duk_json_dec_ctx Struct Reference

Data Fields

- **duk_hthread** * **thr**
- const duk_uint8_t * **p**
- const duk_uint8_t * **p_start**
- const duk_uint8_t * **p_end**
- duk_idx_t **idx_reviver**
- duk_small_uint_t **flags**
- duk_small_uint_t **flag_ext_custom**
- duk_small_uint_t **flag_ext_compatible**
- duk_small_uint_t **flag_ext_custom_or_compatible**
- duk_int_t **recursion_depth**
- duk_int_t **recursion_limit**

4.289.1 Detailed Description

Definition at line 9158 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.c

4.290 duk_json_enc_ctx Struct Reference

Data Fields

- **duk_hthread** * **thr**
- **duk_bufwriter_ctx** **bw**
- **duk_hobject** * **h_replacer**
- **duk_hstring** * **h_gap**
- duk_idx_t **idx_proplist**
- duk_idx_t **idx_loop**
- duk_small_uint_t **flags**
- duk_small_uint_t **flag_ascii_only**
- duk_small_uint_t **flag_avoid_key_quotes**
- duk_small_uint_t **flag_ext_custom**
- duk_small_uint_t **flag_ext_compatible**
- duk_small_uint_t **flag_ext_custom_or_compatible**
- duk_int_t **recursion_depth**
- duk_int_t **recursion_limit**
- duk_uint_t **mask_for_undefined**
- duk_small_uint_t **stridx_custom_undefined**
- duk_small_uint_t **stridx_custom_nan**
- duk_small_uint_t **stridx_custom_neginf**
- duk_small_uint_t **stridx_custom_posinf**
- duk_small_uint_t **stridx_custom_function**
- **duk_hobject** * **visiting** [DUK_JSON_ENC_LOOPARRAY]

4.290.1 Detailed Description

Definition at line 9130 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.c

4.291 duk_labelinfo Struct Reference

Data Fields

- duk_small_uint_t **flags**
- duk_int_t **label_id**
- duk_hstring * **h_label**
- duk_int_t **catch_depth**
- duk_int_t **pc_label**

4.291.1 Detailed Description

Definition at line 3534 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.c

4.292 duk_lexer_codepoint Struct Reference

Data Fields

- duk_codepoint_t **codepoint**
- duk_size_t **offset**
- duk_int_t **line**

4.292.1 Detailed Description

Definition at line 3390 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.c

4.293 duk_lexer_ctx Struct Reference

Data Fields

- **duk_lexer_codepoint** * **window**
- **duk_lexer_codepoint** **buffer** [DUK_LEXER_BUFFER_SIZE]
- **duk_hthread** * **thr**
- const duk_uint8_t * **input**
- duk_size_t **input_length**
- duk_size_t **input_offset**
- duk_int_t **input_line**
- duk_idx_t **slot1_idx**
- duk_idx_t **slot2_idx**
- duk_idx_t **buf_idx**
- **duk_hbuffer_dynamic** * **buf**
- **duk_bufwriter_ctx** **bw**
- duk_int_t **token_count**
- duk_int_t **token_limit**

4.293.1 Detailed Description

Definition at line 3397 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.c

4.294 duk_lexer_point Struct Reference

Data Fields

- duk_size_t **offset**
- duk_int_t **line**

4.294.1 Detailed Description

Definition at line 3384 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.c

4.295 duk_ljstate Struct Reference

Data Fields

- **duk_jmpbuf** * **jmpbuf_ptr**
- duk_small_uint_t **type**
- duk_bool_t **iserror**
- **duk_tval** **value1**
- **duk_tval** **value2**

4.295.1 Detailed Description

Definition at line 7716 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.c

4.296 duk_memory_functions Struct Reference

Data Fields

- duk_alloc_function **alloc_func**
- duk_realloc_function **realloc_func**
- duk_free_function **free_func**
- void * **udata**

4.296.1 Detailed Description

Definition at line 217 of file duktape.h.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.h

4.297 duk_number_list_entry Struct Reference

Data Fields

- const char * **key**
- duk_double_t **value**

4.297.1 Detailed Description

Definition at line 230 of file duktape.h.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.h

4.298 duk_propaccessor Struct Reference

Data Fields

- **duk_hobject * get**
- **duk_hobject * set**

4.298.1 Detailed Description

Definition at line 5943 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.c

4.299 duk_propdesc Struct Reference

Data Fields

- **duk_small_int_t flags**
- **duk_hobject * get**
- **duk_hobject * set**
- **duk_int_t e_idx**
- **duk_int_t h_idx**
- **duk_int_t a_idx**

4.299.1 Detailed Description

Definition at line 5957 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.c

4.300 duk_propvalue Union Reference

Data Fields

- **duk_tval** v
- **duk_propaccessor** a

4.300.1 Detailed Description

Definition at line 5948 of file duktape.c.

The documentation for this union was generated from the following file:

- src/lib/world_script/duktape/duktape.c

4.301 duk_re_compiler_ctx Struct Reference

Data Fields

- **duk_hthread** * thr
- duk_uint32_t **re_flags**
- **duk_lexer_ctx** lex
- **duk_re_token** curr_token
- **duk_bufwriter_ctx** bw
- duk_uint32_t **captures**
- duk_uint32_t **highest_backref**
- duk_uint32_t **recursion_depth**
- duk_uint32_t **recursion_limit**
- duk_uint32_t **nranges**

4.301.1 Detailed Description

Definition at line 3733 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.c

4.302 duk_re_matcher_ctx Struct Reference

Data Fields

- **duk_hthread** * thr
- duk_uint32_t **re_flags**
- const duk_uint8_t * **input**
- const duk_uint8_t * **input_end**
- const duk_uint8_t * **bytecode**
- const duk_uint8_t * **bytecode_end**
- const duk_uint8_t ** **saved**
- duk_uint32_t **nsaved**
- duk_uint32_t **recursion_depth**
- duk_uint32_t **recursion_limit**
- duk_uint32_t **steps_count**
- duk_uint32_t **steps_limit**

4.302.1 Detailed Description

Definition at line 3717 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.c

4.303 duk_re_token Struct Reference

Data Fields

- duk_small_int_t **t**
- duk_small_int_t **greedy**
- duk_uint_fast32_t **num**
- duk_uint_fast32_t **qmin**
- duk_uint_fast32_t **qmax**

4.303.1 Detailed Description

Definition at line 3375 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.c

4.304 duk_strcache Struct Reference

Data Fields

- duk_hstring * **h**
- duk_uint32_t **bidx**
- duk_uint32_t **cidx**

4.304.1 Detailed Description

Definition at line 7705 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.c

4.305 duk_strtab_entry Struct Reference

Data Fields

- duk_size_t **listlen**
- union {
 duk_hstring ** **strlist**
 duk_hstring * **str**
} **u**

4.305.1 Detailed Description

Definition at line 7728 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.c

4.306 duk_thread_state Struct Reference

Data Fields

- char **data** [128]

4.306.1 Detailed Description

Definition at line 209 of file duktape.h.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.h

4.307 duk_time_components Struct Reference

Data Fields

- duk_double_t **year**
- duk_double_t **month**
- duk_double_t **day**
- duk_double_t **hours**
- duk_double_t **minutes**
- duk_double_t **seconds**
- duk_double_t **milliseconds**
- duk_double_t **weekday**

4.307.1 Detailed Description

Definition at line 235 of file duktape.h.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.h

4.308 duk_token Struct Reference

Data Fields

- duk_small_int_t **t**
- duk_small_int_t **t_nores**
- duk_double_t **num**
- duk_hstring * **str1**
- duk_hstring * **str2**
- duk_size_t **start_offset**
- duk_int_t **start_line**
- duk_int_t **num_escapes**
- duk_bool_t **lineterm**
- duk_bool_t **allow_auto_semi**

4.308.1 Detailed Description

Definition at line 3359 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world_script/duktape/duktape.c

4.309 duk_tval_struct Struct Reference

Data Fields

- duk_small_uint_t **t**
 - duk_small_uint_t **v_extra**
 -
- ```

union {
 duk_double_t d
 duk_small_int_t i
 void * voidptr
 duk_hstring * hstring
 duk_hobject * hobject
 duk_hcompfunc * hcompfunc
 duk_hnatfunc * hnatfunc
 duk_hthread * hthread
 duk_hbuffer * hbuffer
 duk_heaphdr * heaphdr
 duk_c_function lightfunc
} v

```

### 4.309.1 Detailed Description

Definition at line 681 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/duktape/duktape.c

## 4.310 duk\_tval\_unused Struct Reference

### Data Fields

- duk\_small\_uint\_t t
- duk\_small\_uint\_t v\_extra
- duk\_double\_t d

### 4.310.1 Detailed Description

Definition at line 702 of file duktape.c.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/duktape/duktape.c

## 4.311 EAI\_Extra\_Data Struct Reference

### Data Fields

- int field\_id
- int node\_id
- int field\_type
- int listener\_id

### 4.311.1 Detailed Description

Definition at line 76 of file EAIHeaders.h.

The documentation for this struct was generated from the following file:

- src/lib/input/EAIHeaders.h

## 4.312 EAI\_ListenerStruct Struct Reference

### Data Fields

- int **FreeWRL\_RegisterNumber**
- int **type**
- int **datasize**
- void \* **dataArea**
- void \* **arg**
- void(\* **functionHandler** )( X3DNode \*, double, void \*arg)

### 4.312.1 Detailed Description

Definition at line 11 of file EAI\_C\_Advise.c.

The documentation for this struct was generated from the following file:

- src/libeai/EAI\_C\_Advise.c

## 4.313 sai.eai.EAIAsyncMessage Class Reference

### Data Fields

- String **value**
- int **EventNumber**
- **EAIAsyncMessage** prev
- **EAIAsyncMessage** next

### 4.313.1 Detailed Description

Definition at line 20 of file EAIAsyncMessage.java.

The documentation for this class was generated from the following file:

- src/java/sai/eai/EAIAsyncMessage.java

## 4.314 vrml.external.FreeWRL\_EAI.EAIAsyncMessage Class Reference

### Data Fields

- String **value**
- int **EventNumber**
- **EAIAsyncMessage** prev
- **EAIAsyncMessage** next



### 4.314.1 Detailed Description

Definition at line 20 of file EAIAsyncMessage.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/FreeWRLEAI/EAIAsyncMessage.java

## 4.315 sai.eai.EAIAsyncQueue Class Reference

### Public Member Functions

- synchronized void **enqueue** ( **EAIAsyncMessage** msg)
- synchronized **EAIAsyncMessage** **dequeue** ()
- boolean **isEmpty** ()

### 4.315.1 Detailed Description

Definition at line 20 of file EAIAsyncQueue.java.

The documentation for this class was generated from the following file:

- src/java/sai/eai/EAIAsyncQueue.java

## 4.316 vrml.external.FreeWRLEAI.EAIAsyncQueue Class Reference

### Public Member Functions

- synchronized void **enqueue** ( **EAIAsyncMessage** msg)
- synchronized **EAIAsyncMessage** **dequeue** ()
- boolean **isEmpty** ()

### 4.316.1 Detailed Description

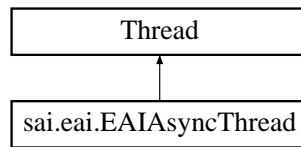
Definition at line 20 of file EAIAsyncQueue.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/FreeWRLEAI/EAIAsyncQueue.java

## 4.317 sai.eai.EAIAsyncThread Class Reference

Inheritance diagram for sai.eai.EAIAsyncThread:



### Public Member Functions

- void **run** ()
- synchronized void **send** (String eaistring, int indx)
- synchronized void **stopThread** ()

#### 4.317.1 Detailed Description

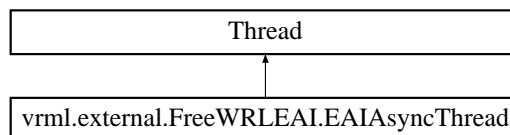
Definition at line 36 of file EAIAsyncThread.java.

The documentation for this class was generated from the following file:

- src/java/sai/eai/EAIAsyncThread.java

## 4.318 vrml.external.FreeWRLEAI.EAIAsyncThread Class Reference

Inheritance diagram for vrml.external.FreeWRLEAI.EAIAsyncThread:



### Public Member Functions

- void **run** ()
- synchronized void **send** (String eaistring, int indx)
- synchronized void **stopThread** ()

#### 4.318.1 Detailed Description

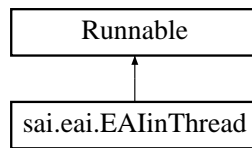
Definition at line 34 of file EAIAsyncThread.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/FreeWRLEAI/EAIAsyncThread.java

## 4.319 sai.eai.EAInThread Class Reference

Inheritance diagram for sai.eai.EAInThread:



### Public Member Functions

- **EAInThread** (Socket s, Applet d, PrintWriter pwtoBrowserjava, **BrowserInterface** me)
- void **run** ()

#### 4.319.1 Detailed Description

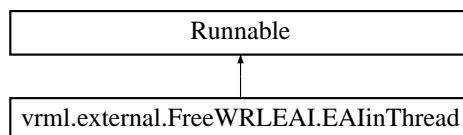
Definition at line 12 of file EAInThread.java.

The documentation for this class was generated from the following file:

- src/java/sai/eai/EAInThread.java

## 4.320 vrml.external.FreeWRLEAI.EAInThread Class Reference

Inheritance diagram for vrml.external.FreeWRLEAI.EAInThread:



### Public Member Functions

- **EAInThread** (Socket s, Applet d, PrintWriter pwtoBrowserjava, **Browser** me)
- void **run** ()

#### 4.320.1 Detailed Description

Definition at line 13 of file EAInThread.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/FreeWRLEAI/EAInThread.java

## 4.321 sai.eai.EAIMessage Class Reference

### Public Member Functions

- **EAIMessage** (String thismsg)

### Data Fields

- String **mmm**
- **EAIMessage** prev
- **EAIMessage** next

#### 4.321.1 Detailed Description

Definition at line 20 of file EAIMessage.java.

The documentation for this class was generated from the following file:

- src/java/sai/eai/EAIMessage.java

## 4.322 vrml.external.FreeWRLEAI.EAIMessage Class Reference

### Public Member Functions

- **EAIMessage** (String thismsg)

### Data Fields

- String **mmm**
- **EAIMessage** prev
- **EAIMessage** next

#### 4.322.1 Detailed Description

Definition at line 20 of file EAIMessage.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/FreeWRLEAI/EAIMessage.java

## 4.323 EAINodeIndexStruct Struct Reference

### Data Fields

- struct **X3D\_Node** \* **actualNodePtr**
- int **nodeType**
- struct **Vector** \* **nodeParams**

### 4.323.1 Detailed Description

Definition at line 141 of file EAIHelpers.c.

The documentation for this struct was generated from the following file:

- src/lib/input/EAIHelpers.c

## 4.324 EAINodeParams Struct Reference

### Data Fields

- struct **X3D\_Node** \* **thisFieldNodePointer**
- int **fieldOffset**
- int **datalen**
- int **typeString**
- int **scripttype**
- char \* **invokedPROTOValue**

### 4.324.1 Detailed Description

Definition at line 132 of file EAIHelpers.c.

The documentation for this struct was generated from the following file:

- src/lib/input/EAIHelpers.c

## 4.325 sai.eai.EAloutQueue Class Reference

### Public Member Functions

- synchronized void **enqueue** ( **EAIMessage** msg)
- synchronized **EAIMessage** **dequeue** ()
- boolean **isEmpty** ()

### 4.325.1 Detailed Description

Definition at line 21 of file EAloutQueue.java.

The documentation for this class was generated from the following file:

- src/java/sai/eai/EAloutQueue.java

## 4.326 vrml.external.FreeWRLEAI.EAloutQueue Class Reference

### Public Member Functions

- synchronized void **enqueue** ( **EAIMessage** msg)
- synchronized **EAIMessage** **dequeue** ()
- boolean **isEmpty** ()

### 4.326.1 Detailed Description

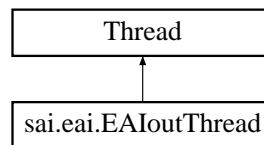
Definition at line 21 of file EAloutQueue.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/FreeWRLEAI/EAloutQueue.java

## 4.327 sai.eai.EAloutThread Class Reference

Inheritance diagram for sai.eai.EAloutThread:



### Public Member Functions

- **EAloutThread** (PrintWriter output)
- void **run** ()
- synchronized void **send** (String eaistring)
- synchronized void **stopThread** ()

### 4.327.1 Detailed Description

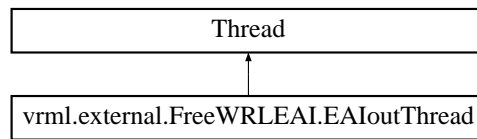
Definition at line 33 of file EAloutThread.java.

The documentation for this class was generated from the following file:

- src/java/sai/eai/EAloutThread.java

## 4.328 vrml.external.FreeWRLEAI.EAloutThread Class Reference

Inheritance diagram for vrml.external.FreeWRLEAI.EAloutThread:



### Public Member Functions

- **EAloutThread** (PrintWriter output)
- void **run** ()
- synchronized void **send** (String eaistring)
- synchronized void **stopThread** ()

#### 4.328.1 Detailed Description

Definition at line 33 of file EAloutThread.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/FreeWRLEAI/EAloutThread.java

## 4.329 EdgePair Struct Reference

### Data Fields

- **GLUhalfEdge** e
- **GLUhalfEdge** eSym

#### 4.329.1 Detailed Description

Definition at line 59 of file mesh.c.

The documentation for this struct was generated from the following files:

- src/libtess/mesh.c
- src/libtess/tess.c

## 4.330 EightByteChunk Struct Reference

### Data Fields

- char **otherParameters** [8]  
*Eight bytes of arbitrary data.*

### 4.330.1 Detailed Description

Definition at line 274 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.331 ElectronicEmissionBeamData Struct Reference

### Data Fields

- unsigned char **beamDataLength**  
*This field shall specify the length of this beams data in 32 bit words.*
- unsigned char **beamIDNumber**  
*This field shall specify a unique emitter database number assigned to differentiate between otherwise similar or identical emitter beams within an emitter system.*
- unsigned short **beamParameterIndex**  
*This field shall specify a Beam Parameter Index number that shall be used by receiving entities in conjunction with the Emitter Name field to provide a pointer to the stored database parameters required to regenerate the beam.*
- struct **FundamentalParameterData** **fundamentalParameterData**  
*Fundamental parameter data such as frequency range, beam sweep, etc.*
- unsigned char **beamFunction**  
*beam function of a particular beam*
- unsigned char **numberOfTrackJamTargets**  
*Number of track/jam targets.*
- unsigned char **highDensityTrackJam**  
*whether or not the receiving simulation apps can assume all the targets in the scan pattern are being tracked/jammed*
- unsigned char **pad4**  
*padding*
- unsigned int **jammingModeSequence**  
*identify jamming techniques used*
- void \* **trackJamTargets**  
*variable length list of track/jam targets*

### 4.331.1 Detailed Description

Definition at line 676 of file DIS.h.

### 4.331.2 Field Documentation



#### 4.331.2.1 beamParameterIndex

```
unsigned short ElectronicEmissionBeamData::beamParameterIndex
```

This field shall specify a Beam Parameter Index number that shall be used by receiving entities in conjunction with the Emitter Name field to provide a pointer to the stored database parameters required to regenerate the beam.

Definition at line 682 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.332 ElectronicEmissionsPdu Struct Reference

### Data Fields

- struct **DistributedEmissionsFamilyPdu** myDistributedEmissionsFamilyPdu
- struct **EntityID** emittingEntityID  
*ID of the entity emitting.*
- struct **EventID** eventID  
*ID of event.*
- unsigned char **stateUpdateIndicator**  
*This field shall be used to indicate if the data in the PDU represents a state update or just data that has changed since issuance of the last Electromagnetic Emission PDU [relative to the identified entity and emission system(s)].*
- unsigned char **numberOfSystems**  
*This field shall specify the number of emission systems being described in the current PDU.*
- unsigned short **paddingForEmissionsPdu**  
*padding*
- void \* **systems**  
*Electronic emissions systems.*

#### 4.332.1 Detailed Description

Definition at line 1283 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.333 ElectronicEmissionSystemData Struct Reference

### Data Fields

- unsigned char **systemDataLength**  
*This field shall specify the length of this emitter system's data (including beam data and its track/jam information) in 32-bit words.*
- unsigned char **numberOfBeams**  
*This field shall specify the number of beams being described in the current PDU for the system being described.*
- unsigned short **emissionsPadding2**  
*padding.*
- struct **EmitterSystem emitterSystem**  
*This field shall specify information about a particular emitter system.*
- struct **Vector3Float location**  
*Location with respect to the entity.*
- void \* **beamDataRecords**  
*variable length list of beam data records*

### 4.333.1 Detailed Description

Definition at line 1003 of file DIS.h.

### 4.333.2 Field Documentation

#### 4.333.2.1 numberOfBeams

```
unsigned char ElectronicEmissionSystemData::numberOfBeams
```

This field shall specify the number of beams being described in the current PDU for the system being described.

Definition at line 1007 of file DIS.h.

#### 4.333.2.2 systemDataLength

```
unsigned char ElectronicEmissionSystemData::systemDataLength
```

This field shall specify the length of this emitter system's data (including beam data and its track/jam information) in 32-bit words.

The length shall include the System Data Length field.

Definition at line 1005 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.334 ellipsoid Struct Reference

### Data Fields

- double **a**
- double **b**
- double **f**

### 4.334.1 Detailed Description

Definition at line 409 of file Component\_Geospatial.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_Geospatial.c

## 4.335 EmitterSystem Struct Reference

### Data Fields

- unsigned short **emitterName**  
*Name of the emitter, 16 bit enumeration.*
- unsigned char **function**  
*function of the emitter, 8 bit enumeration*
- unsigned char **emitterIdNumber**  
*emitter ID, 8 bit enumeration*

### 4.335.1 Detailed Description

Definition at line 658 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.336 EntityID Struct Reference

### Data Fields

- unsigned short **site**  
*The site ID.*
- unsigned short **application**  
*The application ID.*
- unsigned short **entity**  
*the entity ID*

#### 4.336.1 Detailed Description

Definition at line 571 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

### 4.337 EntityInformationFamilyPdu Struct Reference

#### Data Fields

- struct **Pdu** myPdu

#### 4.337.1 Detailed Description

Definition at line 1497 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

### 4.338 EntityManagementFamilyPdu Struct Reference

#### Data Fields

- struct **Pdu** myPdu

#### 4.338.1 Detailed Description

Definition at line 1214 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.339 EntityStatePdu Struct Reference

### Data Fields

- struct **EntityInformationFamilyPdu** **myEntityInformationFamilyPdu**
- struct **EntityID** **entityID**  
*Unique ID for an entity that is tied to this state information.*
- unsigned char **forceId**  
*What force this entity is affiliated with, eg red, blue, neutral, etc.*
- char **numberOfArticulationParameters**  
*How many articulation parameters are in the variable length list.*
- struct **EntityType** **entityType**  
*Describes the type of entity in the world.*
- struct **EntityType** **alternativeEntityType**
- struct **Vector3Float** **entityLinearVelocity**  
*Describes the speed of the entity in the world.*
- struct **Vector3Double** **entityLocation**  
*describes the location of the entity in the world*
- struct **Orientation** **entityOrientation**  
*describes the orientation of the entity, in euler angles*
- int **entityAppearance**  
*a series of bit flags that are used to help draw the entity, such as smoking, on fire, etc.*
- struct **DeadReckoningParameter** **deadReckoningParameters**  
*parameters used for dead reckoning*
- struct **Marking** **marking**  
*characters that can be used for debugging, or to draw unique strings on the side of entities in the world*
- int **capabilities**  
*a series of bit flags*
- void \* **articulationParameters**  
*variable length list of articulation parameters*

### 4.339.1 Detailed Description

Definition at line 2133 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.340 EntityStateUpdatePdu Struct Reference

### Data Fields

- struct **EntityInformationFamilyPdu** **myEntityInformationFamilyPdu**
- struct **EntityID** **entityID**  
*This field shall identify the entity issuing the PDU.*
- char **padding1**  
*Padding.*
- unsigned char **numberOfArticulationParameters**  
*How many articulation parameters are in the variable length list.*
- struct **Vector3Float** **entityLinearVelocity**  
*Describes the speed of the entity in the world.*
- struct **Vector3Double** **entityLocation**  
*describes the location of the entity in the world*
- struct **Orientation** **entityOrientation**  
*describes the orientation of the entity, in euler angles*
- int **entityAppearance**  
*a series of bit flags that are used to help draw the entity, such as smoking, on fire, etc.*
- void \* **articulationParameters**

### 4.340.1 Detailed Description

Definition at line 1640 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.341 EntityType Struct Reference

### Data Fields

- unsigned char **entityKind**  
*Kind of entity.*
- unsigned char **domain**  
*Domain of entity (air, surface, subsurface, space, etc)*
- unsigned short **country**  
*country to which the design of the entity is attributed*
- unsigned char **category**  
*category of entity*
- unsigned char **subcategory**  
*subcategory of entity*
- unsigned char **specific**  
*specific info based on subcategory field*
- unsigned char **extra**

### 4.341.1 Detailed Description

Definition at line 478 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.342 Environment Struct Reference

### Data Fields

- unsigned int **environmentType**  
*Record type.*
- unsigned char **length**  
*length, in bits*
- unsigned char **index**  
*Identify the sequentially numbered record index.*
- unsigned char **padding1**  
*padding*
- unsigned char **geometry**  
*Geometry or state record.*
- unsigned char **padding2**  
*padding to bring the total size up to a 64 bit boundry*

### 4.342.1 Detailed Description

Definition at line 527 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.343 EnvironmentalProcessPdu Struct Reference

### Data Fields

- struct **SyntheticEnvironmentFamilyPdu** mySyntheticEnvironmentFamilyPdu
- struct **EntityID** environmentalProcessID  
*Environmental process ID.*
- struct **EntityType** environmentType  
***Environment** (p. 235) type.*
- unsigned char **modelType**  
*model type*
- unsigned char **environmentStatus**  
***Environment** (p. 235) status.*
- unsigned char **numberOfEnvironmentRecords**  
*number of environment records*
- unsigned short **sequenceNumber**  
*PDU sequence number for the environmentla process if pdu sequencing required.*
- void \* **environmentRecords**  
*environemt records*

### 4.343.1 Detailed Description

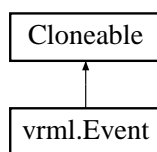
Definition at line 1388 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.344 vrml.Event Class Reference

Inheritance diagram for vrml.Event:



### Public Member Functions

- **Event** (String name2, double timestamp2, **ConstField** value2)
- String **getName** ()
- double **getTimeStamp** ()
- **ConstField** **getValue** ()
- Object **clone** ()
- String **toString** ()

### 4.344.1 Detailed Description

Definition at line 4 of file Event.java.

The documentation for this class was generated from the following file:

- src/java/vrml/Event.java

## 4.345 EventID Struct Reference

### Data Fields

- unsigned short **site**  
*The site ID.*
- unsigned short **application**  
*The application ID.*
- unsigned short **eventNumber**  
*the number of the event*



### 4.345.1 Detailed Description

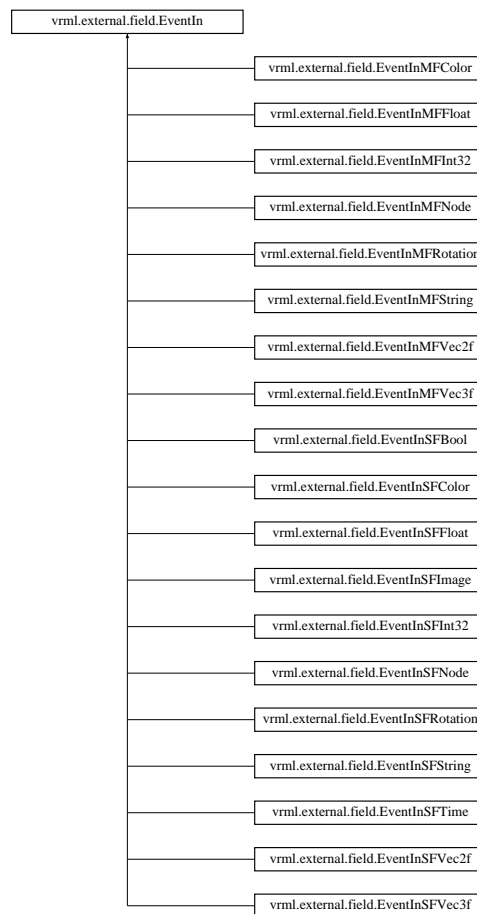
Definition at line 222 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.346 vrml.external.field.EventIn Class Reference

Inheritance diagram for vrml.external.field.EventIn:



### Public Member Functions

- int **getIntType** ()
- int **getType** ()

### Data Fields

- String **command**
- String **inNode**
- int **datasize** = 0
- int **nodeptr** = 0
- int **offset** = 0
- int **ScriptType** = 0
- String **datatype**

### 4.346.1 Detailed Description

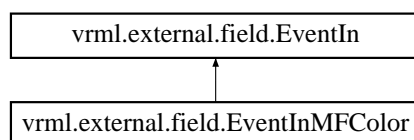
Definition at line 5 of file EventIn.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventIn.java

## 4.347 vrml.external.field.EventInMFColor Class Reference

Inheritance diagram for vrml.external.field.EventInMFColor:



### Public Member Functions

- void **setValue** (float[ ][ ] value) throws IllegalArgumentException
- void **set1Value** (int index, float[ ] value) throws IllegalArgumentException

### Additional Inherited Members

### 4.347.1 Detailed Description

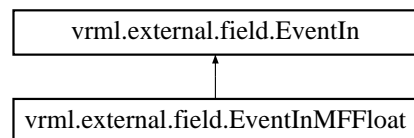
Definition at line 6 of file EventInMFColor.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventInMFColor.java

## 4.348 vrml.external.field.EventInMFFloat Class Reference

Inheritance diagram for vrml.external.field.EventInMFFloat:



## Public Member Functions

- void **setValue** (float[] value) throws IllegalArgumentException
- void **set1Value** (int index, float value) throws IllegalArgumentException

## Additional Inherited Members

### 4.348.1 Detailed Description

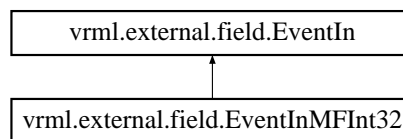
Definition at line 6 of file EventInMFFloat.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventInMFFloat.java

## 4.349 vrml.external.field.EventInMFInt32 Class Reference

Inheritance diagram for vrml.external.field.EventInMFInt32:



## Public Member Functions

- void **setValue** (int value[]) throws IllegalArgumentException
- void **set1Value** (int index, int value) throws IllegalArgumentException

## Additional Inherited Members

### 4.349.1 Detailed Description

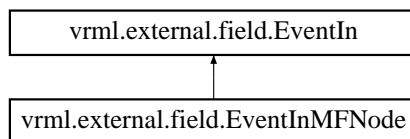
Definition at line 6 of file EventInMFInt32.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventInMFInt32.java

## 4.350 `vrml.external.field.EventInMFNode` Class Reference

Inheritance diagram for `vrml.external.field.EventInMFNode`:



### Public Member Functions

- void **setValue** ( `Node[]` node) throws `IllegalArgumentException`
- void **set1Value** (int index, `Node` node) throws `IllegalArgumentException`

### Additional Inherited Members

#### 4.350.1 Detailed Description

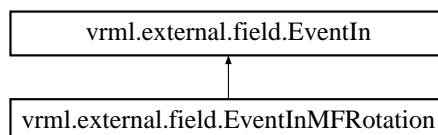
Definition at line 6 of file `EventInMFNode.java`.

The documentation for this class was generated from the following file:

- `src/java/vrml/external/field/EventInMFNode.java`

## 4.351 `vrml.external.field.EventInMFRotation` Class Reference

Inheritance diagram for `vrml.external.field.EventInMFRotation`:



### Public Member Functions

- void **setValue** (float[ ][ ] value) throws `IllegalArgumentException`
- void **set1Value** (int index, float[ ] value) throws `IllegalArgumentException`

### Additional Inherited Members

#### 4.351.1 Detailed Description

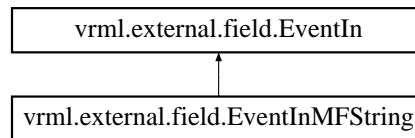
Definition at line 6 of file `EventInMFRotation.java`.

The documentation for this class was generated from the following file:

- `src/java/vrml/external/field/EventInMFRotation.java`

## 4.352 vrml.external.field.EventInMFString Class Reference

Inheritance diagram for vrml.external.field.EventInMFString:



### Public Member Functions

- void **setValue** (String[] value) throws IllegalArgumentException
- void **set1Value** (int index, String value) throws IllegalArgumentException

### Additional Inherited Members

#### 4.352.1 Detailed Description

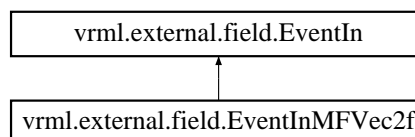
Definition at line 5 of file `EventInMFString.java`.

The documentation for this class was generated from the following file:

- `src/java/vrml/external/field/EventInMFString.java`

## 4.353 vrml.external.field.EventInMFVec2f Class Reference

Inheritance diagram for vrml.external.field.EventInMFVec2f:



### Public Member Functions

- void **setValue** (float[][] value) throws IllegalArgumentException
- void **set1Value** (int index, float value[]) throws IllegalArgumentException

### Additional Inherited Members

#### 4.353.1 Detailed Description

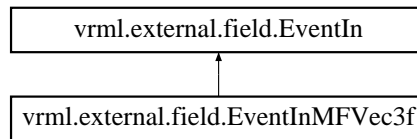
Definition at line 6 of file `EventInMFVec2f.java`.

The documentation for this class was generated from the following file:

- `src/java/vrml/external/field/EventInMFVec2f.java`

## 4.354 vrml.external.field.EventInMFVec3f Class Reference

Inheritance diagram for vrml.external.field.EventInMFVec3f:



### Public Member Functions

- void **setValue** (float[ ][ ] value) throws IllegalArgumentException
- void **set1Value** (int index, float[ ] value) throws IllegalArgumentException

### Additional Inherited Members

#### 4.354.1 Detailed Description

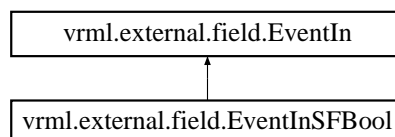
Definition at line 6 of file EventInMFVec3f.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventInMFVec3f.java

## 4.355 vrml.external.field.EventInSFBool Class Reference

Inheritance diagram for vrml.external.field.EventInSFBool:



### Public Member Functions

- void **setValue** (boolean value)

### Additional Inherited Members

#### 4.355.1 Detailed Description

Definition at line 5 of file EventInSFBool.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventInSFBool.java

## 4.356 vrml.external.field.EventInSFCOLOR Class Reference

Inheritance diagram for vrml.external.field.EventInSFCOLOR:



### Public Member Functions

- void **setValue** (float[] value) throws IllegalArgumentException

### Additional Inherited Members

#### 4.356.1 Detailed Description

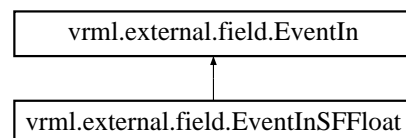
Definition at line 5 of file EventInSFCOLOR.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventInSFCOLOR.java

## 4.357 vrml.external.field.EventInSFFloat Class Reference

Inheritance diagram for vrml.external.field.EventInSFFloat:



### Public Member Functions

- void **setValue** (float value)

### Additional Inherited Members

#### 4.357.1 Detailed Description

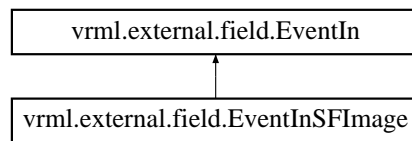
Definition at line 5 of file EventInSFFloat.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventInSFFloat.java

## 4.358 vrml.external.field.EventInSFImage Class Reference

Inheritance diagram for vrml.external.field.EventInSFImage:



### Public Member Functions

- void **setValue** (int width, int height, int components, byte[] pixels) throws IllegalArgumentException

### Additional Inherited Members

#### 4.358.1 Detailed Description

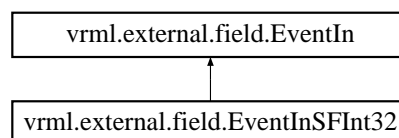
Definition at line 7 of file EventInSFImage.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventInSFImage.java

## 4.359 vrml.external.field.EventInSFInt32 Class Reference

Inheritance diagram for vrml.external.field.EventInSFInt32:



### Public Member Functions

- void **setValue** (Integer value)
- void **setValue** (int value)

### Additional Inherited Members

#### 4.359.1 Detailed Description

Definition at line 6 of file EventInSFInt32.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventInSFInt32.java



## 4.360 vrml.external.field.EventInSFNode Class Reference

Inheritance diagram for vrml.external.field.EventInSFNode:



### Public Member Functions

- void **setValue** ( **Node** node)

### Additional Inherited Members

#### 4.360.1 Detailed Description

Definition at line 6 of file EventInSFNode.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventInSFNode.java

## 4.361 vrml.external.field.EventInSFRotation Class Reference

Inheritance diagram for vrml.external.field.EventInSFRotation:



### Public Member Functions

- void **setValue** (float[] value) throws IllegalArgumentException

### Additional Inherited Members

#### 4.361.1 Detailed Description

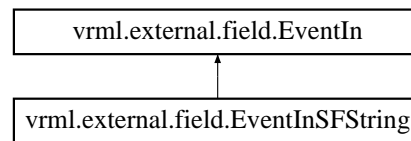
Definition at line 5 of file EventInSFRotation.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventInSFRotation.java

## 4.362 vrml.external.field.EventInSFString Class Reference

Inheritance diagram for vrml.external.field.EventInSFString:



### Public Member Functions

- void **setValue** (String value)

### Additional Inherited Members

#### 4.362.1 Detailed Description

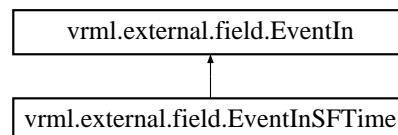
Definition at line 6 of file EventInSFString.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventInSFString.java

## 4.363 vrml.external.field.EventInSFTIME Class Reference

Inheritance diagram for vrml.external.field.EventInSFTIME:



### Public Member Functions

- void **setValue** (double value)

### Additional Inherited Members

#### 4.363.1 Detailed Description

Definition at line 6 of file EventInSFTIME.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventInSFTIME.java

## 4.364 vrml.external.field.EventInSFVec2f Class Reference

Inheritance diagram for vrml.external.field.EventInSFVec2f:



### Public Member Functions

- void **setValue** (float[] value) throws IllegalArgumentException

### Additional Inherited Members

#### 4.364.1 Detailed Description

Definition at line 5 of file EventInSFVec2f.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventInSFVec2f.java

## 4.365 vrml.external.field.EventInSFVec3f Class Reference

Inheritance diagram for vrml.external.field.EventInSFVec3f:



### Public Member Functions

- void **setValue** (float[] value) throws IllegalArgumentException

### Additional Inherited Members

#### 4.365.1 Detailed Description

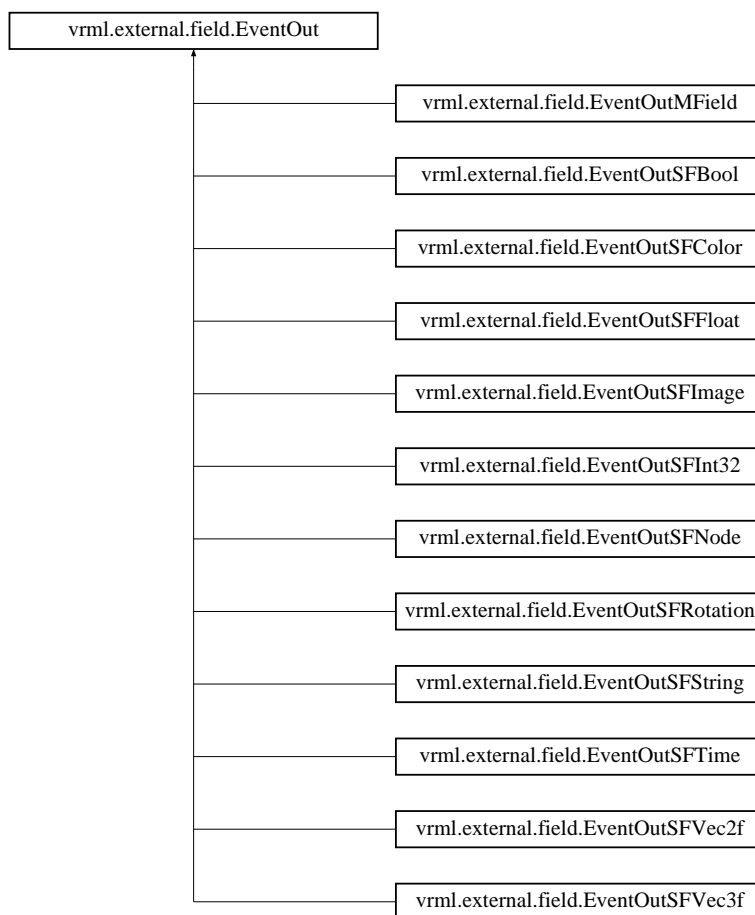
Definition at line 5 of file EventInSFVec3f.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventInSFVec3f.java

## 4.366 vrml.external.field.EventOut Class Reference

Inheritance diagram for vrml.external.field.EventOut:



### Public Member Functions

- int **getType** ()
- int **getIntType** ()
- void **advise** ( **EventOutObserver** f, Object userData)
- void **unadvise** ( **EventOutObserver** f)

### Data Fields

- int **EventType** = FieldTypes.UnknownType
- String **inNode**
- String **RLreturn**
- String **command**
- int **nodeptr** = 0
- int **offset** = 0
- int **datasize** = 0
- String **datatype**
- int **ScriptType** = 0

### 4.366.1 Detailed Description

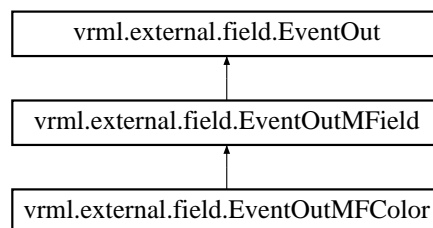
Definition at line 6 of file EventOut.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventOut.java

## 4.367 vrml.external.field.EventOutMFCOLOR Class Reference

Inheritance diagram for vrml.external.field.EventOutMFCOLOR:



### Public Member Functions

- float[ ][ ] **getValue** ()
- float[ ] **get1Value** (int index)

### Additional Inherited Members

### 4.367.1 Detailed Description

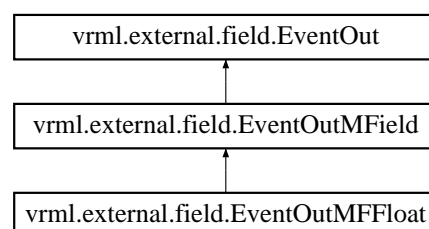
Definition at line 8 of file EventOutMFCOLOR.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventOutMFCOLOR.java

## 4.368 vrml.external.field.EventOutMFFLOAT Class Reference

Inheritance diagram for vrml.external.field.EventOutMFFLOAT:



## Public Member Functions

- float[] **getValue** ()
- float **get1Value** (int index)

## Additional Inherited Members

### 4.368.1 Detailed Description

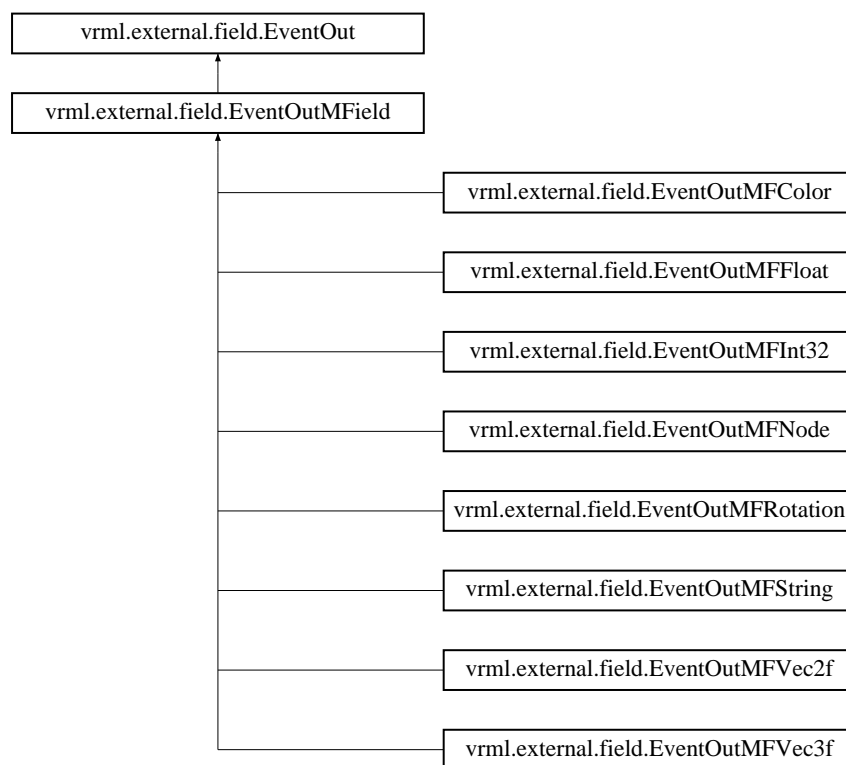
Definition at line 8 of file EventOutMFFloat.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventOutMFFloat.java

## 4.369 vrml.external.field.EventOutMField Class Reference

Inheritance diagram for vrml.external.field.EventOutMField:



## Public Member Functions

- int **getSize** ()

## Additional Inherited Members

### 4.369.1 Detailed Description

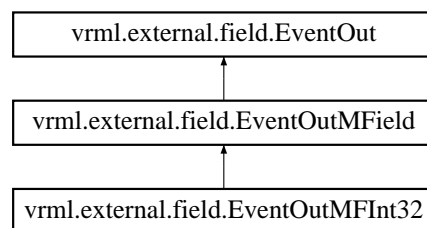
Definition at line 7 of file EventOutMField.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventOutMField.java

## 4.370 vrml.external.field.EventOutMField Class Reference

Inheritance diagram for vrml.external.field.EventOutMField:



## Public Member Functions

- int[] **getValue** ()
- int **get1Value** (int index)

## Additional Inherited Members

### 4.370.1 Detailed Description

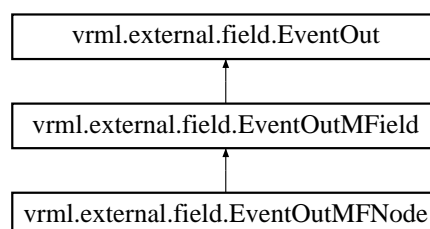
Definition at line 8 of file EventOutMFieldInt32.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventOutMFieldInt32.java

## 4.371 vrml.external.field.EventOutMFNode Class Reference

Inheritance diagram for vrml.external.field.EventOutMFNode:



## Public Member Functions

- **Node[]** **getValue** ()
- **Node** **get1Value** (int index)

## Additional Inherited Members

### 4.371.1 Detailed Description

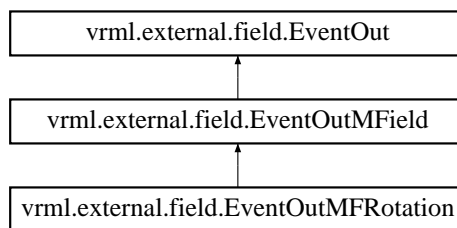
Definition at line 8 of file EventOutMFNode.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventOutMFNode.java

## 4.372 vrml.external.field.EventOutMFRotation Class Reference

Inheritance diagram for vrml.external.field.EventOutMFRotation:



## Public Member Functions

- float[ ][ ] **getValue** ()
- float[ ] **get1Value** (int index)

## Additional Inherited Members

### 4.372.1 Detailed Description

Definition at line 8 of file EventOutMFRotation.java.

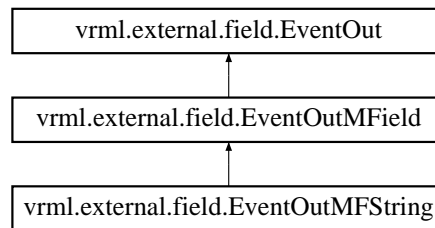
The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventOutMFRotation.java



## 4.373 vrml.external.field.EventOutMFString Class Reference

Inheritance diagram for vrml.external.field.EventOutMFString:



### Public Member Functions

- `String[] getValue ()`
- `String get1Value (int index)`

### Additional Inherited Members

#### 4.373.1 Detailed Description

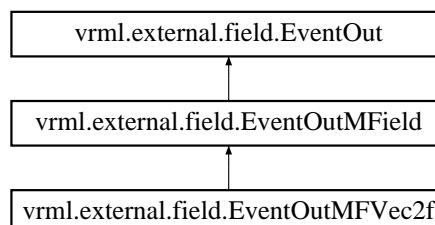
Definition at line 7 of file EventOutMFString.java.

The documentation for this class was generated from the following file:

- `src/java/vrml/external/field/EventOutMFString.java`

## 4.374 vrml.external.field.EventOutMFVec2f Class Reference

Inheritance diagram for vrml.external.field.EventOutMFVec2f:



### Public Member Functions

- `float[ ][ ] getValue ()`
- `float[ ] get1Value (int index)`

## Additional Inherited Members

### 4.374.1 Detailed Description

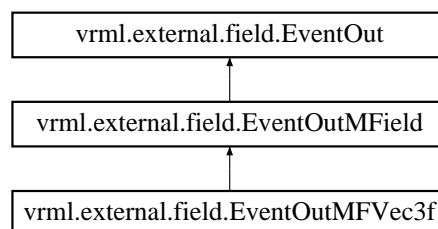
Definition at line 8 of file EventOutMFVec2f.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventOutMFVec2f.java

## 4.375 vrml.external.field.EventOutMFVec3f Class Reference

Inheritance diagram for vrml.external.field.EventOutMFVec3f:



## Public Member Functions

- float[ ][ ] **getValue** ()
- float[ ] **get1Value** (int index)

## Additional Inherited Members

### 4.375.1 Detailed Description

Definition at line 8 of file EventOutMFVec3f.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventOutMFVec3f.java

## 4.376 vrml.external.field.EventOutObserver Interface Reference

## Public Member Functions

- void **callback** ( **EventOut** value, double timeStamp, Object userData)

### 4.376.1 Detailed Description

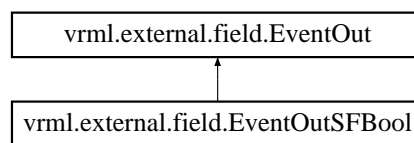
Definition at line 8 of file EventOutObserver.java.

The documentation for this interface was generated from the following file:

- src/java/vrml/external/field/EventOutObserver.java

## 4.377 vrml.external.field.EventOutSFBool Class Reference

Inheritance diagram for vrml.external.field.EventOutSFBool:



### Public Member Functions

- boolean **getValue** ()

### Additional Inherited Members

### 4.377.1 Detailed Description

Definition at line 7 of file EventOutSFBool.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventOutSFBool.java

## 4.378 vrml.external.field.EventOutSFColor Class Reference

Inheritance diagram for vrml.external.field.EventOutSFColor:



### Public Member Functions

- float[ ] **getValue** ()

## Additional Inherited Members

### 4.378.1 Detailed Description

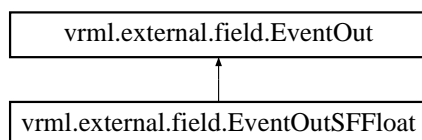
Definition at line 7 of file EventOutSFColor.java.

The documentation for this class was generated from the following file:

- `src/java/vrml/external/field/EventOutSFColor.java`

## 4.379 vrml.external.field.EventOutSFFloat Class Reference

Inheritance diagram for vrml.external.field.EventOutSFFloat:



## Public Member Functions

- `float getValue ()`

## Additional Inherited Members

### 4.379.1 Detailed Description

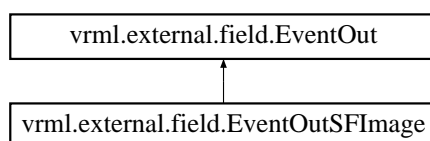
Definition at line 7 of file EventOutSFFloat.java.

The documentation for this class was generated from the following file:

- `src/java/vrml/external/field/EventOutSFFloat.java`

## 4.380 vrml.external.field.EventOutSFImage Class Reference

Inheritance diagram for vrml.external.field.EventOutSFImage:



## Public Member Functions

- int **getWidth** ()
- int **getHeight** ()
- int **getNumComponents** ()
- byte[] **getPixels** ()

## Additional Inherited Members

### 4.380.1 Detailed Description

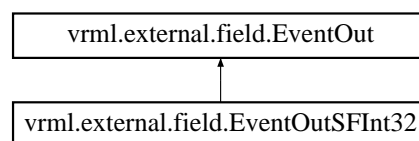
Definition at line 7 of file EventOutSFImage.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventOutSFImage.java

## 4.381 vrml.external.field.EventOutSFInt32 Class Reference

Inheritance diagram for vrml.external.field.EventOutSFInt32:



## Public Member Functions

- int **getValue** ()

## Additional Inherited Members

### 4.381.1 Detailed Description

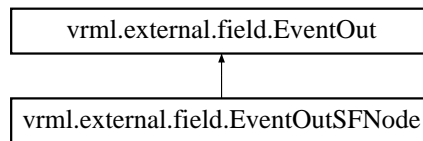
Definition at line 7 of file EventOutSFInt32.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventOutSFInt32.java

## 4.382 vrml.external.field.EventOutSFNode Class Reference

Inheritance diagram for vrml.external.field.EventOutSFNode:



### Public Member Functions

- Node `getValue ()`

### Additional Inherited Members

#### 4.382.1 Detailed Description

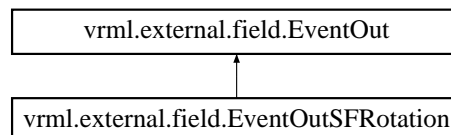
Definition at line 8 of file EventOutSFNode.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventOutSFNode.java

## 4.383 vrml.external.field.EventOutSFRotation Class Reference

Inheritance diagram for vrml.external.field.EventOutSFRotation:



### Public Member Functions

- float[] `getValue ()`

### Additional Inherited Members

#### 4.383.1 Detailed Description

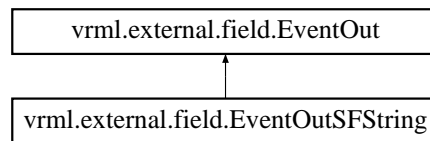
Definition at line 6 of file EventOutSFRotation.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventOutSFRotation.java

## 4.384 vrml.external.field.EventOutSFString Class Reference

Inheritance diagram for vrml.external.field.EventOutSFString:



### Public Member Functions

- String **getValue** ()

### Additional Inherited Members

#### 4.384.1 Detailed Description

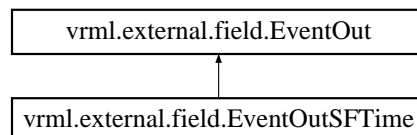
Definition at line 7 of file EventOutSFString.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventOutSFString.java

## 4.385 vrml.external.field.EventOutSFTIME Class Reference

Inheritance diagram for vrml.external.field.EventOutSFTIME:



### Public Member Functions

- double **getValue** ()

### Additional Inherited Members

#### 4.385.1 Detailed Description

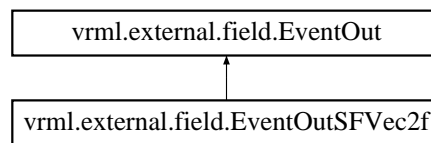
Definition at line 7 of file EventOutSFTIME.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventOutSFTIME.java

## 4.386 vrml.external.field.EventOutSFVec2f Class Reference

Inheritance diagram for vrml.external.field.EventOutSFVec2f:



### Public Member Functions

- float[] **getValue** ()

### Additional Inherited Members

#### 4.386.1 Detailed Description

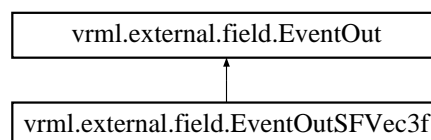
Definition at line 6 of file EventOutSFVec2f.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventOutSFVec2f.java

## 4.387 vrml.external.field.EventOutSFVec3f Class Reference

Inheritance diagram for vrml.external.field.EventOutSFVec3f:



### Public Member Functions

- float[] **getValue** ()

### Additional Inherited Members

#### 4.387.1 Detailed Description

Definition at line 6 of file EventOutSFVec3f.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/field/EventOutSFVec3f.java



## 4.388 EventReportPdu Struct Reference

### Data Fields

- struct **SimulationManagementFamilyPdu** mySimulationManagementFamilyPdu
- unsigned int **eventType**  
*Type of event.*
- unsigned int **padding1**  
*padding*
- unsigned int **numberOfFixedDatumRecords**  
*Number of fixed datum records.*
- unsigned int **numberOfVariableDatumRecords**  
*Number of variable datum records.*
- void \* **fixedDatums**  
*variable length list of fixed datums*
- void \* **variableDatums**  
*variable length list of variable length datums*

### 4.388.1 Detailed Description

Definition at line 1342 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.389 EventReportReliablePdu Struct Reference

### Data Fields

- struct **SimulationManagementWithReliabilityFamilyPdu** mySimulationManagementWithReliability↵  
**FamilyPdu**
- unsigned short **eventType**  
*Event type.*
- unsigned int **pad1**  
*padding*
- unsigned int **numberOfFixedDatumRecords**  
*Fixed datum record count.*
- unsigned int **numberOfVariableDatumRecords**  
*variable datum record count*
- void \* **fixedDatumRecords**  
*Fixed datum records.*
- void \* **variableDatumRecords**  
*Variable datum records.*

### 4.389.1 Detailed Description

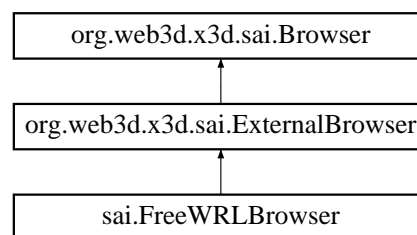
Definition at line 2007 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.390 org.web3d.x3d.sai.ExternalBrowser Interface Reference

Inheritance diagram for org.web3d.x3d.sai.ExternalBrowser:



### Public Member Functions

- void **addBrowserListener** ( **BrowserListener** listener) throws InvalidBrowserException
- void **removeBrowserListener** ( **BrowserListener** l) throws InvalidBrowserException
- void **beginUpdate** () throws InvalidBrowserException
- void **endUpdate** () throws InvalidBrowserException
- void **dispose** () throws InvalidOperationTimingException

### 4.390.1 Detailed Description

Definition at line 4 of file ExternalBrowser.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/ExternalBrowser.java

## 4.391 extrusion Struct Reference

### Data Fields

- **polygon poly**
- double **below**
- double **above**

### 4.391.1 Detailed Description

Definition at line 771 of file SSRServer.c.

The documentation for this struct was generated from the following file:

- src/SSR/SSRServer.c

## 4.392 FaceCount Struct Reference

### Data Fields

- long **size**
- **GLUhalfEdge** \* **eStart**
- void(\* **render** )( **GLUtesselator** \*, **GLUhalfEdge** \*, long)

### 4.392.1 Detailed Description

Definition at line 49 of file render.c.

The documentation for this struct was generated from the following file:

- src/libtess/render.c

## 4.393 FastEntityStatePdu Struct Reference

### Data Fields

- struct **EntityInformationFamilyPdu** **myEntityInformationFamilyPdu**
- unsigned short **site**  
*The site ID.*
- unsigned short **application**  
*The application ID.*
- unsigned short **entity**  
*the entity ID*
- unsigned char **forceld**  
*what force this entity is affiliated with, eg red, blue, neutral, etc*
- char **numberOfArticulationParameters**  
*How many articulation parameters are in the variable length list.*
- unsigned char **entityKind**  
*Kind of entity.*
- unsigned char **domain**  
*Domain of entity (air, surface, subsurface, space, etc)*
- unsigned short **country**  
*country to which the design of the entity is attributed*
- unsigned char **category**

- category of entity*
- unsigned char **subcategory**
  - subcategory of entity*
- unsigned char **specific**
  - specific info based on subcategory field*
- unsigned char **extra**
- unsigned char **altEntityKind**
  - Kind of entity.*
- unsigned char **altDomain**
  - Domain of entity (air, surface, subsurface, space, etc)*
- unsigned short **altCountry**
  - country to which the design of the entity is attributed*
- unsigned char **altCategory**
  - category of entity*
- unsigned char **altSubcategory**
  - subcategory of entity*
- unsigned char **altSpecific**
  - specific info based on subcategory field*
- unsigned char **altExtra**
- float **xVelocity**
  - X velo.*
- float **yVelocity**
  - y Value*
- float **zVelocity**
  - Z value.*
- double **xLocation**
  - X value.*
- double **yLocation**
  - y Value*
- double **zLocation**
  - Z value.*
- float **psi**
- float **theta**
- float **phi**
- int **entityAppearance**
  - a series of bit flags that are used to help draw the entity, such as smoking, on fire, etc.*
- unsigned char **deadReckoningAlgorithm**
  - enumeration of what dead reckoning algorithm to use*
- char **otherParameters** [15]
  - other parameters to use in the dead reckoning algorithm*
- float **xAcceleration**
  - X value.*
- float **yAcceleration**
  - y Value*
- float **zAcceleration**
  - Z value.*
- float **xAngularVelocity**
  - X value.*
- float **yAngularVelocity**
  - y Value*
- float **zAngularVelocity**

- Z value.*
- char **marking** [12]  
*characters that can be used for debugging, or to draw unique strings on the side of entities in the world*
- int **capabilities**  
*a series of bit flags*
- void \* **articulationParameters**  
*variable length list of articulation parameters*

### 4.393.1 Detailed Description

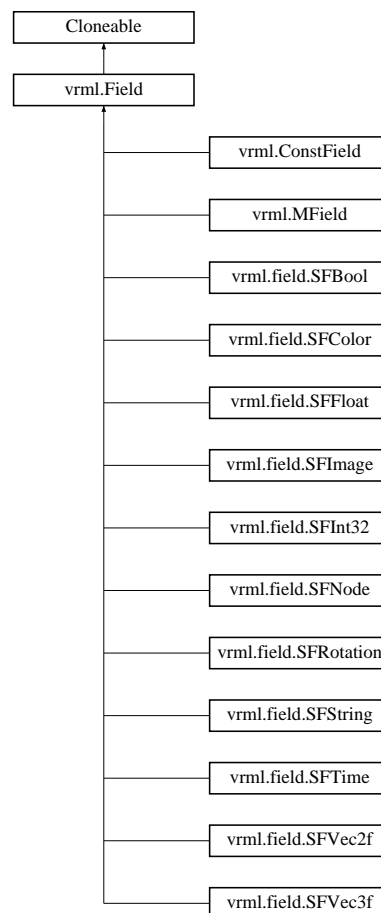
Definition at line 2163 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.394 vrml.Field Class Reference

Inheritance diagram for vrml.Field:



## Public Member Functions

- Object **clone** ()
- void **bind\_to** ( FWJavaScriptBinding b)
- final void **\_\_updateRead** ()
- abstract void **\_\_fromPerl** (BufferedReader in) throws IOException
- abstract void **\_\_toPerl** (PrintWriter out) throws IOException
- void **setOffset** (String offs)
- String **getOffset** ()

## Protected Member Functions

- final void **\_\_updateWrite** ()

### 4.394.1 Detailed Description

Definition at line 4 of file Field.java.

The documentation for this class was generated from the following file:

- src/java/vrml/Field.java

## 4.395 field\_info Struct Reference

### Data Fields

- int **nameIndex**
- int **offset**
- int **typeIndex**
- int **ioType**
- int **version**
- int **unca**

### 4.395.1 Detailed Description

Definition at line 71 of file headers.h.

The documentation for this struct was generated from the following file:

- src/lib/main/headers.h

## 4.396 FieldDecl Struct Reference

### Data Fields

- indexT **PKWmode**
- indexT **fieldType**
- indexT **lexerNameIndex**
- indexT **JSparamNameIndex**
- int **shaderVariableID**

### 4.396.1 Detailed Description

Definition at line 32 of file `CFieldDecls.h`.

The documentation for this struct was generated from the following file:

- `src/lib/vrml_parser/CFieldDecls.h`

## 4.397 `vrml.external.field.FieldTypes` Class Reference

### Static Public Attributes

- static final int **UnknownType** = 0
- static final int **SFBOOL** = 1
- static final int **SFIMAGE** = 2
- static final int **SFTIME** = 3
- static final int **SFCOLOR** = 4
- static final int **MFCOLOR** = 5
- static final int **SFFLOAT** = 6
- static final int **MFFLOAT** = 7
- static final int **SFINT32** = 8
- static final int **MFINT32** = 9
- static final int **SFNODE** = 10
- static final int **MFNODE** = 11
- static final int **SFROTATION** = 12
- static final int **MFROTATION** = 13
- static final int **SFSTRING** = 14
- static final int **MFSTRING** = 15
- static final int **SFVEC2F** = 16
- static final int **MFVEC2F** = 17
- static final int **SFVEC3F** = 18
- static final int **MFVEC3F** = 19

### 4.397.1 Detailed Description

Definition at line 5 of file `FieldTypes.java`.

The documentation for this class was generated from the following file:

- `src/java/vrml/external/field/FieldTypes.java`

## 4.398 file\_in\_zip64\_read\_info\_s Struct Reference

### Data Fields

- char \* **read\_buffer**
- z\_stream **stream**
- ZPOS64\_T **pos\_in\_zipfile**
- uLong **stream\_initialised**
- ZPOS64\_T **offset\_local\_extrafield**
- uInt **size\_local\_extrafield**
- ZPOS64\_T **pos\_local\_extrafield**
- ZPOS64\_T **total\_out\_64**
- uLong **crc32**
- uLong **crc32\_wait**
- ZPOS64\_T **rest\_read\_compressed**
- ZPOS64\_T **rest\_read\_uncompressed**
- **zlib\_filefunc64\_32\_def** z\_filefunc
- voidpf **filestream**
- uLong **compression\_method**
- ZPOS64\_T **byte\_before\_the\_zipfile**
- int **raw**

### 4.398.1 Detailed Description

Definition at line 134 of file unzip.c.

The documentation for this struct was generated from the following file:

- src/libminizip/unzip.c

## 4.399 FirePdu Struct Reference

### Data Fields

- struct **WarfareFamilyPdu** myWarfareFamilyPdu
- struct **EntityID** munitionID  
*ID of the munition that is being shot.*
- struct **EventID** eventID  
*ID of event.*
- int **fireMissionIndex**
- struct **Vector3Double** locationInWorldCoordinates  
*location of the firing event*
- struct **BurstDescriptor** burstDescriptor  
*Describes munitions used in the firing event.*
- struct **Vector3Float** velocity  
*Velocity of the ammunition.*
- float **range**  
*range to the target*



### 4.399.1 Detailed Description

Definition at line 1836 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.400 FirstStruct Struct Reference

### Data Fields

- void \* **tonode**
- void(\* **interpptr**)(void \*)

### 4.400.1 Detailed Description

- we count times through the scenegraph; helps to break routing loops */\*\* Routing table \*\* Structure table \*/*

Definition at line 166 of file CRoutes.c.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/CRoutes.c

## 4.401 FixedDatum Struct Reference

### Data Fields

- unsigned int **fixedDatumID**  
*ID of the fixed datum.*
- unsigned int **fixedDatumValue**  
*Value for the fixed datum.*

### 4.401.1 Detailed Description

Definition at line 280 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.402 Flist Class Reference

### Public Member Functions

- void **add** (REAL x)
- void **filter** (void)
- void **grow** (int)
- void **taper** (REAL, REAL)

### Data Fields

- REAL \* **pts**
- int **npts**
- int **start**
- int **end**

### Protected Attributes

- **FlistSorter** **sorter**

### 4.402.1 Detailed Description

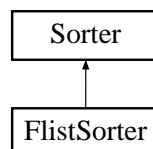
Definition at line 42 of file flist.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/flist.h
- src/libnurbs/internals/flist.cc

## 4.403 FlistSorter Class Reference

Inheritance diagram for FlistSorter:



### Public Member Functions

- void **qsort** (REAL \*a, int n)

## Protected Member Functions

- virtual int **qscmp** (char \*, char \*)
- virtual void **qsexc** (char \*i, char \*j)
- virtual void **qstexc** (char \*i, char \*j, char \*k)

### 4.403.1 Detailed Description

Definition at line 42 of file flistsorter.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/flistsorter.h
- src/libnurbs/internals/flistsorter.cc

## 4.404 flychord Struct Reference

### Data Fields

- int **chord**
- **Key arrows** [4]

### 4.404.1 Detailed Description

Definition at line 1644 of file Viewer.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Viewer.c

## 4.405 fmtChnk Struct Reference

### Data Fields

- char **chunkID** [4]
- int **chunkSize**
- short **wFormatTag**
- unsigned short **wChannels**
- unsigned int **dwSamplesPerSec**
- unsigned int **dwAvgBytesPerSec**
- unsigned short **wBlockAlign**
- unsigned short **wBitsPerSample**

### 4.405.1 Detailed Description

Definition at line 51 of file soundheader.h.

The documentation for this struct was generated from the following file:

- src/sound/soundheader.h

## 4.406 FourByteChunk Struct Reference

### Data Fields

- char **otherParameters** [4]  
*four bytes of arbitrary data*

### 4.406.1 Detailed Description

Definition at line 203 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.407 freewrl\_params Struct Reference

Initialization.

```
#include <libFreeWRL.h>
```

### Data Fields

- int **width**
- int **height**
- int **xpos**
- int **ypos**
- long int **winToEmbedInto**
- bool **fullscreen**
- bool **multithreading**
- bool **enableEAI**
- bool **verbose**
- bool **frontend\_handles\_display\_thread**
- void \* **display**
- void \* **context**
- void \* **surface**

### 4.407.1 Detailed Description

Initialization.

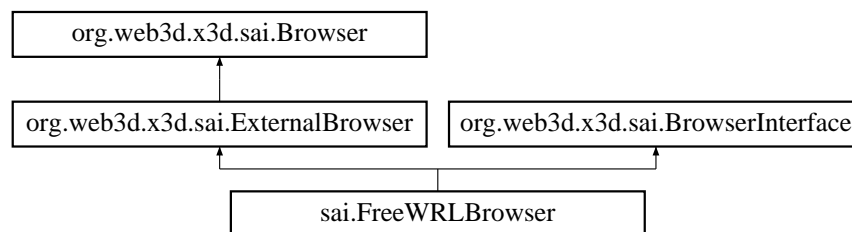
Definition at line 72 of file libFreeWRL.h.

The documentation for this struct was generated from the following file:

- src/lib/libFreeWRL.h

## 4.408 sai.FreeWRLBrowser Class Reference

Inheritance diagram for sai.FreeWRLBrowser:



### Public Member Functions

- int **get\_Browser\_EVtype** (int event)
- **X3DFieldEventListener** **get\_Browser\_EVObserver** (int eventno)
- void **Browser\_RL\_Async\_send** (String EVentreply, int eventno)
- **FreeWRLBrowser** (Applet pApplet, int portnum)
- **FreeWRLBrowser** (Applet pApplet)
- void **checkValid** ()
- String **getName** () throws InvalidBrowserException, ConnectionException
- String **getVersion** () throws InvalidBrowserException, ConnectionException
- float **getCurrentSpeed** () throws InvalidBrowserException, ConnectionException
- float **getCurrentFrameRate** () throws InvalidBrowserException, ConnectionException
- void **replaceWorld** ( X3DScene passedscene) throws InvalidBrowserException, ConnectionException
- void **setDescription** (String des) throws InvalidBrowserException, ConnectionException
- **X3DScene** **createX3DFromString** (String str) throws InvalidBrowserException, InvalidX3DException, ConnectionException, NotSupportedException
- **X3DNode** **createNodeFromString** (String str)
- **X3DScene** **createX3DFromStream** (InputStream is) throws InvalidBrowserException, InvalidX3DException, ConnectionException, NotSupportedException, IOException
- **X3DScene** **createX3DFromURL** (String[] url) throws InvalidBrowserException, InvalidX3DException, ConnectionException, IOException
- Map **getRenderingProperties** () throws InvalidBrowserException, ConnectionException
- Map **getBrowserProperties** () throws InvalidBrowserException, ConnectionException
- void **nextViewpoint** () throws InvalidBrowserException, ConnectionException
- void **previousViewpoint** () throws InvalidBrowserException, ConnectionException
- void **firstViewpoint** () throws InvalidBrowserException, ConnectionException
- void **lastViewpoint** () throws InvalidBrowserException, ConnectionException
- void **print** (Object obj) throws InvalidBrowserException, ConnectionException

- void **println** (Object obj) throws InvalidBrowserException, ConnectionException
- String **addRoute** ( **FreeWRLNode** fromNode, String fromEventOut, **FreeWRLNode** toNode, String toEventIn) throws IllegalArgumentException
- String **deleteRoute** ( **FreeWRLNode** fromNode, String fromEventOut, **FreeWRLNode** toNode, String toEventIn) throws IllegalArgumentException
- void **beginUpdate** ()
- void **endUpdate** ()
- void **initialize** ()
- void **shutdown** ()
- **X3DNode** **getNode** (String nodeName) throws NodeUnavailableException
- void **close** ()
- void **dispose** ()
- void **addBrowserListener** ( **BrowserListener** listener) throws InvalidBrowserException, ConnectionException
- void **removeBrowserListener** ( **BrowserListener** listener) throws InvalidBrowserException, ConnectionException
- void **browserEvent** (int type)
- **X3DScene** **currentScene** ()
- **ProfileInfo** **getProfile** (String name) throws ConnectionException, InvalidBrowserException, NotSupportedException
- **ProfileInfo[]** **getSupportedProfiles** () throws InvalidBrowserException, ConnectionException
- **ComponentInfo[]** **getSupportedComponents** () throws InvalidBrowserException, ConnectionException
- **ComponentInfo** **getComponent** (String name, int level) throws InvalidBrowserException, NotSupportedException, ConnectionException
- **X3DExecutionContext** **getExecutionContext** () throws InvalidBrowserException, ConnectionException
- **X3DScene** **createScene** ( **ProfileInfo** profile, **ComponentInfo[]** components) throws InvalidBrowserException, ConnectionException
- void **loadURL** (String[] url, Map parameters) throws InvalidBrowserException, InvalidURLException, ConnectionException
- String **getDescription** () throws InvalidBrowserException, ConnectionException
- void **stopRender** ()
- void **pauseRender** ()
- **X3DScene** **importDocument** (Node element) throws InvalidBrowserException, InvalidDocumentException, NotSupportedException, ConnectionException

## Static Public Member Functions

- static void **SendChildEvent** (String parent, String offset, String fieldName, String child)
- static void **newSendEvent** ( **FreeWRLField** field, String value)
- static String **sendGlobalCommand** (String command)
- static String **SendEventOut** (String nodeptr, String offset, String datasize, String datatype, String command)
- static void **RegisterListener** ( **X3DFieldEventListener** f, Object userData, String nodeptr, String offset, String datatype, String datasize, int EventType)
- static void **unRegisterListener** ( **X3DFieldEventListener** f, String nodeptr, String offset, String datatype, String datasize, int EventType)

## Static Protected Member Functions

- static String **SendEventType** (String nodeName, String ptr, String fieldName, String direction)
- static synchronized String **getVRMLreply** (int queryno)

### 4.408.1 Detailed Description

Definition at line 18 of file FreeWRLBrowser.java.

The documentation for this class was generated from the following file:

- src/java/sai/FreeWRLBrowser.java

## 4.409 sai.FreeWRLBrowserInfo Class Reference

### Static Public Member Functions

- static void **setBrowserProperty** (int property, boolean value)
- static boolean **getBrowserProperty** (int property)
- static Map **getBrowserProperties** ()

### 4.409.1 Detailed Description

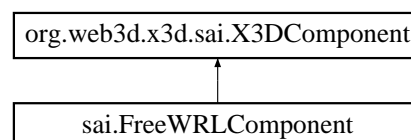
Definition at line 5 of file FreeWRLBrowserInfo.java.

The documentation for this class was generated from the following file:

- src/java/sai/FreeWRLBrowserInfo.java

## 4.410 sai.FreeWRLComponent Class Reference

Inheritance diagram for sai.FreeWRLComponent:



### Public Member Functions

- ExternalBrowser **getBrowser** ()
- Object **getImplementation** ()
- void **shutdown** ()

### 4.410.1 Detailed Description

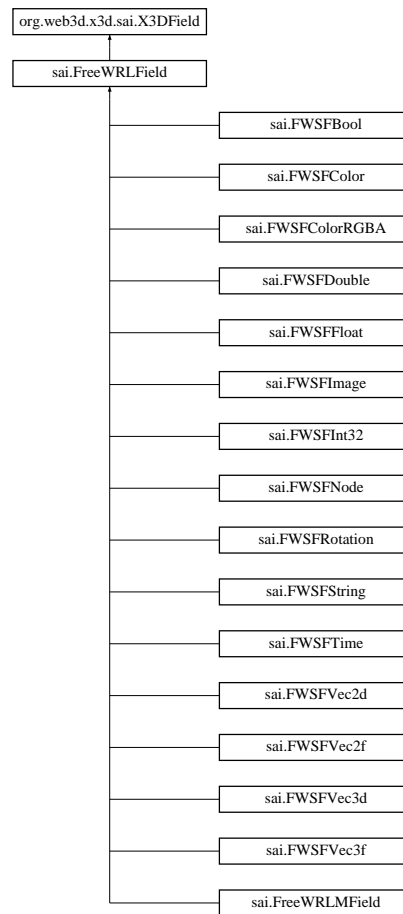
Definition at line 4 of file FreeWRLComponent.java.

The documentation for this class was generated from the following file:

- src/java/sai/FreeWRLComponent.java

## 4.411 sai.FreeWRLField Class Reference

Inheritance diagram for sai.FreeWRLField:



### Public Member Functions

- **FreeWRLField** ( **FreeWRLFieldDefinition** def, **FreeWRLBrowser** b)
- **String toString** ()
- **X3DFieldDefinition getDefinition** () throws **InvalidFieldException**, **ConnectionException**
- **boolean isReadable** () throws **InvalidFieldException**, **ConnectionException**
- **boolean isWritable** () throws **InvalidFieldException**, **ConnectionException**
- **void addX3DEventListener** ( **X3DFieldEventListener** l) throws **ConnectionException**, **InvalidFieldException**
- **void removeX3DEventListener** ( **X3DFieldEventListener** l) throws **ConnectionException**, **InvalidFieldException**
- **void setUserData** (Object data) throws **InvalidFieldException**, **ConnectionException**
- **Object getUserData** () throws **InvalidFieldException**, **ConnectionException**
- **void dispose** ()
- **void checkValid** ()
- **void setCommand** (String com)
- **void setNode** (String nod)
- **void setDataType** (String dt)
- **void setNodePtr** (String np)
- **void setOffset** (String off)
- **void setDataSize** (String ds)



- void **setScriptType** (String st)
- String **getDataSize** ()
- String **getScriptType** ()
- String **getCommand** ()
- String **getNode** ()
- String **getDataType** ()
- String **getNodePtr** ()
- String **getOffset** ()

### Protected Attributes

- **FreeWRLFieldDefinition** fieldDef
- Object **userData**
- **FreeWRLBrowser** browser

#### 4.411.1 Detailed Description

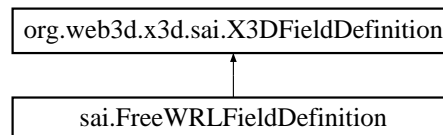
Definition at line 4 of file FreeWRLField.java.

The documentation for this class was generated from the following file:

- src/java/sai/FreeWRLField.java

## 4.412 sai.FreeWRLFieldDefinition Class Reference

Inheritance diagram for sai.FreeWRLFieldDefinition:



### Public Member Functions

- **FreeWRLFieldDefinition** (String nm, int access, int field)
- String **getName** ()
- int **getAccessType** ()
- int **getFieldType** ()
- String **getFieldTypeString** ()
- void **setDefaultValue** (String val)
- String **getDefault** ()

### Protected Attributes

- String **name**
- int **accessType**
- int **fieldType**
- String **fieldTypeString**
- String **defaultVal**

### 4.412.1 Detailed Description

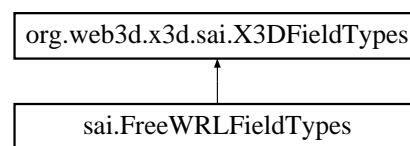
Definition at line 4 of file FreeWRLFieldDefinition.java.

The documentation for this class was generated from the following file:

- src/java/sai/FreeWRLFieldDefinition.java

## 4.413 sai.FreeWRLFieldTypes Class Reference

Inheritance diagram for sai.FreeWRLFieldTypes:



### Static Public Member Functions

- static int **getIntType** (String type)
- static String **getStringType** (int type)
- static String **getStringDesc** (int type)
- static int **getIntFromStringDesc** (String desc)
- static int **getAccessFromType** (String type)
- static int **getIntAccess** (String type)
- static String **getStringAccess** (int type)

### Static Public Attributes

- static int **SFUNKOWN** = 0

### Additional Inherited Members

### 4.413.1 Detailed Description

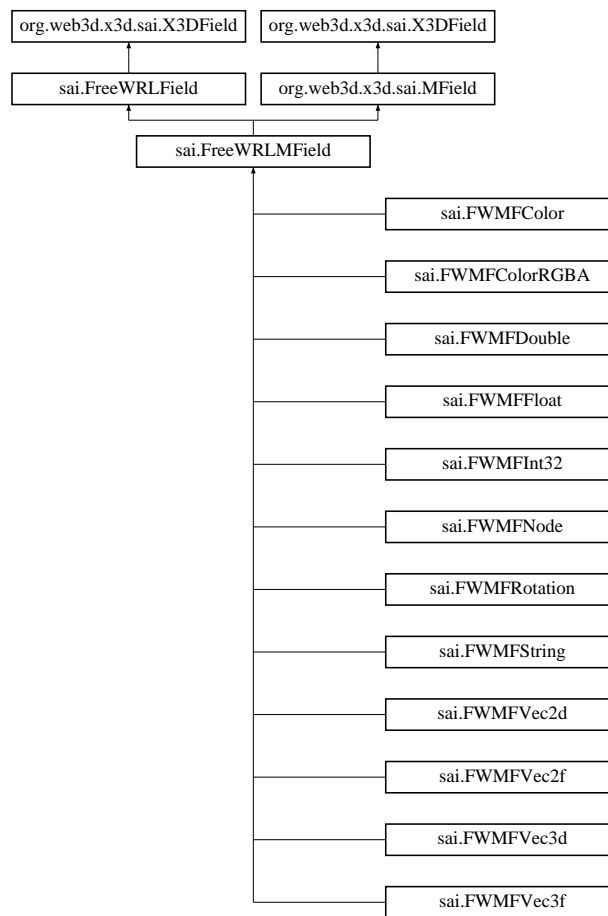
Definition at line 5 of file FreeWRLFieldTypes.java.

The documentation for this class was generated from the following file:

- src/java/sai/FreeWRLFieldTypes.java

## 4.414 sai.FreeWRLMField Class Reference

Inheritance diagram for sai.FreeWRLMField:



### Public Member Functions

- **FreeWRLMField** ( **FreeWRLFieldDefinition** def, **FreeWRLBrowser** b)
- **int size** () throws InvalidFieldException, ConnectionException
- **void clear** () throws InvalidFieldException, ConnectionException
- **void remove** (int index) throws InvalidFieldException, ConnectionException, ArrayIndexOutOfBoundsException↵

### Additional Inherited Members

#### 4.414.1 Detailed Description

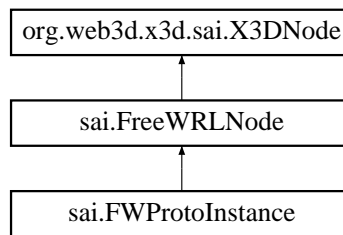
Definition at line 5 of file FreeWRLMField.java.

The documentation for this class was generated from the following file:

- src/java/sai/FreeWRLMField.java

## 4.415 sai.FreeWRLNode Class Reference

Inheritance diagram for sai.FreeWRLNode:



### Public Member Functions

- **FreeWRLNode** ( **FreeWRLBrowser** b)
- **toString** ()
- **boolean equals** (Object o)
- **String getNodeName** () throws **InvalidNodeException**, **ConnectionException**
- **void setPerIPtr** (String p)
- **String getPerIPtr** ()
- **String getName** ()
- **int[] getNodeType** () throws **InvalidNodeException**, **ConnectionException**
- **X3DFieldDefinition[] getFieldDefinitions** () throws **InvalidNodeException**, **ConnectionException**
- **X3DField getField** (String fieldName) throws **InvalidNameException**, **InvalidNodeException**, **ConnectionException**
- **void dispose** () throws **InvalidNodeException**
- **void setNodeName** (String n)
- **void setType** (int t)
- **void setPointer** (String p)
- **String getPointer** ()
- **void setMetadata** ( **X3DMetadataObject** data) throws **InvalidNodeException**, **ConnectionException**
- **X3DMetadataObject getMetadata** () throws **InvalidNodeException**, **ConnectionException**

### 4.415.1 Detailed Description

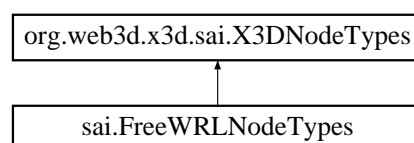
Definition at line 6 of file FreeWRLNode.java.

The documentation for this class was generated from the following file:

- src/java/sai/FreeWRLNode.java

## 4.416 sai.FreeWRLNodeTypes Class Reference

Inheritance diagram for sai.FreeWRLNodeTypes:



## Static Public Member Functions

- static String **getStringType** (int type)

## Data Fields

- int **X3D\_Component\_Networking** = 1
- int **X3D\_Component\_Shape** = 2
- int **X3D\_Component\_Geometry2D** = 3
- int **X3D\_Component\_Sound** = 4
- int **X3D\_Component\_EnvironmentalEffects** = 5
- int **X3D\_Component\_Navigation** = 6
- int **X3D\_Component\_EventUtilities** = 7
- int **X3D\_Component\_Geometry3D** = 8
- int **X3D\_Component\_Rendering** = 9
- int **X3D\_Component\_Interpolation** = 10
- int **X3D\_Component\_Nurbs** = 11
- int **X3D\_Component\_PointingDevice** = 12
- int **X3D\_Component\_Lighting** = 13
- int **X3D\_Component\_Text** = 14
- int **X3D\_Component\_Geospatial** = 15
- int **X3D\_Component\_Grouping** = 16
- int **X3D\_Component\_HAnim** = 17
- int **X3D\_Component\_Texturing** = 18
- int **X3D\_Component\_EnvironmentalSensor** = 19
- int **X3D\_Component\_Scripting** = 20
- int **X3D\_Component\_Time** = 21

### 4.416.1 Detailed Description

Definition at line 5 of file FreeWRLNodeTypes.java.

The documentation for this class was generated from the following file:

- src/java/sai/FreeWRLNodeTypes.java

## 4.417 sai.FreeWRLRendererInfo Class Reference

### Static Public Member Functions

- static void **setRenderingProperty** (String **key**, Object value)
- static Object **getRenderingProperty** (String **key**)
- static Map **getRenderingProperties** ()

### 4.417.1 Detailed Description

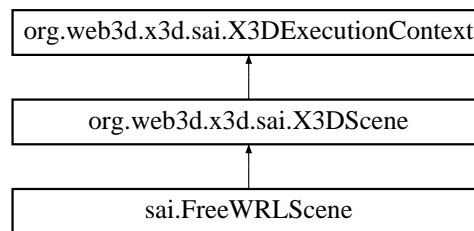
Definition at line 5 of file FreeWRLRendererInfo.java.

The documentation for this class was generated from the following file:

- src/java/sai/FreeWRLRendererInfo.java

## 4.418 sai.FreeWRLScene Class Reference

Inheritance diagram for sai.FreeWRLScene:



### Public Member Functions

- **FreeWRLScene** ( **FreeWRLNode**[] n, **FreeWRLBrowser** b)
- **FreeWRLScene** ( **FreeWRLBrowser** b)
- **FreeWRLScene** ( **FWComponentInfo**[] c, **FWProfileInfo** p, **FreeWRLBrowser** b)
- void **setCurrent** (boolean val)
- String **getMetaData** (String **key**) throws **InvalidExecutionContextException**
- void **setMetaData** (String **key**, String value) throws **InvalidExecutionContextException**
- **X3DNode** **getExportedNode** (String nodeName) throws **InvalidExecutionContextException**, **Node**←**UnavailableException**, **InvalidNameException**
- void **updateExportedNode** (String nodeName, String newName) throws **InvalidExecutionContextException**, **InvalidNameException**
- void **removeExportedNode** (String nodeName) throws **InvalidExecutionContextException**, **InvalidName**←**Exception**
- void **addRootNode** ( **X3DNode** rootNode) throws **InvalidExecutionContextException**, **NodeInUseException**, **InsufficientCapabilitiesException**
- void **removeRootNode** ( **X3DNode** rootNode) throws **InvalidExecutionContextException**
- String **getSpecificationVersion** () throws **InvalidExecutionContextException**
- int **getEncoding** () throws **InvalidExecutionContextException**
- **ProfileInfo** **getProfile** () throws **InvalidExecutionContextException**
- **ComponentInfo**[] **getComponents** () throws **InvalidExecutionContextException**
- String **getWorldURL** () throws **InvalidExecutionContextException**
- **X3DNode** **getNamedNode** (String nodeName) throws **InvalidExecutionContextException**, **Node**←**UnavailableException**, **InvalidNameException**
- **X3DNode** **getImportedNode** (String nodeName) throws **InvalidExecutionContextException**, **Node**←**UnavailableException**, **InvalidNameException**
- **X3DNode** **createNode** (String nodeName) throws **InvalidExecutionContextException**, **InvalidName**←**Exception**
- **X3DProtoInstance** **createProto** (String protoName) throws **InvalidExecutionContextException**, **Invalid**←**NameException**
- void **updateNamedNode** (String nodeName, **X3DNode** nodeRef) throws **InvalidExecutionContextException**, **InvalidNameException**, **ImportedNodeException**
- void **updateImportedNode** (String nodeName, String importedName, **X3DNode** nodeRef) throws **Invalid**←**ExecutionContextException**, **InvalidNameException**, **ImportedNodeException**
- void **removeNamedNode** (String nodeName) throws **InvalidExecutionContextException**, **InvalidName**←**Exception**
- void **removeImportedNode** (String nodeName) throws **InvalidExecutionContextException**, **InvalidName**←**Exception**
- **X3DProtoDeclaration** **getProtoDeclaration** (String protoName) throws **InvalidExecutionContextException**, **InvalidNameException**

- void **updateProtoDeclaration** (String protoName, **X3DProtoDeclaration** newDeclaration) throws InvalidExecutionContextException, InvalidNameException
- void **removeProtoDeclaration** (String protoName) throws InvalidExecutionContextException, InvalidNameException
- **X3DExternProtoDeclaration** **getExternProtoDeclaration** (String protoName) throws InvalidExecutionContextException, InvalidNameException, URLUnavailableException
- void **updateExternProtoDeclaration** (String protoName, **X3DExternProtoDeclaration** newDeclaration) throws InvalidExecutionContextException
- void **removeExternProtoDeclaration** (String protoName) throws InvalidExecutionContextException
- **X3DNode**[] **getRootNodes** () throws InvalidExecutionContextException
- **X3DRoute**[] **getRoutes** () throws InvalidExecutionContextException
- **X3DRoute** **addRoute** ( **X3DNode** startNode, String startName, **X3DNode** endNode, String endEvent) throws InvalidExecutionContextException, InvalidNodeException, InvalidFieldException
- void **removeRoute** ( **X3DRoute** route) throws InvalidExecutionContextException, InvalidNodeException, InvalidFieldException
- void **checkValid** ()
- void **dispose** ()

### 4.418.1 Detailed Description

Definition at line 6 of file FreeWRLScene.java.

The documentation for this class was generated from the following file:

- src/java/sai/FreeWRLScene.java

## 4.419 ftype Struct Reference

### Data Fields

- int **type**
- void **\*( \* copy )**(void \*T, void \*A)
- void **\*( \* add )**(void \*T, void \*A, void \*B)
- void **\*( \* dif )**(void \*T, void \*A, void \*B)
- void **\*( \* scale )**(void \*T, void \*A, float S)
- void **\*( \* lerp )**(void \*T, void \*A, void \*B, float alpha)
- float **\*( \* dist )**(void \*A)
- int **\*( \* same )**(void \*A, void \*B)
- int **\*( \* approx )**(void \*A, void \*B)
- void **\*( \* arr )**(void \*A, int i)
- void **\*\* tmp**

### 4.419.1 Detailed Description

Definition at line 195 of file Component\_Followers.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_Followers.c

## 4.420 FundamentalParameterData Struct Reference

### Data Fields

- float **frequency**  
*center frequency of the emission in hertz.*
- float **frequencyRange**  
*Bandwidth of the frequencies corresponding to the fequency field.*
- float **effectiveRadiatedPower**  
*Effective radiated power for the emission in DdBm.*
- float **pulseRepetitionFrequency**  
*Average repetition frequency of the emission in hertz.*
- float **pulseWidth**  
*Average pulse width of the emission in microseconds.*
- float **beamAzimuthCenter**  
*Specifies the beam azimuth an elevation centers and corresponding half-angles to describe the scan volume.*
- float **beamAzimuthSweep**  
*Specifies the beam azimuth sweep to determine scan volume.*
- float **beamElevationCenter**  
*Specifies the beam elevation center to determine scan volume.*
- float **beamElevationSweep**  
*Specifies the beam elevation sweep to determine scan volume.*
- float **beamSweepSync**  
*allows receiver to synchronize its regenerated scan pattern to that of the emmitter.*

### 4.420.1 Detailed Description

Definition at line 495 of file DIS.h.

### 4.420.2 Field Documentation

#### 4.420.2.1 beamSweepSync

```
float FundamentalParameterData::beamSweepSync
```

allows receiver to synchronize its regenerated scan pattern to that of the emmitter.

Specifies the percentage of time a scan is through its pattern from its origion.

Definition at line 515 of file DIS.h.



#### 4.420.2.2 effectiveRadiatedPower

```
float FundamentalParameterData::effectiveRadiatedPower
```

Effective radiated power for the emission in DdBm.

For a radar noise jammer, indicates the peak of the transmitted power.

Definition at line 501 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

### 4.421 FundamentalParameterDataIff Struct Reference

#### Data Fields

- float **erp**  
*ERP.*
- float **frequency**  
*frequency*
- float **pgrf**  
*pgrf*
- float **pulseWidth**  
*Pulse width.*
- unsigned int **burstLength**  
*Burst length.*
- unsigned char **applicableModes**  
*Applicable modes enumeration.*
- unsigned short **pad2**  
*padding*
- unsigned char **pad3**  
*padding*

#### 4.421.1 Detailed Description

Definition at line 254 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.422 fw\_MaterialParameters Struct Reference

### Data Fields

- float **emission** [4]
- float **ambient** [4]
- float **diffuse** [4]
- float **specular** [4]
- float **shininess**

### 4.422.1 Detailed Description

Definition at line 145 of file Component\_Shape.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_Shape.h

## 4.423 FWBITMAPFILEHEADER Struct Reference

### Data Fields

- FDWORD **bfSize**
- FWORD **bfReserved1**
- FWORD **bfReserved2**
- FDWORD **bfOffBits**

### 4.423.1 Detailed Description

Definition at line 196 of file Snapshot.c.

The documentation for this struct was generated from the following file:

- src/lib/main/Snapshot.c

## 4.424 FWBITMAPINFO Struct Reference

### Data Fields

- FWBITMAPINFOHEADER **bmiHeader**
- FWRGBQUAD **bmiColors** [1]

### 4.424.1 Detailed Description

Definition at line 211 of file Snapshot.c.

The documentation for this struct was generated from the following file:

- src/lib/main/Snapshot.c

## 4.425 FWBITMAPINFOHEADER Struct Reference

### Data Fields

- FDWORD **biSize**
- FLONG **biWidth**
- FLONG **biHeight**
- FWORD **biPlanes**
- FWORD **biBitCount**
- FDWORD **biCompression**
- FDWORD **biSizeImage**
- FLONG **biXPelsPerMeter**
- FLONG **biYPelsPerMeter**
- FDWORD **biClrUsed**
- FDWORD **biClrImportant**

### 4.425.1 Detailed Description

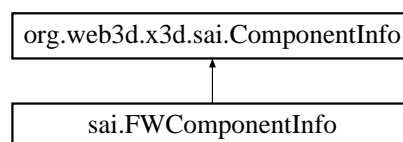
Definition at line 181 of file Snapshot.c.

The documentation for this struct was generated from the following file:

- src/lib/main/Snapshot.c

## 4.426 sai.FWComponentInfo Class Reference

Inheritance diagram for sai.FWComponentInfo:



### Public Member Functions

- **FWComponentInfo** (String n, int l, String t, String u)
- String **getName** ()
- int **getLevel** ()
- String **getTitle** ()
- String **getProviderURL** ()
- String **toX3DString** ()

### 4.426.1 Detailed Description

Definition at line 4 of file FWComponentInfo.java.

The documentation for this class was generated from the following file:

- src/java/sai/FWComponentInfo.java

## 4.427 vrml.FWCreateField Class Reference

### Static Public Member Functions

- static **Field createField** (String type)
- static **ConstField createConstField** (String type)

### 4.427.1 Detailed Description

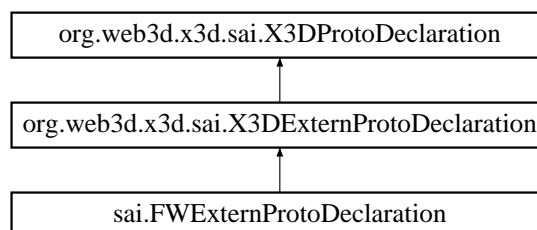
Definition at line 5 of file FWCreateField.java.

The documentation for this class was generated from the following file:

- src/java/vrml/FWCreateField.java

## 4.428 sai.FWExternProtoDeclaration Class Reference

Inheritance diagram for sai.FWExternProtoDeclaration:



### Public Member Functions

- String **getProtoName** ()
- int **getLoadState** ()
- void **loadNow** ()
- **X3DProtoInstance createInstance** () throws InvalidOperationTimingException, InvalidProtoException
- **X3DFieldDefinition[] getFieldDefinitions** () throws InvalidOperationTimingException, InvalidProtoException
- void **setProtoName** (String name)
- void **setFields** ( FreeWRLFieldDefinition[] f)
- void **setType** (int t)
- void **dispose** ()

### 4.428.1 Detailed Description

Definition at line 5 of file FWExternProtoDeclaration.java.

The documentation for this class was generated from the following file:

- src/java/sai/FWExternProtoDeclaration.java

## 4.429 FWFunctionSpec Struct Reference

### Data Fields

- const char \* **name**
- FWFunction **call**
- char **retType**
- struct **ArgListType** arglist

### 4.429.1 Detailed Description

Definition at line 60 of file FWTYPE.h.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/FWTYPE.h

## 4.430 vrml.FWHelper Class Reference

### Static Public Member Functions

- static String **base64encode** (String str)
- static String **base64decode** (String str)
- static String **quote** (String str)  
*This is the static method, that quotes a string.*
- static String **nodeToString** ( **BaseNode** node)

### 4.430.1 Detailed Description

Definition at line 4 of file FWHelper.java.

The documentation for this class was generated from the following file:

- src/java/vrml/FWHelper.java

## 4.431 vrml.FWJavaScript Class Reference

### Static Public Member Functions

- static void **add\_touched** ( **Field** f)
- static void **send\_touched** (String reqid) throws IOException
- static void **main** (String argv[]) throws ClassNotFoundException, NoSuchMethodException, InstantiationException, IllegalAccessException, InvocationTargetException, Exception, Throwable
- static String **getFieldType** ( **BaseNode** node, String fieldname, String kind)
- static void **readField** ( **BaseNode** node, String fieldName, **Field** fld)
- static String **getNodeType** ( **BaseNode** node)
- static **Browser** **getBrowser** ()
- static **BaseNode**[] **createVrmlFromString** (String vrmlSyntax) throws InvalidVRMLSyntaxException
- static **BaseNode**[] **createX3DFromString** (String vrmlSyntax) throws InvalidX3DSyntaxException

### 4.431.1 Detailed Description

Definition at line 13 of file FWJavaScript.java.

The documentation for this class was generated from the following file:

- src/java/vrml/FWJavaScript.java

## 4.432 vrml.FWJavaScriptBinding Class Reference

### Public Member Functions

- **FWJavaScriptBinding** ( **BaseNode** n, String f)
- **FWJavaScriptBinding** ( **BaseNode** n, String f, boolean u)
- **BaseNode** **node** ()
- String **field** ()
- void **updateRead** ( **Field** field)
- void **updateWrite** ( **Field** field)
- String **toString** ()

### 4.432.1 Detailed Description

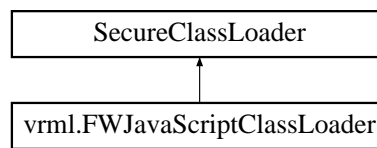
Definition at line 5 of file FWJavaScriptBinding.java.

The documentation for this class was generated from the following file:

- src/java/vrml/FWJavaScriptBinding.java

## 4.433 vrml.FWJavaScriptClassLoader Class Reference

Inheritance diagram for vrml.FWJavaScriptClassLoader:



### Public Member Functions

- **FWJavaScriptClassLoader** (String url)

### Protected Member Functions

- Class **findClass** (String name) throws ClassNotFoundException
- PermissionCollection **getPermissions** (CodeSource codesource)
- URL **findResource** (String name)
- Enumeration **findResources** (String name) throws IOException

### 4.433.1 Detailed Description

Definition at line 13 of file FWJavaScriptClassLoader.java.

### 4.433.2 Constructor & Destructor Documentation

#### 4.433.2.1 FWJavaScriptClassLoader()

```
vrml.FWJavaScriptClassLoader.FWJavaScriptClassLoader (
 String url) [inline]
```

Parameters

|            |                               |
|------------|-------------------------------|
| <i>url</i> | base url for loading classes. |
|------------|-------------------------------|

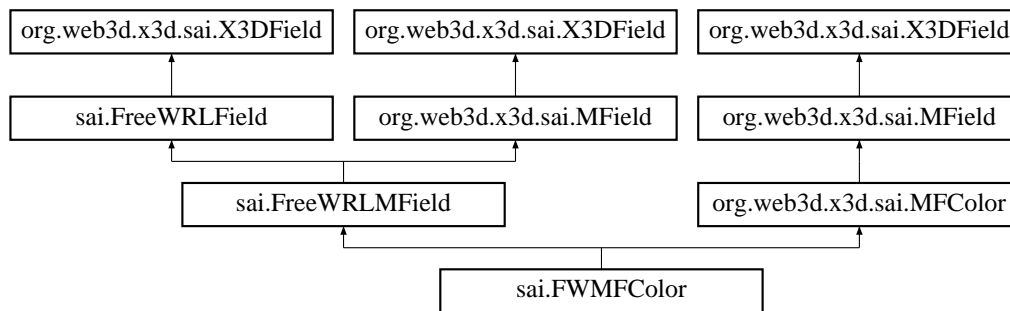
Definition at line 21 of file FWJavaScriptClassLoader.java.

The documentation for this class was generated from the following file:

- src/java/vrml/FWJavaScriptClassLoader.java

## 4.434 sai.FWMFColor Class Reference

Inheritance diagram for sai.FWMFColor:



### Public Member Functions

- **FWMFColor** ( **FreeWRLFieldDefinition** def, **FreeWRLBrowser** b)
- void **getValue** (float[ ][ ] value) throws `ArrayIndexOutOfBoundsException`
- void **getValue** (float[ ] value)
- void **get1Value** (int index, float[ ] value)
- void **setValue** (int numVals, float[ ] value) throws `ArrayIndexOutOfBoundsException`, `IllegalArgumentException`
- void **setValue** (int numVals, float[ ][ ] value) throws `ArrayIndexOutOfBoundsException`, `IllegalArgumentException`
- void **set1Value** (int index, float[ ] value) throws `IllegalArgumentException`, `ArrayIndexOutOfBoundsException`
- void **append** (float[ ] value) throws `IllegalArgumentException`, `ArrayIndexOutOfBoundsException`
- void **insertValue** (int index, float[ ] value)

### Additional Inherited Members

#### 4.434.1 Detailed Description

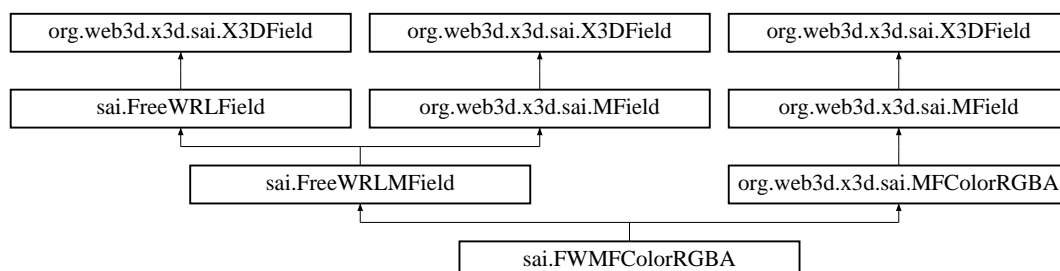
Definition at line 6 of file `FWMFColor.java`.

The documentation for this class was generated from the following file:

- `src/java/sai/FWMFColor.java`

## 4.435 sai.FWMFColorRGBA Class Reference

Inheritance diagram for sai.FWMFColorRGBA:





## Public Member Functions

- **FWMFColorRGBA** ( **FreeWRLFieldDefinition** def, **FreeWRLBrowser** b)
- void **getValue** (float[] value) throws `ArrayIndexOutOfBoundsException`
- void **getValue** (float[] value) throws `ArrayIndexOutOfBoundsException`
- void **get1Value** (int index, float[] value)
- void **setValue** (int numColors, float[] value) throws `ArrayIndexOutOfBoundsException`
- void **setValue** (int numColors, float[] value) throws `ArrayIndexOutOfBoundsException`
- void **set1Value** (int index, float[] value)
- void **append** (float[] value)
- void **insertValue** (int index, float[] value)

## Additional Inherited Members

### 4.435.1 Detailed Description

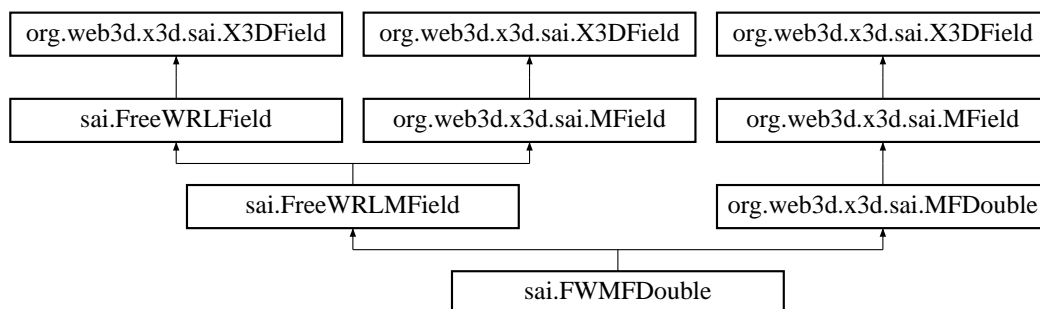
Definition at line 5 of file `FWMFColorRGBA.java`.

The documentation for this class was generated from the following file:

- `src/java/sai/FWMFColorRGBA.java`

## 4.436 sai.FWMFDouble Class Reference

Inheritance diagram for `sai.FWMFDouble`:



## Public Member Functions

- **FWMFDouble** ( **FreeWRLFieldDefinition** def, **FreeWRLBrowser** b)
- void **getValue** (double[] value) throws `ArrayIndexOutOfBoundsException`
- double **get1Value** (int index) throws `ArrayIndexOutOfBoundsException`
- void **setValue** (int size, double[] value)
- void **set1Value** (int index, double value) throws `ArrayIndexOutOfBoundsException`
- void **append** (double[] value)
- void **insertValue** (int index, double[] value) throws `ArrayIndexOutOfBoundsException`

## Additional Inherited Members

### 4.436.1 Detailed Description

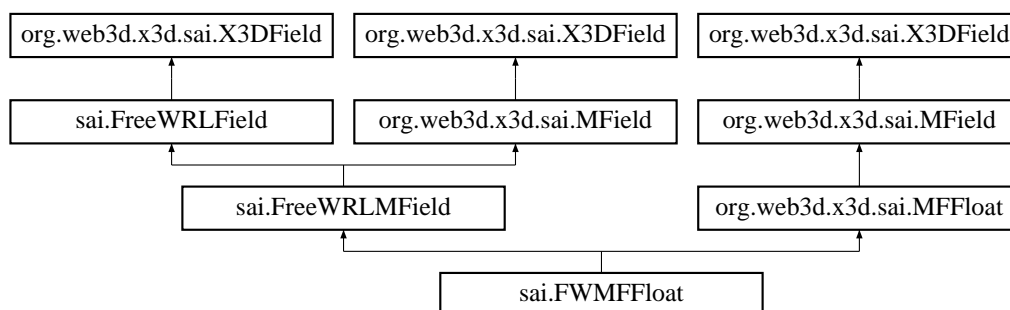
Definition at line 5 of file FWMFDouble.java.

The documentation for this class was generated from the following file:

- src/java/sai/FWMFDouble.java

## 4.437 sai.FWMFFloat Class Reference

Inheritance diagram for sai.FWMFFloat:



## Public Member Functions

- **FWMFFloat** ( **FreeWRLFieldDefinition** def, **FreeWRLBrowser** b)
- void **getValue** (float[] value) throws `ArrayIndexOutOfBoundsException`
- float **get1Value** (int index) throws `ArrayIndexOutOfBoundsException`
- void **setValue** (int size, float[] value)
- void **set1Value** (int index, float value) throws `ArrayIndexOutOfBoundsException`
- void **append** (float[] value)
- void **insertValue** (int index, float[] value) throws `ArrayIndexOutOfBoundsException`

## Additional Inherited Members

### 4.437.1 Detailed Description

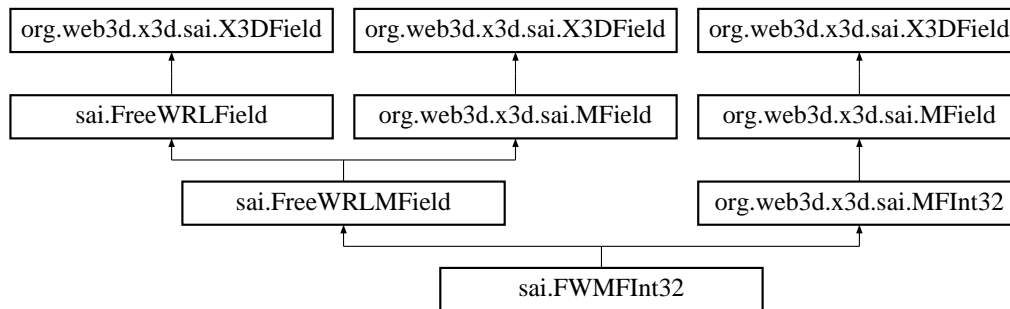
Definition at line 5 of file FWMFFloat.java.

The documentation for this class was generated from the following file:

- src/java/sai/FWMFFloat.java

## 4.438 sai.FWMFInt32 Class Reference

Inheritance diagram for sai.FWMFInt32:



### Public Member Functions

- **FWMFInt32** ( **FreeWRLFieldDefinition** def, **FreeWRLBrowser** b)
- void **getValue** (int[] values) throws ArrayIndexOutOfBoundsException
- int **get1Value** (int index) throws ArrayIndexOutOfBoundsException
- void **setValue** (int size, int[] value)
- void **set1Value** (int index, int value) throws ArrayIndexOutOfBoundsException
- void **append** (int[] value)
- void **insertValue** (int index, int[] value)

### Additional Inherited Members

#### 4.438.1 Detailed Description

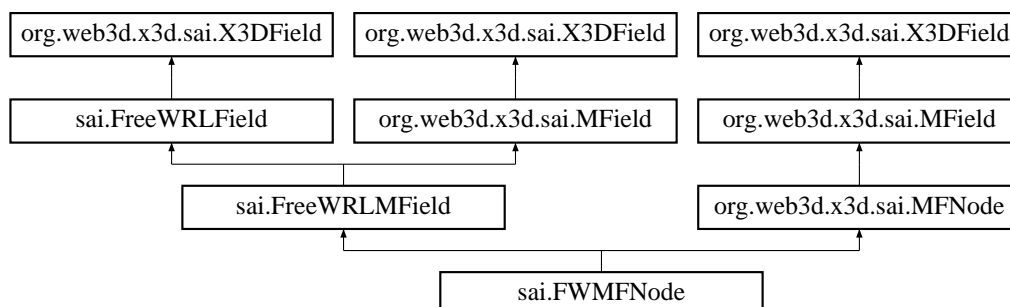
Definition at line 5 of file FWMFInt32.java.

The documentation for this class was generated from the following file:

- src/java/sai/FWMFInt32.java

## 4.439 sai.FWMFNode Class Reference

Inheritance diagram for sai.FWMFNode:



## Public Member Functions

- void **getValue** ( **X3DNode**[] nodes) throws `ArrayIndexOutOfBoundsException`
- **X3DNode** **get1Value** (int index) throws `ArrayIndexOutOfBoundsException`
- void **setValue** (int size, **X3DNode**[] value)
- void **set1Value** (int index, **X3DNode** value)
- void **append** ( **X3DNode** value)
- void **insertValue** (int index, **X3DNode** value)

## Additional Inherited Members

### 4.439.1 Detailed Description

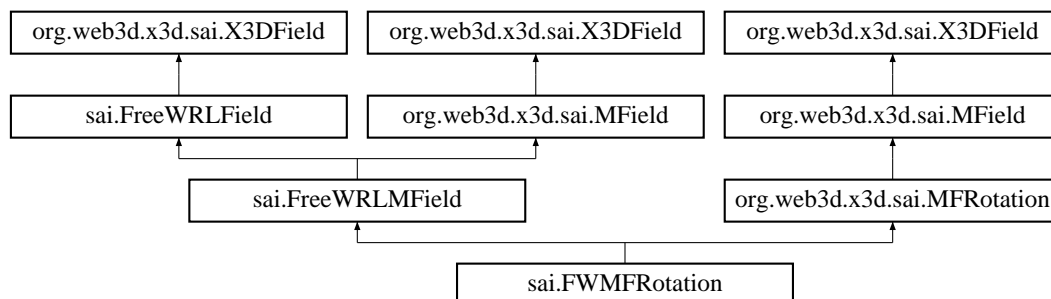
Definition at line 5 of file `FWMFNode.java`.

The documentation for this class was generated from the following file:

- `src/java/sai/FWMFNode.java`

## 4.440 sai.FWMFRotation Class Reference

Inheritance diagram for `sai.FWMFRotation`:



## Public Member Functions

- **FWMFRotation** ( **FreeWRLFieldDefinition** def, **FreeWRLBrowser** b)
- void **getValue** (float[] [] value) throws `ArrayIndexOutOfBoundsException`
- void **getValue** (float[] value) throws `ArrayIndexOutOfBoundsException`
- void **get1Value** (int index, float[] value)
- void **setValue** (int numRotations, float[] value) throws `ArrayIndexOutOfBoundsException`
- void **setValue** (int numRotations, float[] [] value) throws `ArrayIndexOutOfBoundsException`
- void **set1Value** (int index, float[] value)
- void **append** (float[] value)
- void **insertValue** (int index, float[] value)

## Additional Inherited Members

### 4.440.1 Detailed Description

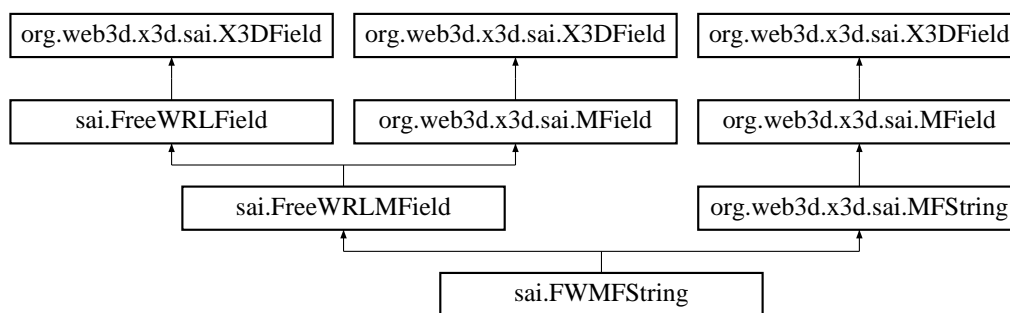
Definition at line 5 of file FWMFRotation.java.

The documentation for this class was generated from the following file:

- src/java/sai/FWMFRotation.java

## 4.441 sai.FWMFString Class Reference

Inheritance diagram for sai.FWMFString:



## Public Member Functions

- **FWMFString** ( **FreeWRLFieldDefinition** def, **FreeWRLBrowser** b)
- void **getValue** (String[] value) throws `ArrayIndexOutOfBoundsException`
- String **get1Value** (int index) throws `ArrayIndexOutOfBoundsException`
- void **setValue** (int numStrings, String[] value)
- void **set1Value** (int index, String value)
- void **append** (String[] value)
- void **insertValue** (int index, String[] value)

## Additional Inherited Members

### 4.441.1 Detailed Description

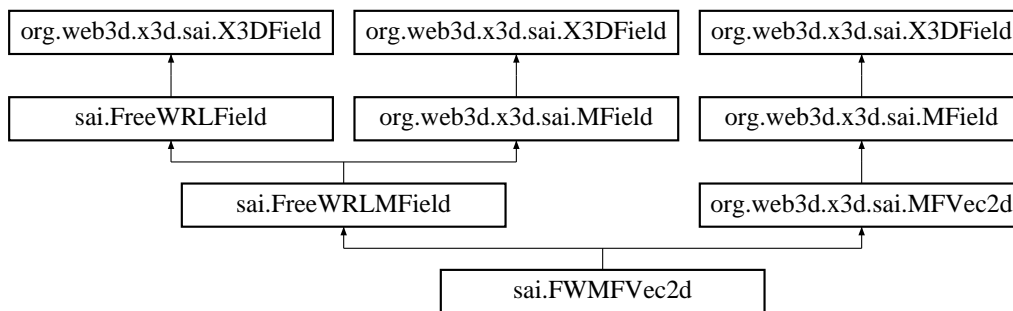
Definition at line 5 of file FWMFString.java.

The documentation for this class was generated from the following file:

- src/java/sai/FWMFString.java

## 4.442 sai.FWMFVec2d Class Reference

Inheritance diagram for sai.FWMFVec2d:



### Public Member Functions

- **FWMFVec2d** ( **FreeWRLFieldDefinition** def, **FreeWRLBrowser** b)
- void **getValue** (double[][] value) throws `ArrayIndexOutOfBoundsException`
- void **getValue** (double[] value) throws `ArrayIndexOutOfBoundsException`
- void **get1Value** (int index, double[] value) throws `ArrayIndexOutOfBoundsException`
- void **setValue** (int size, double[] value) throws `ArrayIndexOutOfBoundsException`
- void **setValue** (int size, double[][] value) throws `ArrayIndexOutOfBoundsException`
- void **set1Value** (int index, double[] value) throws `ArrayIndexOutOfBoundsException`
- void **append** (double[] value)
- void **insertValue** (int index, double[] value)

### Additional Inherited Members

#### 4.442.1 Detailed Description

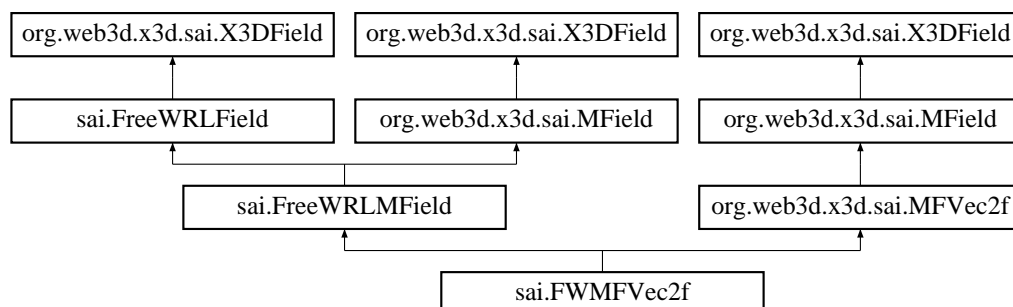
Definition at line 5 of file FWMFVec2d.java.

The documentation for this class was generated from the following file:

- src/java/sai/FWMFVec2d.java

## 4.443 sai.FWMFVec2f Class Reference

Inheritance diagram for sai.FWMFVec2f:



## Public Member Functions

- **FWMFVec2f** ( **FreeWRLFieldDefinition** def, **FreeWRLBrowser** b)
- void **getValue** (float[ ][ ] value) throws `ArrayIndexOutOfBoundsException`
- void **getValue** (float[ ] value) throws `ArrayIndexOutOfBoundsException`
- void **get1Value** (int index, float[ ] value) throws `ArrayIndexOutOfBoundsException`
- void **setValue** (int size, float[ ] value) throws `ArrayIndexOutOfBoundsException`
- void **setValue** (int size, float[ ][ ] value) throws `ArrayIndexOutOfBoundsException`
- void **set1Value** (int index, float[ ] value) throws `ArrayIndexOutOfBoundsException`
- void **append** (float[ ] value)
- void **insertValue** (int index, float[ ] value)

## Additional Inherited Members

### 4.443.1 Detailed Description

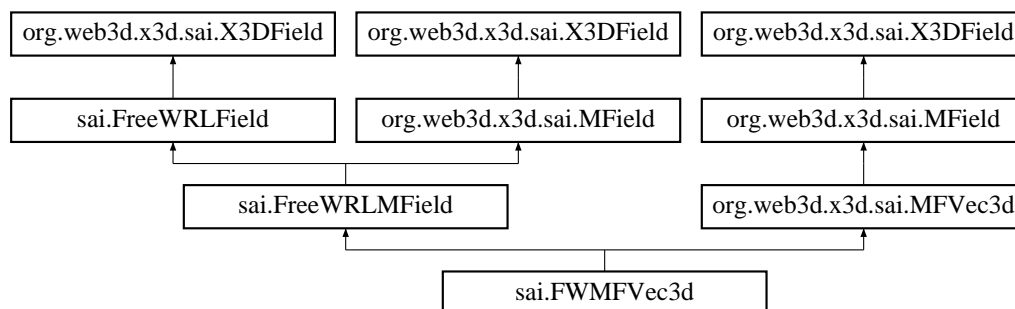
Definition at line 5 of file `FWMFVec2f.java`.

The documentation for this class was generated from the following file:

- `src/java/sai/FWMFVec2f.java`

## 4.444 sai.FWMFVec3d Class Reference

Inheritance diagram for `sai.FWMFVec3d`:



## Public Member Functions

- **FWMFVec3d** ( **FreeWRLFieldDefinition** def, **FreeWRLBrowser** b)
- void **getValue** (double[ ][ ] value) throws `ArrayIndexOutOfBoundsException`
- void **getValue** (double[ ] value) throws `ArrayIndexOutOfBoundsException`
- void **get1Value** (int index, double[ ] value) throws `ArrayIndexOutOfBoundsException`
- void **setValue** (int size, double[ ] value) throws `ArrayIndexOutOfBoundsException`
- void **setValue** (int size, double[ ][ ] value) throws `ArrayIndexOutOfBoundsException`
- void **set1Value** (int index, double[ ] value) throws `ArrayIndexOutOfBoundsException`
- void **append** (double[ ] value)
- void **insertValue** (int index, double[ ] value)

## Additional Inherited Members

### 4.444.1 Detailed Description

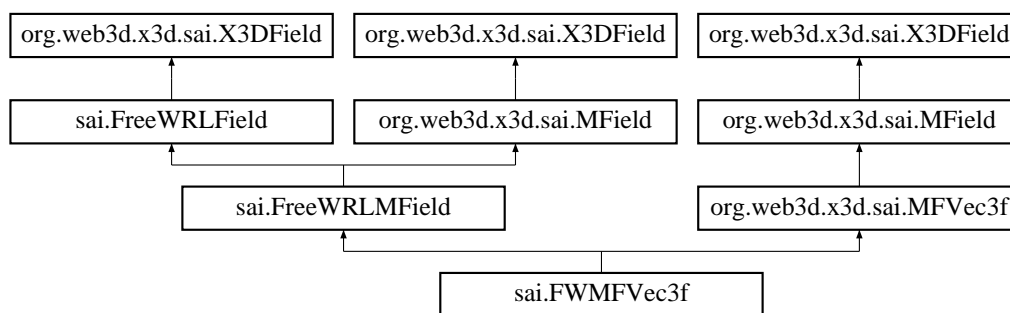
Definition at line 5 of file FWMFVec3d.java.

The documentation for this class was generated from the following file:

- src/java/sai/FWMFVec3d.java

## 4.445 sai.FWMFVec3f Class Reference

Inheritance diagram for sai.FWMFVec3f:



## Public Member Functions

- **FWMFVec3f** ( **FreeWRLFieldDefinition** def, **FreeWRLBrowser** b)
- void **getValue** (float[ ][ ] value) throws **ArrayIndexOutOfBoundsException**
- void **getValue** (float[ ] value) throws **ArrayIndexOutOfBoundsException**
- void **get1Value** (int index, float[ ] value) throws **ArrayIndexOutOfBoundsException**
- void **setValue** (int size, float[ ] value) throws **ArrayIndexOutOfBoundsException**
- void **setValue** (int size, float[ ][ ] value) throws **ArrayIndexOutOfBoundsException**
- void **set1Value** (int index, float[ ] value) throws **ArrayIndexOutOfBoundsException**
- void **append** (float[ ] value)
- void **insertValue** (int index, float[ ] value)

## Additional Inherited Members

### 4.445.1 Detailed Description

Definition at line 5 of file FWMFVec3f.java.

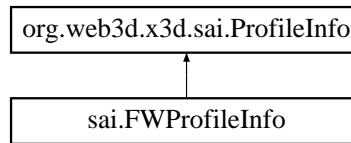
The documentation for this class was generated from the following file:

- src/java/sai/FWMFVec3f.java



## 4.446 sai.FWProfileInfo Class Reference

Inheritance diagram for sai.FWProfileInfo:



### Public Member Functions

- **FWProfileInfo** (String n, String t, **ComponentInfo**[] c)
- String **getName** ()
- String **getTitle** ()
- **ComponentInfo**[] **getComponents** ()
- String **toX3DString** ()

#### 4.446.1 Detailed Description

Definition at line 4 of file FWProfileInfo.java.

The documentation for this class was generated from the following file:

- src/java/sai/FWProfileInfo.java

## 4.447 sai.FWProfInfo Class Reference

### Static Public Member Functions

- static **FWProfileInfo** **getProfile** (String name) throws `NotSupportedException`
- static **FWProfileInfo**[] **getProfiles** ()
- static **ComponentInfo**[] **getComponents** ()
- static **FWComponentInfo** **getComponent** (String name, int level) throws `NotSupportedException`

#### 4.447.1 Detailed Description

Definition at line 5 of file FWProfInfo.java.

The documentation for this class was generated from the following file:

- src/java/sai/FWProfInfo.java

## 4.448 FWPropertySpec Struct Reference

### Data Fields

- const char \* **name**
- short **index**
- char **type**
- char **readOnly**

### 4.448.1 Detailed Description

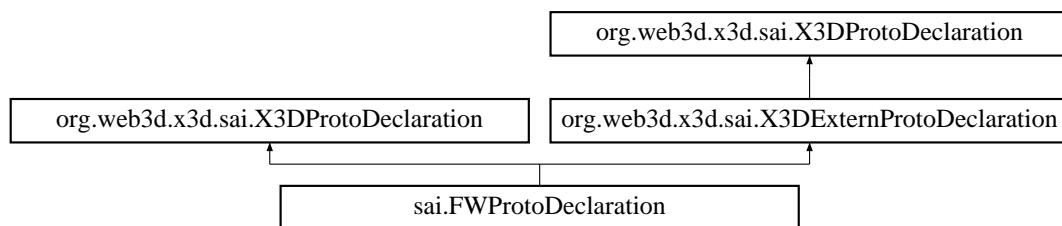
Definition at line 33 of file FWTYPE.h.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/FWTYPE.h

## 4.449 sai.FWProtoDeclaration Class Reference

Inheritance diagram for sai.FWProtoDeclaration:



### Public Member Functions

- String **getProtoName** ()
- String **toString** ()
- **X3DProtoInstance** **createInstance** () throws InvalidOperationTimingException, InvalidProtoException
- **X3DFieldDefinition**[] **getFieldDefinitions** () throws InvalidOperationTimingException, InvalidProtoException
- int **getLoadState** ()
- void **loadNow** ()
- void **setProtoName** (String name)
- void **setFields** ( FreeWRLFieldDefinition[] f)
- void **setType** (int t)
- int[] **getNodeTypes** () throws InvalidProtoException
- void **dispose** ()

### 4.449.1 Detailed Description

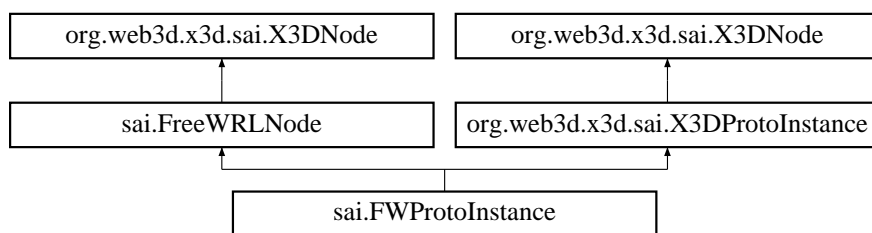
Definition at line 5 of file FWProtoDeclaration.java.

The documentation for this class was generated from the following file:

- src/java/sai/FWProtoDeclaration.java

## 4.450 sai.FWProtoInstance Class Reference

Inheritance diagram for sai.FWProtoInstance:



### Public Member Functions

- **FWProtoInstance** ( **FreeWRLBrowser** b)
- **int[]** **getImplementationTypes** ()

### 4.450.1 Detailed Description

Definition at line 4 of file FWProtoInstance.java.

The documentation for this class was generated from the following file:

- src/java/sai/FWProtoInstance.java

## 4.451 FWRGBQUAD Struct Reference

### Data Fields

- **FBYTE** **rgbBlue**
- **FBYTE** **rgbGreen**
- **FBYTE** **rgbRed**
- **FBYTE** **rgbReserved**

### 4.451.1 Detailed Description

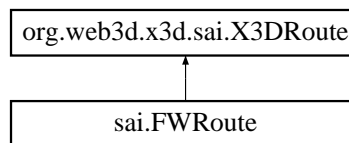
Definition at line 204 of file Snapshot.c.

The documentation for this struct was generated from the following file:

- src/lib/main/Snapshot.c

## 4.452 sai.FWRoute Class Reference

Inheritance diagram for sai.FWRoute:



### Public Member Functions

- **FWRoute** ( **FreeWRLNode** sn, String sf, **FreeWRLNode** dn, String df)
- String **toString** ()
- boolean **equals** (Object o)
- **X3DNode** **getSourceNode** () throws InvalidRouteException
- **X3DNode** **getDestinationNode** () throws InvalidRouteException
- String **getSourceField** () throws InvalidRouteException
- String **getDestinationField** () throws InvalidRouteException
- void **dispose** ()

### 4.452.1 Detailed Description

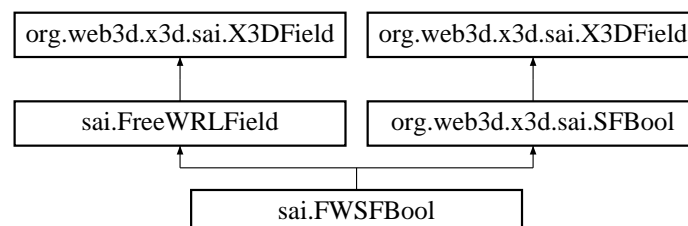
Definition at line 4 of file FWRoute.java.

The documentation for this class was generated from the following file:

- src/java/sai/FWRoute.java

## 4.453 sai.FWSFBool Class Reference

Inheritance diagram for sai.FWSFBool:



## Public Member Functions

- **FWSFBool** ( **FreeWRLFieldDefinition** def, **FreeWRLBrowser** b)
- boolean **getValue** () throws `InvalidFieldException`
- void **setValue** (boolean value) throws `InvalidFieldException`

## Additional Inherited Members

### 4.453.1 Detailed Description

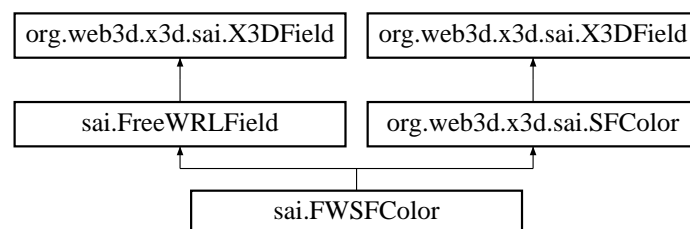
Definition at line 4 of file `FWSFBool.java`.

The documentation for this class was generated from the following file:

- `src/java/sai/FWSFBool.java`

## 4.454 sai.FWSFColor Class Reference

Inheritance diagram for `sai.FWSFColor`:



## Public Member Functions

- **FWSFColor** ( **FreeWRLFieldDefinition** def, **FreeWRLBrowser** b)
- void **getValue** (float[] value) throws `ArrayIndexOutOfBoundsException`
- void **setValue** (float[] value) throws `IllegalArgumentException`, `ArrayIndexOutOfBoundsException`

## Additional Inherited Members

### 4.454.1 Detailed Description

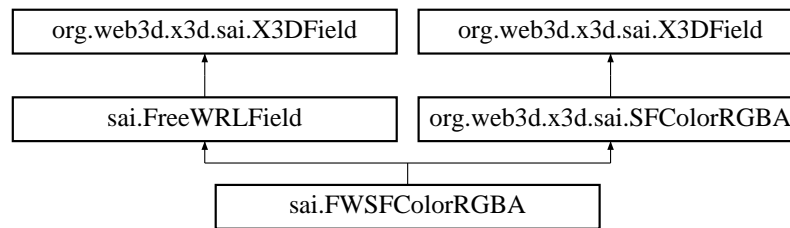
Definition at line 5 of file `FWSFColor.java`.

The documentation for this class was generated from the following file:

- `src/java/sai/FWSFColor.java`

## 4.455 sai.FWSFColorRGBA Class Reference

Inheritance diagram for sai.FWSFColorRGBA:



### Public Member Functions

- **FWSFColorRGBA** ( **FreeWRLFieldDefinition** def, **FreeWRLBrowser** b)
- void **getValue** (float[] value) throws **ArrayIndexOutOfBoundsException**
- void **setValue** (float[] value) throws **ArrayIndexOutOfBoundsException**

### Additional Inherited Members

#### 4.455.1 Detailed Description

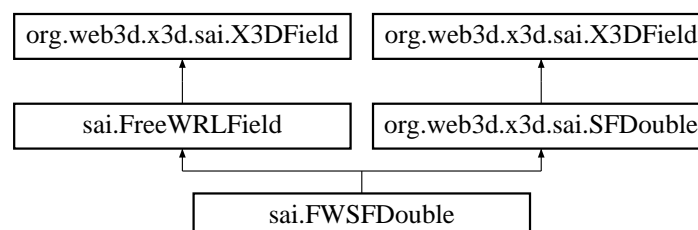
Definition at line 5 of file FWSFColorRGBA.java.

The documentation for this class was generated from the following file:

- src/java/sai/FWSFColorRGBA.java

## 4.456 sai.FWSFDouble Class Reference

Inheritance diagram for sai.FWSFDouble:



### Public Member Functions

- **FWSFDouble** ( **FreeWRLFieldDefinition** def, **FreeWRLBrowser** b)
- double **getValue** ()
- void **setValue** (double value)

## Additional Inherited Members

### 4.456.1 Detailed Description

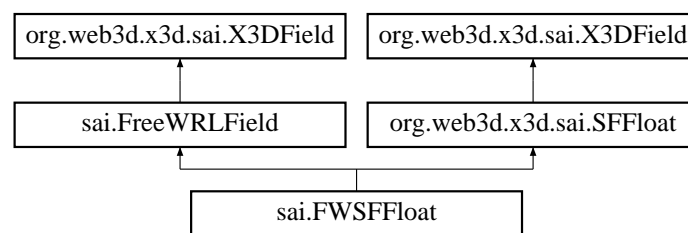
Definition at line 4 of file FWSFDouble.java.

The documentation for this class was generated from the following file:

- src/java/sai/FWSFDouble.java

## 4.457 sai.FWSFFloat Class Reference

Inheritance diagram for sai.FWSFFloat:



## Public Member Functions

- **FWSFFloat** ( **FreeWRLFieldDefinition** def, **FreeWRLBrowser** b)
- float **getValue** ()
- void **setValue** (float value)

## Additional Inherited Members

### 4.457.1 Detailed Description

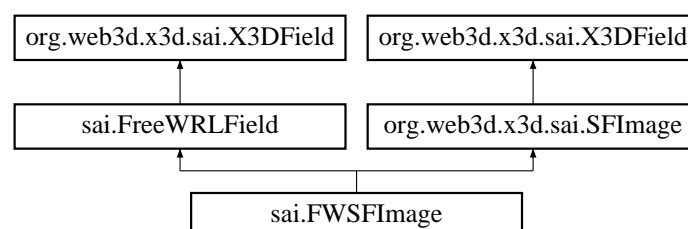
Definition at line 4 of file FWSFFloat.java.

The documentation for this class was generated from the following file:

- src/java/sai/FWSFFloat.java

## 4.458 sai.FWSFImage Class Reference

Inheritance diagram for sai.FWSFImage:



## Public Member Functions

- **FWSFImage** ( **FreeWRLFieldDefinition** def, **FreeWRLBrowser** b)
- int **getWidth** ()
- int **getHeight** ()
- int **getComponents** ()
- void **getPixels** (int[] pixels)
- WritableRenderedImage **getImage** ()
- void **setValue** (int width, int height, int components, int[] pixels)
- void **setImage** (RenderedImage image)
- void **setSubImage** (RenderedImage image, int srcWidth, int srcHeight, int srcXOffset, int srcYOffset, int destXOffset, int destYOffset)

## Additional Inherited Members

### 4.458.1 Detailed Description

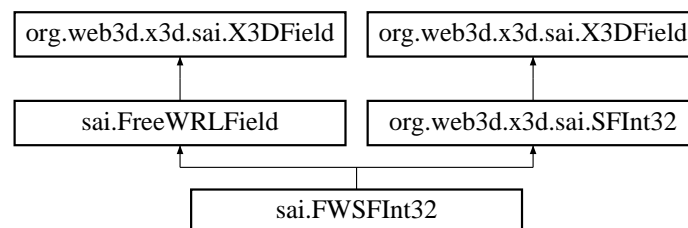
Definition at line 7 of file FWSFImage.java.

The documentation for this class was generated from the following file:

- src/java/sai/FWSFImage.java

## 4.459 sai.FWSFInt32 Class Reference

Inheritance diagram for sai.FWSFInt32:



## Public Member Functions

- **FWSFInt32** ( **FreeWRLFieldDefinition** def, **FreeWRLBrowser** b)
- int **getValue** ()
- void **setValue** (int value)

## Additional Inherited Members

### 4.459.1 Detailed Description

Definition at line 4 of file FWSFInt32.java.

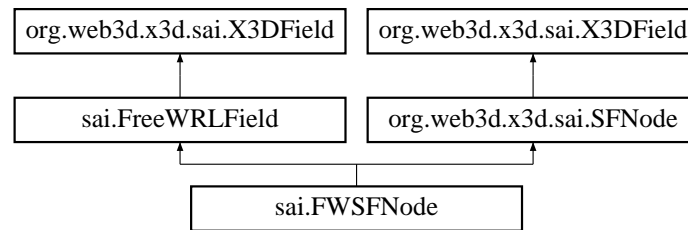
The documentation for this class was generated from the following file:

- src/java/sai/FWSFInt32.java



## 4.460 sai.FWSFNode Class Reference

Inheritance diagram for sai.FWSFNode:



### Public Member Functions

- **FWSFNode** ( **FreeWRLFieldDefinition** def, **FreeWRLBrowser** b)
- **X3DNode** **getValue** ()
- void **setValue** ( **X3DNode** value) throws `InvalidNodeException`

### Additional Inherited Members

#### 4.460.1 Detailed Description

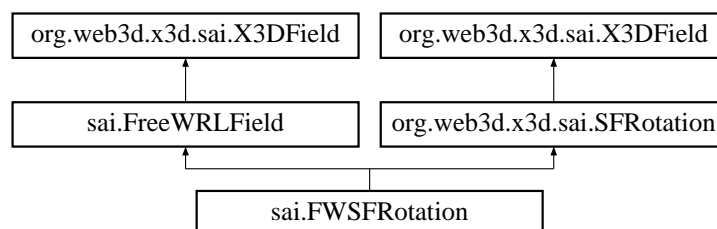
Definition at line 4 of file `FWSFNode.java`.

The documentation for this class was generated from the following file:

- `src/java/sai/FWSFNode.java`

## 4.461 sai.FWSFRotation Class Reference

Inheritance diagram for sai.FWSFRotation:



### Public Member Functions

- **FWSFRotation** ( **FreeWRLFieldDefinition** def, **FreeWRLBrowser** b)
- void **getValue** (float[] value) throws `ArrayIndexOutOfBoundsException`
- void **setValue** (float[] value) throws `ArrayIndexOutOfBoundsException`

## Additional Inherited Members

### 4.461.1 Detailed Description

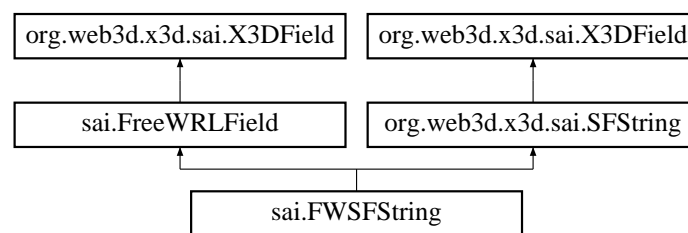
Definition at line 5 of file FWSFRotation.java.

The documentation for this class was generated from the following file:

- src/java/sai/FWSFRotation.java

## 4.462 sai.FWSFString Class Reference

Inheritance diagram for sai.FWSFString:



## Public Member Functions

- **FWSFString** ( **FreeWRLFieldDefinition** def, **FreeWRLBrowser** b)
- **String** **getValue** ()
- **void** **setValue** (String value)

## Additional Inherited Members

### 4.462.1 Detailed Description

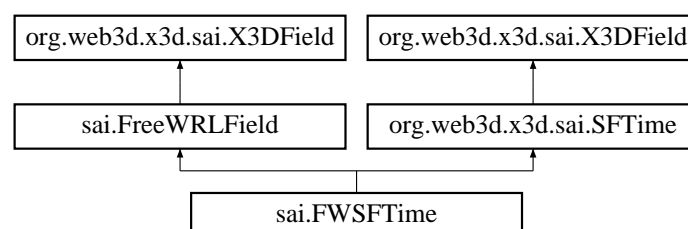
Definition at line 4 of file FWSFString.java.

The documentation for this class was generated from the following file:

- src/java/sai/FWSFString.java

## 4.463 sai.FWSFTime Class Reference

Inheritance diagram for sai.FWSFTime:



## Public Member Functions

- **FWSFTime** ( **FreeWRLFieldDefinition** def, **FreeWRLBrowser** b)
- double **getValue** ()
- long **getJavaValue** ()
- void **setValue** (double value)
- void **setValue** (long value)

## Additional Inherited Members

### 4.463.1 Detailed Description

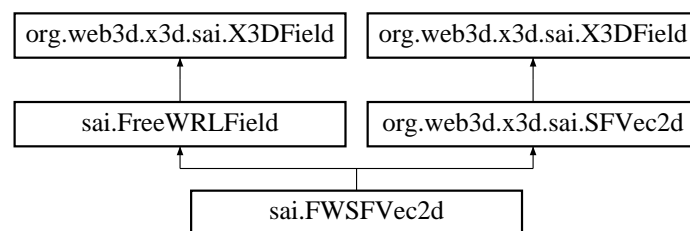
Definition at line 4 of file FWSFTime.java.

The documentation for this class was generated from the following file:

- src/java/sai/FWSFTime.java

## 4.464 sai.FWSFVec2d Class Reference

Inheritance diagram for sai.FWSFVec2d:



## Public Member Functions

- **FWSFVec2d** ( **FreeWRLFieldDefinition** def, **FreeWRLBrowser** b)
- void **getValue** (double[] value) throws `ArrayIndexOutOfBoundsException`
- void **setValue** (double[] value) throws `ArrayIndexOutOfBoundsException`

## Additional Inherited Members

### 4.464.1 Detailed Description

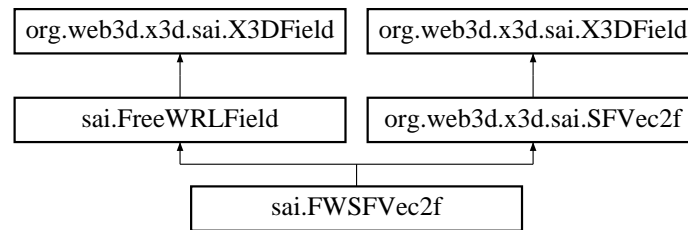
Definition at line 5 of file FWSFVec2d.java.

The documentation for this class was generated from the following file:

- src/java/sai/FWSFVec2d.java

## 4.465 sai.FWSFVec2f Class Reference

Inheritance diagram for sai.FWSFVec2f:



### Public Member Functions

- **FWSFVec2f** ( **FreeWRLFieldDefinition** def, **FreeWRLBrowser** b)
- void **getValue** (float[] value) throws `ArrayIndexOutOfBoundsException`
- void **setValue** (float[] value) throws `ArrayIndexOutOfBoundsException`

### Additional Inherited Members

#### 4.465.1 Detailed Description

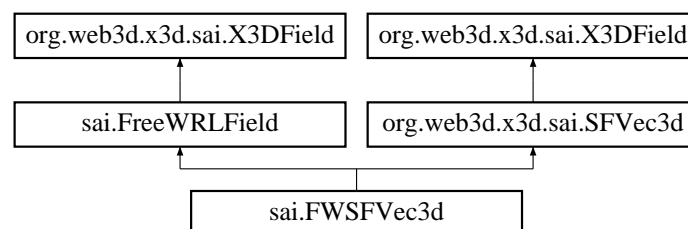
Definition at line 5 of file `FWSFVec2f.java`.

The documentation for this class was generated from the following file:

- `src/java/sai/FWSFVec2f.java`

## 4.466 sai.FWSFVec3d Class Reference

Inheritance diagram for sai.FWSFVec3d:



### Public Member Functions

- **FWSFVec3d** ( **FreeWRLFieldDefinition** def, **FreeWRLBrowser** b)
- void **getValue** (double[] value) throws `ArrayIndexOutOfBoundsException`
- void **setValue** (double[] value) throws `ArrayIndexOutOfBoundsException`

## Additional Inherited Members

### 4.466.1 Detailed Description

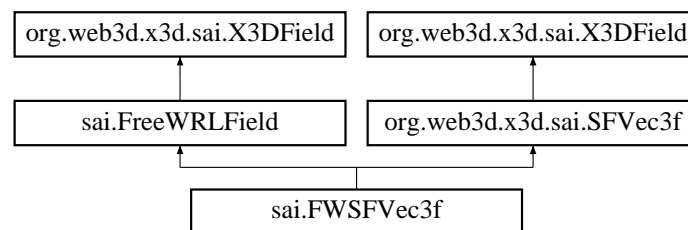
Definition at line 5 of file FWSFVec3d.java.

The documentation for this class was generated from the following file:

- src/java/sai/FWSFVec3d.java

## 4.467 sai.FWSFVec3f Class Reference

Inheritance diagram for sai.FWSFVec3f:



## Public Member Functions

- **FWSFVec3f** ( **FreeWRLFieldDefinition** def, **FreeWRLBrowser** b)
- void **getValue** (float[] value) throws **ArrayIndexOutOfBoundsException**
- void **setValue** (float[] value) throws **ArrayIndexOutOfBoundsException**

## Additional Inherited Members

### 4.467.1 Detailed Description

Definition at line 5 of file FWSFVec3f.java.

The documentation for this class was generated from the following file:

- src/java/sai/FWSFVec3f.java

## 4.468 FWSNDMSG Struct Reference

### Data Fields

- long **mtype**
- char **msg** [SNDMAXMSGSIZE]

### 4.468.1 Detailed Description

Definition at line 49 of file sounds.h.

The documentation for this struct was generated from the following files:

- src/lib/scenegraph/sounds.h
- src/sound/soundheader.h

## 4.469 FWTYPE Struct Reference

### Data Fields

- int **itype**
- char **ctype**
- char \* **name**
- int **size\_of**
- FWConstructor **Constructor**
- struct **ArgListType** \* **ConstructorArgs**
- **FWPropertySpec** \* **Properties**
- FWIterator **iterator**
- FWGet **Getter**
- FWSet **Setter**
- char **takesIndexer**
- char **indexerReadOnly**
- **FWFunctionSpec** \* **Functions**

### 4.469.1 Detailed Description

Definition at line 67 of file FWTYPE.h.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/FWTYPE.h

## 4.470 FWVAL Struct Reference

### Data Fields

- char **itype**
  -
- ```

union {
    int _null
    double _numeric
    int _integer
    int _boolean
    const char * _string
    FWPointer _pointer
    FWPointer _web3dval
    void * _jobject
};

```

4.470.1 Detailed Description

Definition at line 115 of file FWTYPE.h.

The documentation for this struct was generated from the following file:

- src/lib/world_script/FWTYPE.h

4.471 FXY Struct Reference

Data Fields

- GLfloat **x**
- GLfloat **y**

4.471.1 Detailed Description

Definition at line 221 of file CursorDraw.c.

The documentation for this struct was generated from the following file:

- src/lib/ui/CursorDraw.c

4.472 gcgd Struct Reference

Data Fields

- double **A**
- double **F**
- double **C**
- double **A2**
- double **C2**
- double **Eps2**
- double **Eps21**
- double **Eps25**
- double **C254**
- double **C2DA**
- double **CEE**
- double **CE2**
- double **CEEps2**
- double **TwoCEE**
- double **tem**
- double **ARat1**
- double **ARat2**
- double **BRat1**
- double **BRat2**
- double **B1**
- double **B2**
- double **B3**
- double **B4**
- double **B5**

4.472.1 Detailed Description

Definition at line 1359 of file Component_Geospatial.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component_Geospatial.c

4.473 GLUface Struct Reference

Data Fields

- **GLUface** * **next**
- **GLUface** * **prev**
- **GLUhalfEdge** * **anEdge**
- void * **data**
- **GLUface** * **trail**
- GLboolean **marked**
- GLboolean **inside**

4.473.1 Detailed Description

Definition at line 126 of file mesh.h.

The documentation for this struct was generated from the following file:

- src/libtess/mesh.h

4.474 GLUhalfEdge Struct Reference

Data Fields

- **GLUhalfEdge** * **next**
- **GLUhalfEdge** * **Sym**
- **GLUhalfEdge** * **Onext**
- **GLUhalfEdge** * **Lnext**
- **GLUvertex** * **Org**
- **GLUface** * **Lface**
- **ActiveRegion** * **activeRegion**
- int **winding**

4.474.1 Detailed Description

Definition at line 138 of file mesh.h.

The documentation for this struct was generated from the following file:

- src/libtess/mesh.h

4.475 GLUmesh Struct Reference

Data Fields

- **GLUvertex** vHead
- **GLUface** fHead
- **GLUhalfEdge** eHead
- **GLUhalfEdge** eHeadSym

4.475.1 Detailed Description

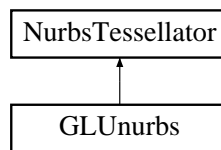
Definition at line 163 of file mesh.h.

The documentation for this struct was generated from the following file:

- src/libtess/mesh.h

4.476 GLUnurbs Class Reference

Inheritance diagram for GLUnurbs:



Public Member Functions

- void **useGLMatrices** (const GLfloat modelMatrix[16], const GLfloat projMatrix[16], const GLint viewport[4])
- void **setSamplingMatrixIdentity** (void)
- void **errorHandler** (int)
- void **bgnrender** (void)
- void **endrender** (void)
- void **setautoloadmode** (INREAL value)
- GLboolean **getautoloadmode** (void)
- void **postError** (int which)
- void **putSurfCallback** (GLenum which, _GLUfuncptr fn)
- int **get_vertices_call_back** ()
- void **put_vertices_call_back** (int flag)
- int **get_callback_auto_normal** ()
- void **put_callback_auto_normal** (int flag)
- void **setNurbsCallbackData** (void *userData)
- void **LOD_eval_list** (int level)
- int **is_callback** ()
- void **put_callbackFlag** (int flag)

Data Fields

- errorCallbackType **errorCallback**

Additional Inherited Members

4.476.1 Detailed Description

Definition at line 50 of file glrender.h.

The documentation for this class was generated from the following files:

- src/libnurbs/interface/glrender.h
- src/libnurbs/interface/glrender.cc

4.477 GLUtesselator Struct Reference

Public Member Functions

- **void** (GLAPIENTRY *callError)(GLenum errnum)
- **void** (GLAPIENTRY *callCombine)(GLdouble coords[3])
- **void** (GLAPIENTRY *callBegin)(GLenum type)
- **void** (GLAPIENTRY *callEdgeFlag)(GLboolean boundaryEdge)
- **void** (GLAPIENTRY *callVertex)(void *data)
- **void** (GLAPIENTRY *callEnd)(void)
- **void** (GLAPIENTRY *callMesh)(**GLUmesh** *mesh)
- **void** (GLAPIENTRY *callBeginData)(GLenum type)
- **void** (GLAPIENTRY *callEdgeFlagData)(GLboolean boundaryEdge)
- **void** (GLAPIENTRY *callVertexData)(void *data)
- **void** (GLAPIENTRY *callEndData)(void *polygonData)
- **void** (GLAPIENTRY *callErrorData)(GLenum errnum)
- **void** (GLAPIENTRY *callCombineData)(GLdouble coords[3])

Data Fields

- enum TessState **state**
- **GLUhalfEdge** * **lastEdge**
- **GLUmesh** * **mesh**
- GLdouble **normal** [3]
- GLdouble **sUnit** [3]
- GLdouble **tUnit** [3]
- GLdouble **relTolerance**
- GLenum **windingRule**
- GLboolean **fatalError**
- **Dict** * **dict**
- **PriorityQ** * **pq**
- **GLUvertex** * **event**
- void * **data** [4]
- void GLfloat **weight** [4]

- void GLfloat void ** **outData**
- GLboolean **flagBoundary**
- GLboolean **boundaryOnly**
- **GLUface** * **lonelyTriList**
- GLboolean **emptyCache**
- int **cacheCount**
- **CachedVertex** **cache** [TESS_MAX_CACHE]
- void * **polygonData**
- void GLfloat void void * **polygonData**
- jmp_buf **env**

4.477.1 Detailed Description

Definition at line 59 of file tess.h.

The documentation for this struct was generated from the following file:

- src/libtess/tess.h

4.478 GLUvertex Struct Reference

Data Fields

- **GLUvertex** * **next**
- **GLUvertex** * **prev**
- **GLUhalfEdge** * **anEdge**
- void * **data**
- GLdouble **coords** [3]
- GLdouble **s**
- GLdouble **t**
- long **pqHandle**

4.478.1 Detailed Description

Definition at line 114 of file mesh.h.

The documentation for this struct was generated from the following file:

- src/libtess/mesh.h

4.479 GLwDrawingAreaCallbackStruct Struct Reference

Data Fields

- int **reason**
- XEvent * **event**
- Dimension **width**
- Dimension **height**

4.479.1 Detailed Description

Definition at line 196 of file GLwDrawA.h.

The documentation for this struct was generated from the following file:

- src/lib/ui/GLwDrawA.h

4.480 GLwDrawingAreaPart Struct Reference

Data Fields

- int * **attribList**
- XVisualInfo * **visualInfo**
- Boolean **myList**
- Boolean **myVisual**
- Boolean **installColormap**
- Boolean **allocateBackground**
- Boolean **allocateOtherColors**
- Boolean **installBackground**
- XtCallbackList **ginitCallback**
- XtCallbackList **resizeCallback**
- XtCallbackList **exposeCallback**
- XtCallbackList **inputCallback**
- int **bufferSize**
- int **level**
- Boolean **rgba**
- Boolean **doublebuffer**
- Boolean **stereo**
- int **auxBuffers**
- int **redSize**
- int **greenSize**
- int **blueSize**
- int **alphaSize**
- int **depthSize**
- int **stencilSize**
- int **accumRedSize**
- int **accumGreenSize**
- int **accumBlueSize**
- int **accumAlphaSize**

4.480.1 Detailed Description

Definition at line 80 of file GLwDrawAP.h.

The documentation for this struct was generated from the following file:

- src/lib/ui/GLwDrawAP.h

4.481 GoP Struct Reference

Data Fields

- int **drop_flag**
- unsigned int **tc_hours**
- unsigned int **tc_minutes**
- unsigned int **tc_seconds**
- unsigned int **tc_pictures**
- int **closed_gop**
- int **broken_link**
- char * **ext_data**
- char * **user_data**

4.481.1 Detailed Description

Definition at line 116 of file mpeg_berkley.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/mpeg_berkley.h

4.482 GridAxisRecord Struct Reference

Data Fields

- unsigned short **sampleType**
type of environmental sample
- unsigned short **dataRepresentation**
value that describes data representation

4.482.1 Detailed Description

Definition at line 288 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.483 GridAxisRecordRepresentation0 Struct Reference

Data Fields

- struct **GridAxisRecord** **myGridAxisRecord**
- unsigned short **numberOfBytes**
number of bytes of environmental state data
- void * **dataValues**
variable length list of data parameters ^{^^^}this is wrong—need padding as well

4.483.1 Detailed Description

Definition at line 962 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.484 GridAxisRecordRepresentation1 Struct Reference

Data Fields

- struct **GridAxisRecord** **myGridAxisRecord**
- float **fieldScale**
constant scale factor
- float **fieldOffset**
constant offset used to scale grid data
- unsigned short **numberOfValues**
Number of data values.
- void * **dataValues**
variable length list of data parameters ^^^this is wrong—need padding as well

4.484.1 Detailed Description

Definition at line 949 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.485 GridAxisRecordRepresentation2 Struct Reference

Data Fields

- struct **GridAxisRecord** **myGridAxisRecord**
- unsigned short **numberOfValues**
number of values
- void * **dataValues**
variable length list of data parameters ^^^this is wrong—need padding as well

4.485.1 Detailed Description

Definition at line 918 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.486 gridBoundaryChain Class Reference

Public Member Functions

- **gridBoundaryChain** (**gridWrap** *gr, Int first_vline_index, Int n_vlines, Int *uline_indices, Int *inner_indices)
- Int **getVlineIndex** (Int i)
- Int **getUlineIndex** (Int i)
- Real **get_u_value** (Int i)
- Real **get_v_value** (Int i)
- Int **get_nVlines** ()
- Int **getInnerIndex** (Int i)
- Real **getInner_u_value** (Int i)
- Real * **get_vertex** (Int i)
- **gridWrap** * **getGrid** ()
- void **leftEndFan** (Int i, **primStream** *pStream)
- void **rightEndFan** (Int i, **primStream** *pStream)
- Int **lookfor** (Real v, Int i1, Int i2)
- void **draw** ()
- void **drawInner** ()

4.486.1 Detailed Description

Definition at line 96 of file gridWrap.h.

The documentation for this class was generated from the following files:

- src/libnurbs/nurbtess/gridWrap.h
- src/libnurbs/nurbtess/gridWrap.cc

4.487 GriddedDataPdu Struct Reference

Data Fields

- struct **SyntheticEnvironmentFamilyPdu** mySyntheticEnvironmentFamilyPdu
- struct **EntityID** environmentalSimulationApplicationID
environmental simulation application ID
- unsigned short **fieldNumber**
unique identifier for each piece of enviornmental data
- unsigned short **pduNumber**
sequence number for the total set of PDUS used to transmit the data
- unsigned short **pduTotal**
Total number of PDUS used to transmit the data.
- unsigned short **coordinateSystem**
coordinate system of the grid
- unsigned char **numberOfGridAxes**
number of grid axes for the environmental data
- unsigned char **constantGrid**
are domain grid axes identidal to those of the priveious domain update?
- struct **EntityType** environmentType

- type of environment*
- struct **Orientation** *orientation*
- orientation of the data grid*
- long long **sampleTime**
 - valid time of the enviornmental data sample, 64 bit unsigned int*
- unsigned int **totalValues**
 - total number of all data values for all pdus for an environmental sample*
- unsigned char **vectorDimension**
 - total number of data values at each grid point.*
- unsigned short **padding1**
 - padding*
- unsigned char **padding2**
 - padding*
- void * **gridDataList**
 - Grid data ^^^ This is wrong.*

4.487.1 Detailed Description

Definition at line 1138 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.488 Gridline Struct Reference

Data Fields

- long **v**
- REAL **vval**
- long **vindex**
- long **ustart**
- long **uend**

4.488.1 Detailed Description

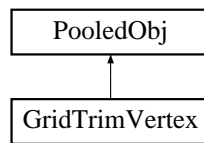
Definition at line 39 of file gridline.h.

The documentation for this struct was generated from the following file:

- src/libnurbs/internals/gridline.h

4.489 GridTrimVertex Class Reference

Inheritance diagram for GridTrimVertex:



Public Member Functions

- void **set** (long, long)
- void **set** (REAL, REAL)
- void **set** (TrimVertex *)
- void **clear** (void)
- int **isGridVert** ()
- int **isTrimVert** ()
- void **output** ()

Data Fields

- TrimVertex * **t**
- GridVertex * **g**

4.489.1 Detailed Description

Definition at line 44 of file gridtrimvertex.h.

The documentation for this class was generated from the following file:

- src/libnurbs/internals/gridtrimvertex.h

4.490 GridVertex Struct Reference

Public Member Functions

- GridVertex (long u, long v)
- void **set** (long u, long v)
- long **nextu** ()
- long **prevu** ()

Data Fields

- long **gparam** [2]

4.490.1 Detailed Description

Definition at line 39 of file gridvertex.h.

The documentation for this struct was generated from the following file:

- src/libnurbs/internals/gridvertex.h

4.491 gridWrap Class Reference

Public Member Functions

- **gridWrap** (Int nUlines, Int nVlines, Real uMin, Real uMax, Real vMin, Real vMax)
- **gridWrap** (Int nUlines, Real *uvals, Int nVlines, Real *vvlas)
- void **print** ()
- Int **get_n_ulines** ()
- Int **get_n_vlines** ()
- Real **get_u_min** ()
- Real **get_u_max** ()
- Real **get_v_min** ()
- Real **get_v_max** ()
- Real **get_u_value** (Int i)
- Real **get_v_value** (Int j)
- Real * **get_u_values** ()
- Real * **get_v_values** ()
- void **outputFanWithPoint** (Int v, Int uleft, Int uright, Real vert[2], **primStream** *pStream)
- void **draw** ()
- Int **isUniform** ()

4.491.1 Detailed Description

Definition at line 42 of file gridWrap.h.

The documentation for this class was generated from the following files:

- src/libnurbs/nurbtess/gridWrap.h
- src/libnurbs/nurbtess/gridWrap.cc

4.492 GUINamedType Struct Reference

Data Fields

- char * **name**
- int **type**

4.492.1 Detailed Description

Definition at line 2279 of file Component_Text.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component_Text.c

4.493 GUIScreen Struct Reference

Data Fields

- int X
- int Y

4.493.1 Detailed Description

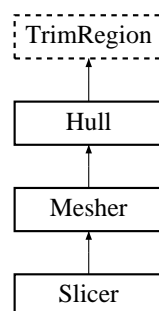
Definition at line 3077 of file Component_Text.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component_Text.c

4.494 Hull Class Reference

Inheritance diagram for Hull:



Public Member Functions

- void **init** (void)
- **GridTrimVertex** * **nextlower** (**GridTrimVertex** *)
- **GridTrimVertex** * **nextupper** (**GridTrimVertex** *)

Additional Inherited Members

4.494.1 Detailed Description

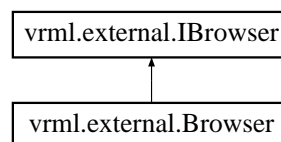
Definition at line 47 of file hull.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/hull.h
- src/libnurbs/internals/hull.cc

4.495 vrml.external.IBrowser Interface Reference

Inheritance diagram for vrml.external.IBrowser:



Public Member Functions

- String **getName** ()
- String **getVersion** ()
- int **getEncoding** ()
- float **getCurrentSpeed** ()
- float **getCurrentFrameRate** ()
- String **getWorldURL** ()
- void **replaceWorld** (**Node**[] nodes) throws IllegalArgumentException
- void **loadURL** (String[] url, String[] parameter)
- void **setDescription** (String description)
- String **getDescription** ()
- String **getRenderingProperties** ()
- **Node**[] **createVrmlFromString** (String vrmlSyntax) throws InvalidVrmlException
- void **createVrmlFromURL** (String[] url, **Node** node, String event)
- **Node** **getNode** (String name)
- void **addRoute** (**Node** fromNode, String fromEventOut, **Node** toNode, String toEventIn) throws IllegalArgumentException↵
- void **deleteRoute** (**Node** fromNode, String fromEventOut, **Node** toNode, String toEventIn) throws IllegalArgumentException↵
- void **beginUpdate** ()
- void **endUpdate** ()
- void **initialize** ()
- void **shutdown** ()
- void **firstViewpoint** ()
- void **lastViewpoint** ()
- void **nextViewpoint** ()
- void **previousViewpoint** ()
- String **createNode** (String name)

- String **createProto** (String name)
- String **updateNamedNode** (String name, **Node** node)
- String **removeNamedNode** (String name)
- String **getProtoDeclaration** (String name)
- String **removeProtoDeclaration** (String name)
- String **updateProtoDeclaration** (String name, String npdecl)
- String **getNodeFieldDefs** (**Node** myn)
- String **getNodeDEFName** (**Node** myn)

4.495.1 Detailed Description

Definition at line 6 of file IBrowser.java.

The documentation for this interface was generated from the following file:

- src/java/vrml/external/IBrowser.java

4.496 IffAtcNavAidsLayer1Pdu Struct Reference

Data Fields

- struct **DistributedEmissionsFamilyPdu** myDistributedEmissionsFamilyPdu
- struct **EntityID** emittingEntityId
ID of the entity that is the source of the emissions.
- struct **EventID** eventId
Number generated by the issuing simulation to associate realted events.
- struct **Vector3Float** location
Location wrt entity.
- struct **SystemID** systemId
System ID information.
- unsigned short **pad2**
padding
- struct **IffFundamentalData** fundamentalParameters
fundamental parameters

4.496.1 Detailed Description

Definition at line 1060 of file DIS.h.

4.496.2 Field Documentation

4.496.2.1 location

```
struct Vector3Float IffAtcNavAidsLayer1Pdu::location
```

Location wrt entity.

There is some ambuigiuity in the standard here, but this is the order it is listed in the table.

Definition at line 1051 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.497 IffAtcNavAidsLayer2Pdu Struct Reference

Data Fields

- struct **IffAtcNavAidsLayer1Pdu** myIffAtcNavAidsLayer1Pdu
- struct **LayerHeader** layerHeader
layer header
- struct **BeamData** beamData
beam data
- struct **BeamData** secondaryOperationalData
Secondary operational data, 5.2.57.
- void * **fundamentalIffParameters**
variable length list of fundamental parameters.

4.497.1 Detailed Description

Definition at line 1530 of file DIS.h.

4.497.2 Field Documentation

4.497.2.1 fundamentalIffParameters

```
void* IffAtcNavAidsLayer2Pdu::fundamentalIffParameters
```

variable length list of fundamental parameters.

^^^This is wrong

Definition at line 1539 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.498 IffFundamentalData Struct Reference

Data Fields

- unsigned char **systemStatus**
system status
- unsigned char **alternateParameter4**
Alternate parameter 4.
- unsigned char **informationLayers**
eight boolean fields
- unsigned char **modifier**
enumeration
- unsigned short **parameter1**
parameter, enumeration
- unsigned short **parameter2**
parameter, enumeration
- unsigned short **parameter3**
parameter, enumeration
- unsigned short **parameter4**
parameter, enumeration
- unsigned short **parameter5**
parameter, enumeration
- unsigned short **parameter6**
parameter, enumeration

4.498.1 Detailed Description

Definition at line 358 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.499 iiglobal Struct Reference

Data Structures

- struct **tBindable**
- struct **tcollision**
- struct **tcommon**
- struct **tComponent_CubeMapTexturing**
- struct **tComponent_EnvironSensor**
- struct **tComponent_Followers**
- struct **tComponent_Geometry3D**
- struct **tComponent_Geospatial**
- struct **tComponent_HAnim**
- struct **tComponent_KeyDevice**
- struct **tComponent_Layering**

- struct **tComponent_Layout**
- struct **tComponent_NURBS**
- struct **tComponent_ParticleSystems**
- struct **tComponent_Picking**
- struct **tComponent_ProgrammableShaders**
- struct **tComponent_PTM**
- struct **tComponent_Rendering**
- struct **tComponent_RigidBodyPhysics**
- struct **tComponent_Shape**
- struct **tComponent_Sound**
- struct **tComponent_Text**
- struct **tComponent_VolumeRendering**
- struct **tComponent_VRML1**
- struct **tConsoleMessage**
- struct **tCParse**
- struct **tCParseParser**
- struct **tCRoutes**
- struct **tCScripts**
- struct **tCursorDraw**
- struct **tdisplay**
- struct **tEAI_C_CommonFunctions**
- struct **tEAICore**
- struct **tEAIEventsIn**
- struct **tEAHelpers**
- struct **tFrustum**
- struct **tinternalc**
- struct **tLoadTextures**
- struct **tMainloop**
- struct **tOpenGL_Utils**
- struct **tPluginSocket**
- struct **tpluginUtils**
- struct **tProdCon**
- struct **tRenderFuncs**
- struct **tRenderTextures**
- struct **tresources**
- struct **tSensInterps**
- struct **tSnapshot**
- struct **tstatusbar**
- struct **tStreamPoly**
- struct **tTess**
- struct **tTextures**
- struct **tthreads**
- struct **tViewer**
- struct **tX3DParser**

Data Fields

- struct **iiglobal::tdisplay** display
- struct **iiglobal::tinternalc** internalc
- struct **iiglobal::tresources** resources
- struct **iiglobal::tthreads** threads
- struct **iiglobal::tSnapshot** Snapshot
- struct **iiglobal::tEAI_C_CommonFunctions** EAI_C_CommonFunctions
- struct **iiglobal::tEAIEventsIn** EAIEventsIn

- struct `iiglobal::tEAIHelpers` `EAIHelpers`
- struct `iiglobal::tEAICore` `EAICore`
- struct `iiglobal::tSensInterps` `SensInterps`
- struct `iiglobal::tConsoleMessage` `ConsoleMessage`
- struct `iiglobal::tMainloop` `Mainloop`
- struct `iiglobal::tProdCon` `ProdCon`
- struct `iiglobal::tFrustum` `Frustum`
- struct `iiglobal::tLoadTextures` `LoadTextures`
- struct `iiglobal::tOpenGL_Utils` `OpenGL_Utils`
- struct `iiglobal::tRenderTextures` `RenderTextures`
- struct `iiglobal::tTextures` `Textures`
- struct `iiglobal::tComponent_PTM` `Component_PTM`
- struct `iiglobal::tPluginSocket` `PluginSocket`
- struct `iiglobal::tpluginUtils` `pluginUtils`
- struct `iiglobal::tcollision` `collision`
- struct `iiglobal::tComponent_CubeMapTexturing` `Component_CubeMapTexturing`
- struct `iiglobal::tComponent_EnviroSensor` `Component_EnviroSensor`
- struct `iiglobal::tComponent_Geometry3D` `Component_Geometry3D`
- struct `iiglobal::tComponent_Geospatial` `Component_Geospatial`
- struct `iiglobal::tComponent_HAnim` `Component_HAnim`
- struct `iiglobal::tComponent_Layering` `Component_Layering`
- struct `iiglobal::tComponent_Layout` `Component_Layout`
- struct `iiglobal::tComponent_NURBS` `Component_NURBS`
- struct `iiglobal::tComponent_ParticleSystems` `Component_ParticleSystems`
- struct `iiglobal::tComponent_ProgrammableShaders` `Component_ProgrammableShaders`
- struct `iiglobal::tComponent_RigidBodyPhysics` `Component_RigidBodyPhysics`
- struct `iiglobal::tComponent_Followers` `Component_Followers`
- struct `iiglobal::tComponent_KeyDevice` `Component_KeyDevice`
- struct `iiglobal::tComponent_Picking` `Component_Picking`
- struct `iiglobal::tComponent_Rendering` `Component_Rendering`
- struct `iiglobal::tComponent_Shape` `Component_Shape`
- struct `iiglobal::tComponent_Sound` `Component_Sound`
- struct `iiglobal::tComponent_Text` `Component_Text`
- struct `iiglobal::tComponent_VRML1` `Component_VRML1`
- struct `iiglobal::tComponent_VolumeRendering` `Component_VolumeRendering`
- struct `iiglobal::tRenderFuncs` `RenderFuncs`
- struct `iiglobal::tStreamPoly` `StreamPoly`
- struct `iiglobal::tTess` `Tess`
- struct `iiglobal::tViewer` `Viewer`
- struct `iiglobal::tstatusbar` `statusbar`
- struct `iiglobal::tCParse` `CParse`
- struct `iiglobal::tCParser` `CParser`
- struct `iiglobal::tCRoutes` `CRoutes`
- struct `iiglobal::tCScripts` `CScripts`
- struct `iiglobal::tBindable` `Bindable`
- struct `iiglobal::tX3DParser` `X3DParser`
- struct `iiglobal::tcommon` `common`
- struct `iiglobal::tCursorDraw` `CursorDraw`

4.499.1 Detailed Description

Definition at line 42 of file `iglobal.h`.

The documentation for this struct was generated from the following file:

- `src/lib/iglobal.h`

4.500 IMEXPORT Struct Reference

Data Fields

- struct **X3D_Node** * **nodeptr**
- char * **inlinename**
- char * **mxname**
- char * **as**

4.500.1 Detailed Description

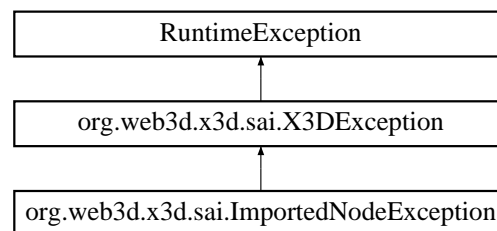
Definition at line 242 of file CParseParser.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml_parser/CParseParser.h

4.501 org.web3d.x3d.sai.ImportedException Class Reference

Inheritance diagram for org.web3d.x3d.sai.ImportedException:



Public Member Functions

- **ImportedException** (String msg)

4.501.1 Detailed Description

Definition at line 3 of file ImportedException.java.

The documentation for this class was generated from the following file:

- src/java/org/web3d/x3d/sai/ImportedException.java

4.502 initialRouteStruct Struct Reference

Data Fields

- struct **X3D_Node** * **from**
- size_t **totalptr**

4.502.1 Detailed Description

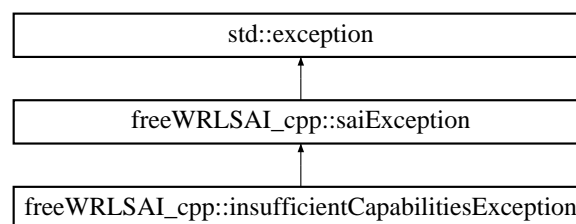
Definition at line 201 of file CRoutes.c.

The documentation for this struct was generated from the following file:

- src/lib/vrml_parser/CRoutes.c

4.503 freeWRLSAI_cpp::insufficientCapabilitiesException Class Reference

Inheritance diagram for freeWRLSAI_cpp::insufficientCapabilitiesException:



Public Member Functions

- virtual const char * **what** ()

Additional Inherited Members

4.503.1 Detailed Description

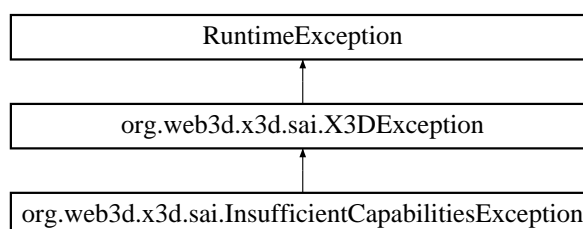
Definition at line 118 of file SAexception.h.

The documentation for this class was generated from the following file:

- src/SAI_Cpp/SAexception.h

4.504 org.web3d.x3d.sai.InsufficientCapabilitiesException Class Reference

Inheritance diagram for org.web3d.x3d.sai.InsufficientCapabilitiesException:



Public Member Functions

- **InsufficientCapabilitiesException** (String msg)

4.504.1 Detailed Description

Definition at line 3 of file `InsufficientCapabilitiesException.java`.

The documentation for this class was generated from the following file:

- `src/java/org/web3d/x3d/sai/InsufficientCapabilitiesException.java`

4.505 IntercomCommunicationsParameters Struct Reference

Data Fields

- unsigned short **recordType**
Type of intercom parameters record.
- unsigned short **recordLength**
length of record
- unsigned int **recordSpecificField**
Jerks.

4.505.1 Detailed Description

Definition at line 452 of file `DIS.h`.

4.505.2 Field Documentation

4.505.2.1 recordSpecificField

```
unsigned int IntercomCommunicationsParameters::recordSpecificField
```

Jerks.

Looks like the committee is forcing a lookup of the record type parameter to find out how long the field is. This is a placeholder.

Definition at line 458 of file `DIS.h`.

The documentation for this struct was generated from the following file:

- `src/lib/DIS/DIS.h`

4.506 IntercomControlPdu Struct Reference

Data Fields

- struct **RadioCommunicationsFamilyPdu** **myRadioCommunicationsFamilyPdu**
- unsigned char **controlType**
control type
- unsigned char **communicationsChannelType**
control type
- struct **EntityID** **sourceEntityID**
Source entity ID.
- unsigned char **sourceCommunicationsDeviceID**
The specific intercom device being simulated within an entity.
- unsigned char **sourceLineID**
Line number to which the intercom control refers.
- unsigned char **transmitPriority**
priority of this message relative to transmissions from other intercom devices
- unsigned char **transmitLineState**
current transmit state of the line
- unsigned char **command**
detailed type requested.
- struct **EntityID** **masterEntityID**
eid of the entity that has created this intercom channel.
- unsigned short **masterCommunicationsDeviceID**
specific intercom device that has created this intercom channel
- unsigned int **intercomParametersLength**
number of intercom parameters
- void * **intercomParameters**
^^^ *This is wrong—the length of the data field is variable.*

4.506.1 Detailed Description

Definition at line 1897 of file DIS.h.

4.506.2 Field Documentation

4.506.2.1 intercomParameters

```
void* IntercomControlPdu::intercomParameters
```

^^^This is wrong—the length of the data field is variable.

Using a long for now.

Definition at line 1922 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.507 IntercomSignalPdu Struct Reference

Data Fields

- struct **RadioCommunicationsFamilyPdu** **myRadioCommunicationsFamilyPdu**
- struct **EntityID** **entityID**
entity ID
- unsigned short **communicationsDeviceID**
ID of communications device.
- unsigned short **encodingScheme**
encoding scheme
- unsigned short **tdlType**
tactical data link type
- unsigned int **sampleRate**
sample rate
- unsigned short **dataLength**
data length
- unsigned short **samples**
samples
- void * **data**
data bytes

4.507.1 Detailed Description

Definition at line 897 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.508 intersection_info Struct Reference

Data Fields

- float **dist**
- float **p** [3]
- float **normal** [3]
- float **texcoord** [3]

4.508.1 Detailed Description

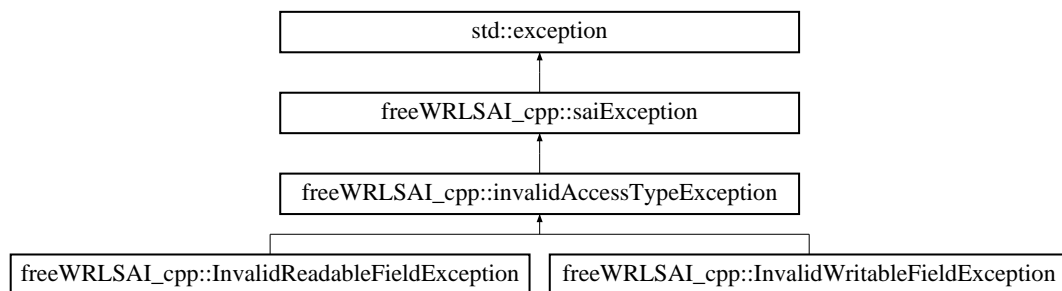
Definition at line 121 of file Polyrep.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Polyrep.h

4.509 freeWRLSAI_cpp::invalidAccessTypeException Class Reference

Inheritance diagram for freeWRLSAI_cpp::invalidAccessTypeException:



Public Member Functions

- virtual const char * **what** ()

Additional Inherited Members

4.509.1 Detailed Description

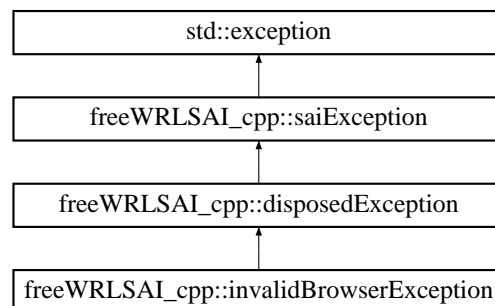
Definition at line 129 of file SAexception.h.

The documentation for this class was generated from the following file:

- src/SAI_Cpp/SAexception.h

4.510 freeWRLSAI_cpp::invalidBrowserException Class Reference

Inheritance diagram for freeWRLSAI_cpp::invalidBrowserException:



Public Member Functions

- virtual const char * **what** ()

Additional Inherited Members

4.510.1 Detailed Description

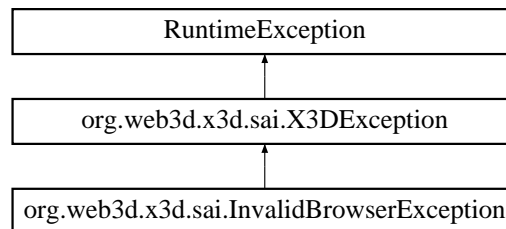
Definition at line 140 of file SAException.h.

The documentation for this class was generated from the following file:

- src/SAI_Cpp/SAException.h

4.511 org.web3d.x3d.sai.InvalidBrowserException Class Reference

Inheritance diagram for org.web3d.x3d.sai.InvalidBrowserException:



Public Member Functions

- **InvalidBrowserException** (String msg)

4.511.1 Detailed Description

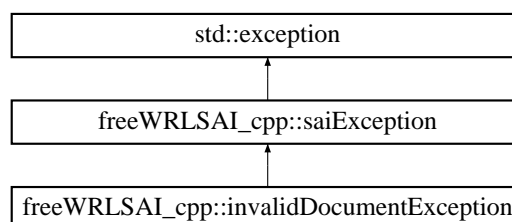
Definition at line 3 of file InvalidBrowserException.java.

The documentation for this class was generated from the following file:

- src/java/org/web3d/x3d/sai/InvalidBrowserException.java

4.512 freeWRLSAI_cpp::invalidDocumentException Class Reference

Inheritance diagram for freeWRLSAI_cpp::invalidDocumentException:



Public Member Functions

- virtual const char * **what** ()

Additional Inherited Members

4.512.1 Detailed Description

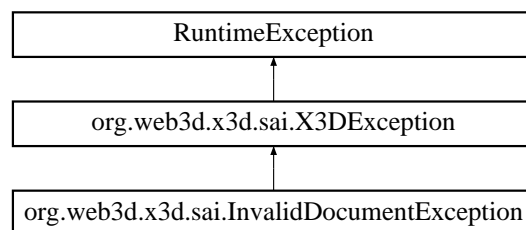
Definition at line 151 of file SAException.h.

The documentation for this class was generated from the following file:

- src/SAI_Cpp/SAException.h

4.513 org.web3d.x3d.sai.InvalidDocumentException Class Reference

Inheritance diagram for org.web3d.x3d.sai.InvalidDocumentException:



Public Member Functions

- **InvalidDocumentException** (String msg)

4.513.1 Detailed Description

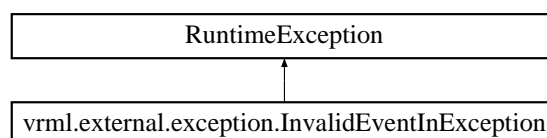
Definition at line 3 of file InvalidDocumentException.java.

The documentation for this class was generated from the following file:

- src/java/org/web3d/x3d/sai/InvalidDocumentException.java

4.514 vrml.external.exception.InvalidEventInException Class Reference

Inheritance diagram for vrml.external.exception.InvalidEventInException:



Public Member Functions

- **InvalidEventInException ()**
Constructs an *InvalidEventInException* (p. 341) with no detail message.
- **InvalidEventInException (String s)**
Constructs an *InvalidEventInException* (p. 341) with the specified detail message.

4.514.1 Detailed Description

Definition at line 3 of file InvalidEventInException.java.

4.514.2 Constructor & Destructor Documentation

4.514.2.1 InvalidEventInException()

```
vrml.external.exception.InvalidEventInException.InvalidEventInException (
    String s ) [inline]
```

Constructs an **InvalidEventInException** (p. 341) with the specified detail message.

A detail message is a String that describes this particular exception.

Parameters

s	the detail message
---	--------------------

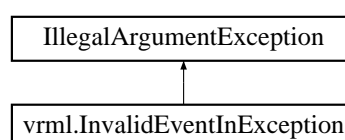
Definition at line 17 of file InvalidEventInException.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/exception/InvalidEventInException.java

4.515 vrml.InvalidEventInException Class Reference

Inheritance diagram for vrml.InvalidEventInException:



Public Member Functions

- **InvalidEventInException (String s)**

4.515.1 Detailed Description

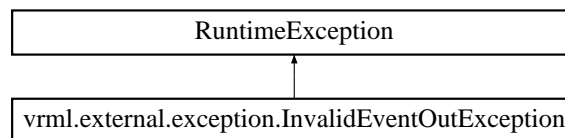
Definition at line 6 of file InvalidEventInException.java.

The documentation for this class was generated from the following file:

- src/java/vrml/InvalidEventInException.java

4.516 vrml.external.exception.InvalidEventOutException Class Reference

Inheritance diagram for vrml.external.exception.InvalidEventOutException:



Public Member Functions

- `InvalidEventOutException` (String s)

4.516.1 Detailed Description

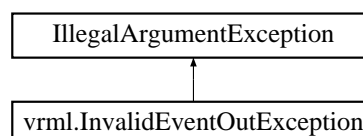
Definition at line 3 of file InvalidEventOutException.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/exception/InvalidEventOutException.java

4.517 vrml.InvalidEventOutException Class Reference

Inheritance diagram for vrml.InvalidEventOutException:



Public Member Functions

- `InvalidEventOutException` (String s)

4.517.1 Detailed Description

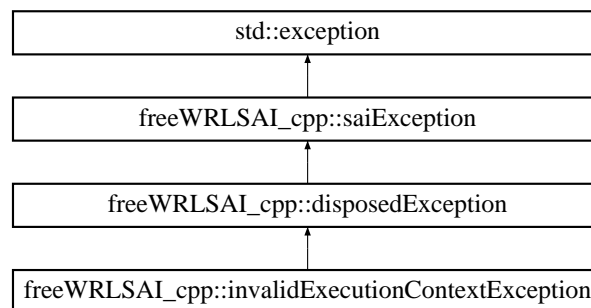
Definition at line 6 of file InvalidEventOutException.java.

The documentation for this class was generated from the following file:

- src/java/vrml/InvalidEventOutException.java

4.518 freeWRLSAI_cpp::invalidExecutionContextException Class Reference

Inheritance diagram for freeWRLSAI_cpp::invalidExecutionContextException:



Public Member Functions

- virtual const char * **what** ()

Additional Inherited Members

4.518.1 Detailed Description

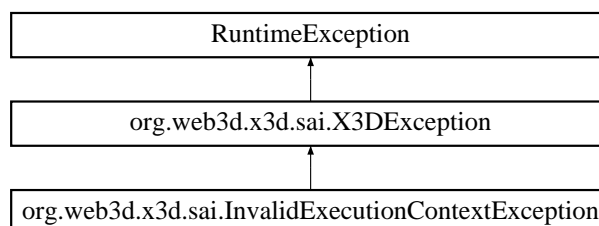
Definition at line 253 of file SAlexception.h.

The documentation for this class was generated from the following file:

- src/SAI_Cpp/SAlexception.h

4.519 org.web3d.x3d.sai.InvalidExecutionContextException Class Reference

Inheritance diagram for org.web3d.x3d.sai.InvalidExecutionContextException:



Public Member Functions

- **InvalidExecutionContextException** (String msg)

4.519.1 Detailed Description

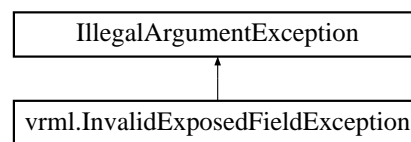
Definition at line 3 of file InvalidExecutionContextException.java.

The documentation for this class was generated from the following file:

- src/java/org/web3d/x3d/sai/InvalidExecutionContextException.java

4.520 vrml.InvalidExposedFieldException Class Reference

Inheritance diagram for vrml.InvalidExposedFieldException:



Public Member Functions

- **InvalidExposedFieldException** (String s)

4.520.1 Detailed Description

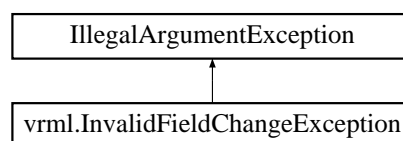
Definition at line 6 of file InvalidExposedFieldException.java.

The documentation for this class was generated from the following file:

- src/java/vrml/InvalidExposedFieldException.java

4.521 vrml.InvalidFieldChangeException Class Reference

Inheritance diagram for vrml.InvalidFieldChangeException:



Public Member Functions

- `InvalidFieldChangeException` (String s)

4.521.1 Detailed Description

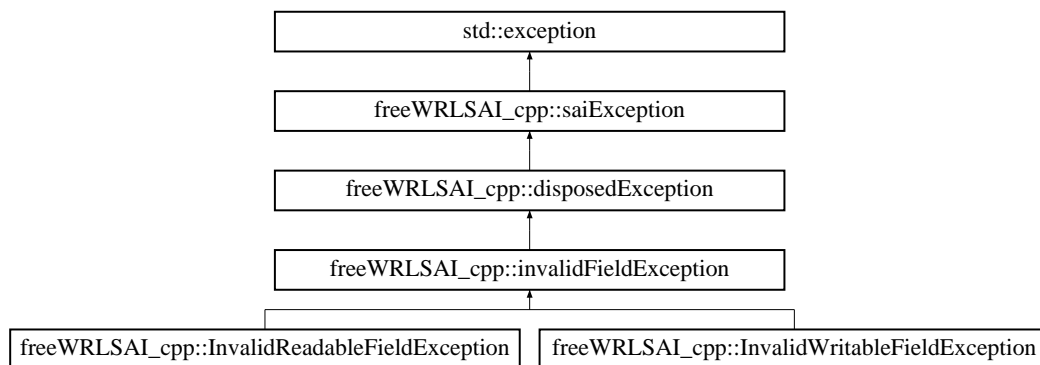
Definition at line 6 of file `InvalidFieldChangeException.java`.

The documentation for this class was generated from the following file:

- `src/java/vrml/InvalidFieldChangeException.java`

4.522 `freeWRLSAI_cpp::invalidFieldException` Class Reference

Inheritance diagram for `freeWRLSAI_cpp::invalidFieldException`:



Public Member Functions

- virtual const char * **what** ()

Additional Inherited Members

4.522.1 Detailed Description

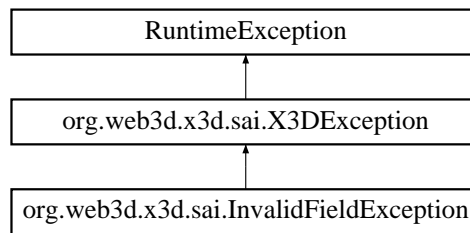
Definition at line 264 of file `SAlexception.h`.

The documentation for this class was generated from the following file:

- `src/SAI_Cpp/SAlexception.h`

4.523 org.web3d.x3d.sai.InvalidFieldException Class Reference

Inheritance diagram for org.web3d.x3d.sai.InvalidFieldException:



Public Member Functions

- **InvalidFieldException** (String msg)

4.523.1 Detailed Description

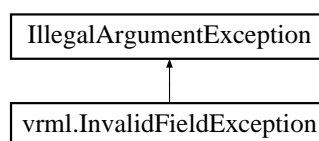
Definition at line 3 of file InvalidFieldException.java.

The documentation for this class was generated from the following file:

- src/java/org/web3d/x3d/sai/InvalidFieldException.java

4.524 vrml.InvalidFieldException Class Reference

Inheritance diagram for vrml.InvalidFieldException:



Public Member Functions

- **InvalidFieldException** (String s)

4.524.1 Detailed Description

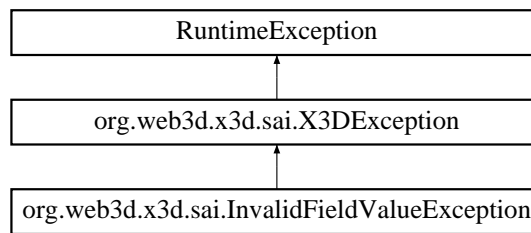
Definition at line 6 of file InvalidFieldException.java.

The documentation for this class was generated from the following file:

- src/java/vrml/InvalidFieldException.java

4.525 org.web3d.x3d.sai.InvalidFieldValueException Class Reference

Inheritance diagram for org.web3d.x3d.sai.InvalidFieldValueException:



Public Member Functions

- **InvalidFieldValueException** (String msg)

4.525.1 Detailed Description

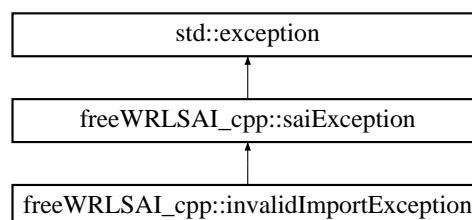
Definition at line 3 of file InvalidFieldValueException.java.

The documentation for this class was generated from the following file:

- src/java/org/web3d/x3d/sai/InvalidFieldValueException.java

4.526 freeWRLSAI_cpp::invalidImportException Class Reference

Inheritance diagram for freeWRLSAI_cpp::invalidImportException:



Public Member Functions

- virtual const char * **what** ()

Additional Inherited Members

4.526.1 Detailed Description

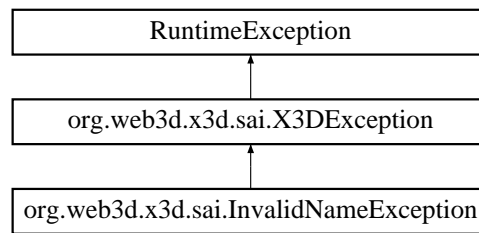
Definition at line 107 of file SAlexception.h.

The documentation for this class was generated from the following file:

- src/SAI_Cpp/SAlexception.h

4.527 org.web3d.x3d.sai.InvalidNameException Class Reference

Inheritance diagram for org.web3d.x3d.sai.InvalidNameException:



Public Member Functions

- **InvalidNameException** (String str)

4.527.1 Detailed Description

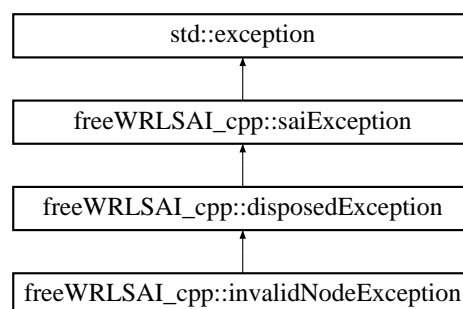
Definition at line 3 of file InvalidNameException.java.

The documentation for this class was generated from the following file:

- src/java/org/web3d/x3d/sai/InvalidNameException.java

4.528 freeWRLSAI_cpp::invalidNodeException Class Reference

Inheritance diagram for freeWRLSAI_cpp::invalidNodeException:



Public Member Functions

- virtual const char * **what** ()

Additional Inherited Members

4.528.1 Detailed Description

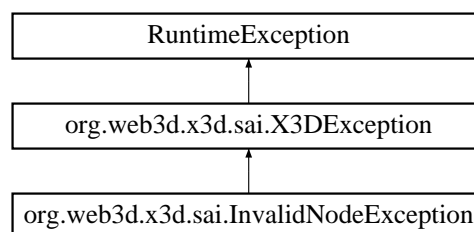
Definition at line 275 of file SAlexception.h.

The documentation for this class was generated from the following file:

- src/SAI_Cpp/SAlexception.h

4.529 org.web3d.x3d.sai.InvalidNodeException Class Reference

Inheritance diagram for org.web3d.x3d.sai.InvalidNodeException:



Public Member Functions

- **InvalidNodeException** (String str)

4.529.1 Detailed Description

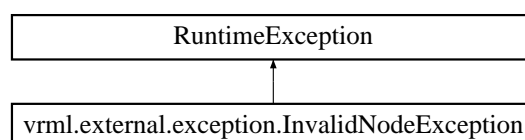
Definition at line 3 of file InvalidNodeException.java.

The documentation for this class was generated from the following file:

- src/java/org/web3d/x3d/sai/InvalidNodeException.java

4.530 vrml.external.exception.InvalidNodeException Class Reference

Inheritance diagram for vrml.external.exception.InvalidNodeException:



Public Member Functions

- **InvalidNodeException** ()
Constructs an **InvalidNodeException** (p. 350) with no detail message.
- **InvalidNodeException** (String s)
Constructs an **InvalidNodeException** (p. 350) with the specified detail message.

4.530.1 Detailed Description

Definition at line 3 of file InvalidNodeException.java.

4.530.2 Constructor & Destructor Documentation

4.530.2.1 InvalidNodeException()

```
vrml.external.exception.InvalidNodeException.InvalidNodeException (
    String s ) [inline]
```

Constructs an **InvalidNodeException** (p. 350) with the specified detail message.

A detail message is a String that describes this particular exception.

Parameters

s	the detail message
---	--------------------

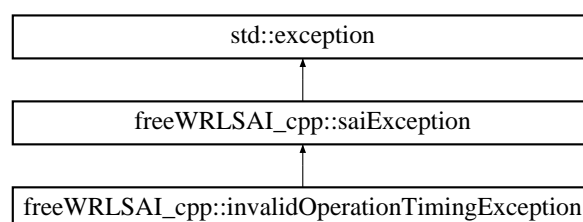
Definition at line 17 of file InvalidNodeException.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/exception/InvalidNodeException.java

4.531 freeWRLSAI_cpp::invalidOperationTimingException Class Reference

Inheritance diagram for freeWRLSAI_cpp::invalidOperationTimingException:



Public Member Functions

- virtual const char * **what** ()

Additional Inherited Members

4.531.1 Detailed Description

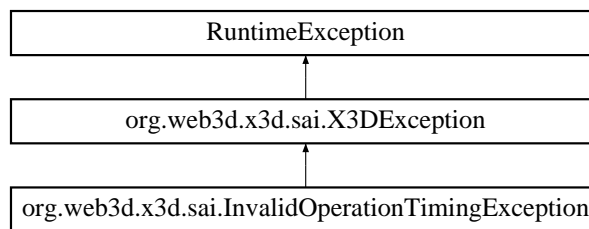
Definition at line 162 of file SAException.h.

The documentation for this class was generated from the following file:

- src/SAI_Cpp/SAException.h

4.532 org.web3d.x3d.sai.InvalidOperationTimingException Class Reference

Inheritance diagram for org.web3d.x3d.sai.InvalidOperationTimingException:



Public Member Functions

- **InvalidOperationTimingException** (String msg)

4.532.1 Detailed Description

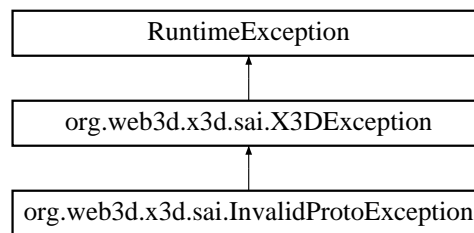
Definition at line 3 of file InvalidOperationTimingException.java.

The documentation for this class was generated from the following file:

- src/java/org/web3d/x3d/sai/InvalidOperationTimingException.java

4.533 org.web3d.x3d.sai.InvalidProtoException Class Reference

Inheritance diagram for org.web3d.x3d.sai.InvalidProtoException:



Public Member Functions

- **InvalidProtoException** (String msg)

4.533.1 Detailed Description

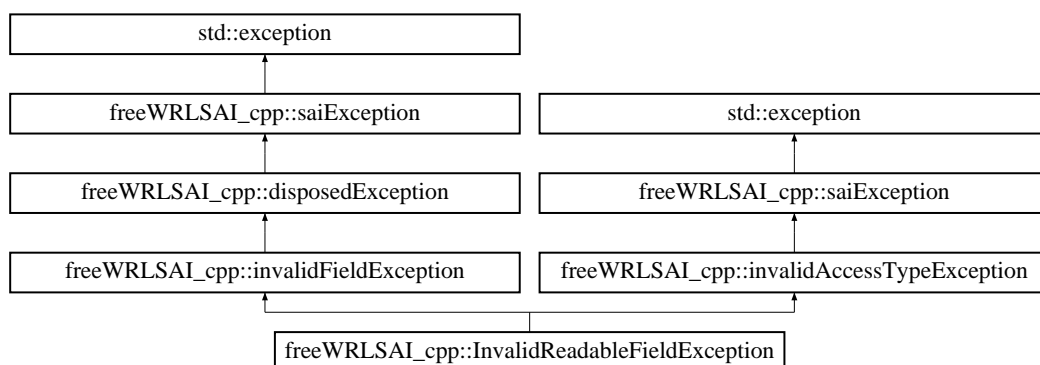
Definition at line 3 of file InvalidProtoException.java.

The documentation for this class was generated from the following file:

- src/java/org/web3d/x3d/sai/InvalidProtoException.java

4.534 freeWRLSAI_cpp::InvalidReadableFieldException Class Reference

Inheritance diagram for freeWRLSAI_cpp::InvalidReadableFieldException:



Public Member Functions

- virtual const char * **what** ()

Additional Inherited Members

4.534.1 Detailed Description

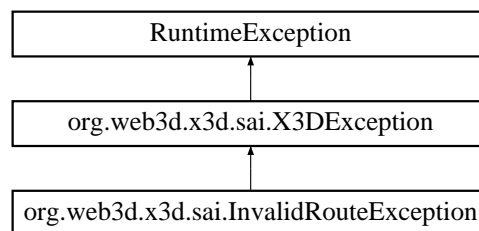
Definition at line 298 of file SAException.h.

The documentation for this class was generated from the following file:

- src/SAI_Cpp/SAException.h

4.535 org.web3d.x3d.sai.InvalidRouteException Class Reference

Inheritance diagram for org.web3d.x3d.sai.InvalidRouteException:



Public Member Functions

- **InvalidRouteException** (String msg)

4.535.1 Detailed Description

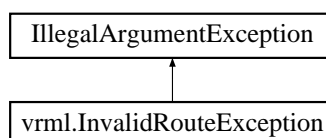
Definition at line 3 of file InvalidRouteException.java.

The documentation for this class was generated from the following file:

- src/java/org/web3d/x3d/sai/InvalidRouteException.java

4.536 vrml.InvalidRouteException Class Reference

Inheritance diagram for vrml.InvalidRouteException:



Public Member Functions

- `InvalidRouteException` (String s)

4.536.1 Detailed Description

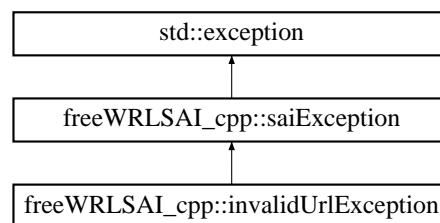
Definition at line 6 of file `InvalidRouteException.java`.

The documentation for this class was generated from the following file:

- `src/java/vrml/InvalidRouteException.java`

4.537 freeWRLSAI_cpp::invalidUrlException Class Reference

Inheritance diagram for `freeWRLSAI_cpp::invalidUrlException`:



Public Member Functions

- `virtual const char * what ()`

Additional Inherited Members

4.537.1 Detailed Description

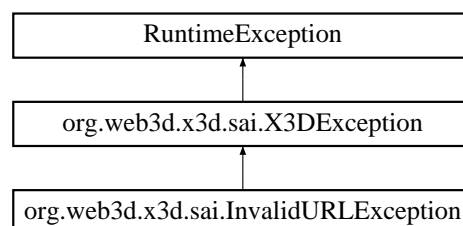
Definition at line 173 of file `SAlexception.h`.

The documentation for this class was generated from the following file:

- `src/SAI_Cpp/SAlexception.h`

4.538 org.web3d.x3d.sai.InvalidURLException Class Reference

Inheritance diagram for `org.web3d.x3d.sai.InvalidURLException`:



Public Member Functions

- **InvalidURLException** (String str)

4.538.1 Detailed Description

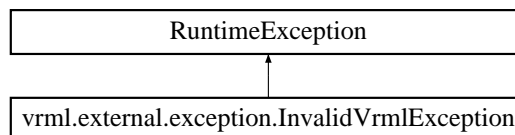
Definition at line 3 of file InvalidURLException.java.

The documentation for this class was generated from the following file:

- src/java/org/web3d/x3d/sai/InvalidURLException.java

4.539 vrml.external.exception.InvalidVrmlException Class Reference

Inheritance diagram for vrml.external.exception.InvalidVrmlException:



Public Member Functions

- **InvalidVrmlException** ()
Constructs an **InvalidVrmlException** (p. 356) with no detail message.
- **InvalidVrmlException** (String s)
Constructs an **InvalidVrmlException** (p. 356) with the specified detail message.

4.539.1 Detailed Description

Definition at line 3 of file InvalidVrmlException.java.

4.539.2 Constructor & Destructor Documentation

4.539.2.1 InvalidVrmlException()

```
vrml.external.exception.InvalidVrmlException.InvalidVrmlException (
    String s ) [inline]
```

Constructs an **InvalidVrmlException** (p. 356) with the specified detail message.

A detail message is a String that describes this particular exception.

Parameters

s	the detail message
---	--------------------

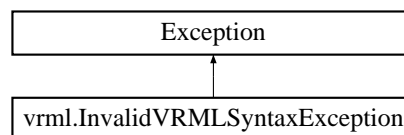
Definition at line 17 of file InvalidVrmlException.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/exception/InvalidVrmlException.java

4.540 vrml.InvalidVRMLSyntaxException Class Reference

Inheritance diagram for vrml.InvalidVRMLSyntaxException:



Public Member Functions

- `InvalidVRMLSyntaxException` (String s)

4.540.1 Detailed Description

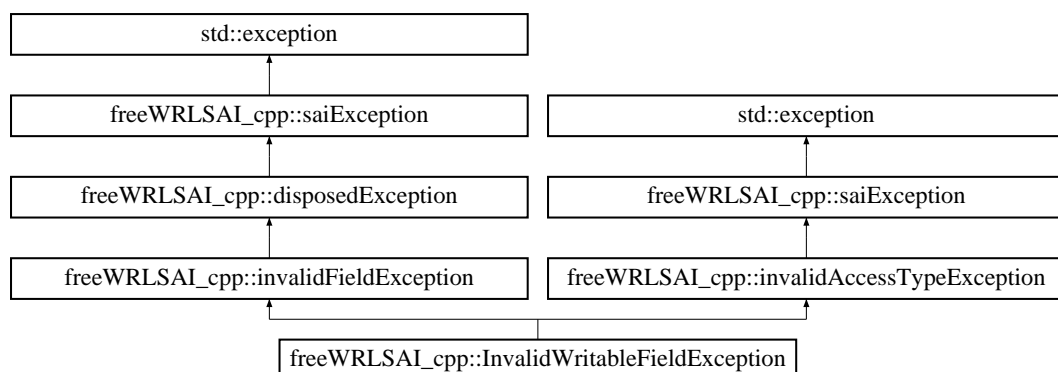
Definition at line 3 of file InvalidVRMLSyntaxException.java.

The documentation for this class was generated from the following file:

- src/java/vrml/InvalidVRMLSyntaxException.java

4.541 freeWRLSAI_cpp::InvalidWritableFieldException Class Reference

Inheritance diagram for freeWRLSAI_cpp::InvalidWritableFieldException:



Public Member Functions

- virtual const char * **what** ()

Additional Inherited Members

4.541.1 Detailed Description

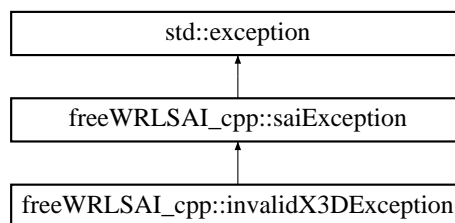
Definition at line 287 of file SAexception.h.

The documentation for this class was generated from the following file:

- src/SAI_Cpp/SAexception.h

4.542 freeWRLSAI_cpp::invalidX3DException Class Reference

Inheritance diagram for freeWRLSAI_cpp::invalidX3DException:



Public Member Functions

- virtual const char * **what** ()

Additional Inherited Members

4.542.1 Detailed Description

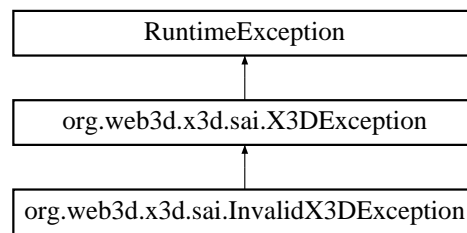
Definition at line 184 of file SAexception.h.

The documentation for this class was generated from the following file:

- src/SAI_Cpp/SAexception.h

4.543 org.web3d.x3d.sai.InvalidX3DException Class Reference

Inheritance diagram for org.web3d.x3d.sai.InvalidX3DException:



Public Member Functions

- **InvalidX3DException** (String str)

4.543.1 Detailed Description

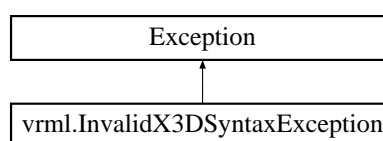
Definition at line 3 of file InvalidX3DException.java.

The documentation for this class was generated from the following file:

- src/java/org/web3d/x3d/sai/InvalidX3DException.java

4.544 vrml.InvalidX3DSyntaxException Class Reference

Inheritance diagram for vrml.InvalidX3DSyntaxException:



Public Member Functions

- **InvalidX3DSyntaxException** (String s)

4.544.1 Detailed Description

Definition at line 3 of file InvalidX3DSyntaxException.java.

The documentation for this class was generated from the following file:

- src/java/vrml/InvalidX3DSyntaxException.java

4.545 IsGroupOfPdu Struct Reference

Data Fields

- struct **EntityManagementFamilyPdu** **myEntityManagementFamilyPdu**
- struct **EntityID** **groupEntityID**
ID of aggregated entities.
- unsigned char **groupedEntityCategory**
type of entities constituting the group
- unsigned char **numberOfGroupedEntities**
Number of individual entities constituting the group.
- unsigned int **pad2**
padding
- double **latitude**
latitude
- double **longitude**
longitude
- void * **groupedEntityDescriptions**
GED records about each individual entity in the group.

4.545.1 Detailed Description

Definition at line 1424 of file DIS.h.

4.545.2 Field Documentation

4.545.2.1 groupedEntityDescriptions

```
void* IsGroupOfPdu::groupedEntityDescriptions
```

GED records about each individual entity in the group.

^^^this is wrong—need a database lookup to find the actual size of the list elements

Definition at line 1439 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.546 IsPartOfPdu Struct Reference

Data Fields

- struct **EntityManagementFamilyPdu** **myEntityManagementFamilyPdu**
- struct **EntityID** **originatingEntityID**
ID of entity originating PDU.
- struct **EntityID** **receivingEntityID**
ID of entity receiving PDU.
- struct **Relationship** **relationship**
relationship of joined parts
- struct **Vector3Float** **partLocation**
location of part; centroid of part in host's coordinate system.
- struct **NamedLocation** **namedLocationID**
named location
- struct **EntityType** **partEntityType**
entity type

4.546.1 Detailed Description

Definition at line 2091 of file DIS.h.

4.546.2 Field Documentation

4.546.2.1 partLocation

```
struct Vector3Float IsPartOfPdu::partLocation
```

location of part; centroid of part in host's coordinate system.

x=range, y=bearing, z=0

Definition at line 2087 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

4.547 ivec2 Struct Reference

Data Fields

- int **X**
- int **Y**

4.547.1 Detailed Description

Definition at line 66 of file display.c.

The documentation for this struct was generated from the following files:

- src/lib/display.c
- src/lib/scenegraph/Component_Text.c
- src/lib/scenegraph/RenderFuncs.h

4.548 ivec4 Struct Reference

Data Fields

- int **X**
- int **Y**
- int **W**
- int **H**

4.548.1 Detailed Description

Definition at line 65 of file display.c.

The documentation for this struct was generated from the following files:

- src/lib/display.c
- src/lib/scenegraph/Component_Text.c
- src/lib/scenegraph/RenderFuncs.h

4.549 Jarcloc Class Reference

Public Member Functions

- void **init** (Arc_ptr a, long first, long last)
- **TrimVertex** * **getnextpt** (void)
- **TrimVertex** * **getprevpt** (void)
- void **reverse** ()

4.549.1 Detailed Description

Definition at line 41 of file jarcloc.h.

The documentation for this class was generated from the following file:

- src/libnurbs/internals/jarcloc.h

4.550 JMATRIX Struct Reference

Data Fields

- double **mat** [16]
- float **normalmat** [9]

4.550.1 Detailed Description

Definition at line 495 of file Component_HAnim.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component_HAnim.c

4.551 JSON_config Struct Reference

The structure used to configure a JSON parser object.

Data Fields

- JSON_parser_callback **callback**
Pointer to a callback, called when the parser has something to tell the user.
- void * **callback_ctx**
Callback context - client-specified data to pass to the callback function.
- int **depth**
Specifies the levels of nested JSON to allow.
- int **allow_comments**
To allow C style comments in JSON, set to non-zero.
- int **handle_floats_manually**
To decode floating point numbers manually set this parameter to non-zero.
- JSON_malloc_t **malloc**
The memory allocation routine, which must be semantically compatible with malloc(3).
- JSON_free_t **free**
The memory deallocation routine, which must be semantically compatible with free(3).

4.551.1 Detailed Description

The structure used to configure a JSON parser object.

Definition at line 121 of file cson_amalgamation_core.c.

4.551.2 Field Documentation

4.551.2.1 callback

```
JSON_parser_callback JSON_config::callback
```

Pointer to a callback, called when the parser has something to tell the user.

This parameter may be NULL. In this case the input is merely checked for validity.

Definition at line 126 of file cson_amalgamation_core.c.

4.551.2.2 callback_ctx

```
void* JSON_config::callback_ctx
```

Callback context - client-specified data to pass to the callback function.

This parameter may be NULL.

Definition at line 131 of file cson_amalgamation_core.c.

4.551.2.3 depth

```
int JSON_config::depth
```

Specifies the levels of nested JSON to allow.

Negative numbers yield unlimited nesting. If negative, the parser can parse arbitrary levels of JSON, otherwise the depth is the limit.

Definition at line 136 of file cson_amalgamation_core.c.

4.551.2.4 free

```
JSON_free_t JSON_config::free
```

The memory deallocation routine, which must be semantically compatible with free(3).

If set to NULL, free(3) is used.

If this is set to a non-NULL value then the 'alloc' member MUST be set to the proper allocation counterpart for this function. Failure to do so results in undefined behaviour at deallocation time.

Definition at line 165 of file cson_amalgamation_core.c.

4.551.2.5 malloc

JSON_malloc_t JSON_config::malloc

The memory allocation routine, which must be semantically compatible with malloc(3).

If set to NULL, malloc(3) is used.

If this is set to a non-NULL value then the 'free' member MUST be set to the proper deallocation counterpart for this function. Failure to do so results in undefined behaviour at deallocation time.

Definition at line 155 of file cson_amalgamation_core.c.

The documentation for this struct was generated from the following file:

- src/SSR/cson/cson_amalgamation_core.c

4.552 JSON_parser_struct Struct Reference

Data Fields

- JSON_parser_callback **callback**
- void * **ctx**
- signed char **state**
- signed char **before_comment_state**
- signed char **type**
- signed char **escaped**
- signed char **comment**
- signed char **allow_comments**
- signed char **handle_floats_manually**
- signed char **error**
- char **decimal_point**
- UTF16 **utf16_high_surrogate**
- int **current_char**
- int **depth**
- int **top**
- int **stack_capacity**
- signed char * **stack**
- char * **parse_buffer**
- size_t **parse_buffer_capacity**
- size_t **parse_buffer_count**
- signed char **static_stack** [JSON_PARSER_STACK_SIZE]
- char **static_parse_buffer** [JSON_PARSER_PARSE_BUFFER_SIZE]
- JSON_malloc_t **malloc**
- JSON_free_t **free**

4.552.1 Detailed Description

Definition at line 347 of file cson_amalgamation_core.c.

The documentation for this struct was generated from the following file:

- src/SSR/cson/cson_amalgamation_core.c

4.553 JSON_value_struct Struct Reference

Data Fields

- ```
union {
 JSON_int_t integer_value
 double float_value
 struct {
 const char * value
 size_t length
 } str
} vu
```

### 4.553.1 Detailed Description

Definition at line 81 of file cson\_amalgamation\_core.c.

The documentation for this struct was generated from the following file:

- src/SSR/cson/cson\_amalgamation\_core.c

## 4.554 key Struct Reference

### Data Fields

- unsigned int **hit**

### 4.554.1 Detailed Description

Definition at line 139 of file Viewer.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Viewer.h

## 4.555 keyHit Struct Reference

### Data Fields

- int **direction**
- double **epoch**
- double **era**
- int **once**

### 4.555.1 Detailed Description

Definition at line 143 of file Viewer.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Viewer.h

## 4.556 keyval Struct Reference

### Data Fields

- char \* **key**
- char \* **val**
- cson\_value \* **cv**

### 4.556.1 Detailed Description

Definition at line 52 of file common.c.

The documentation for this struct was generated from the following files:

- src/lib/ui/common.c
- src/SSR/SSRServer.c

## 4.557 Knotspec Struct Reference

### Public Member Functions

- void **factors** (void)
- void **insert** (REAL \*)
- void **preselect** ()
- void **select** (void)
- void **copy** (INREAL \*, REAL \*)
- void **breakpoints** (void)
- void **knots** (void)
- void **transform** (REAL \*)
- void **showpts** (REAL \*)
- void **pt\_io\_copy** (REAL \*, INREAL \*)
- void **pt\_oo\_copy** (REAL \*, REAL \*)
- void **pt\_oo\_sum** (REAL \*, REAL \*, REAL \*, Knot, Knot)

## Data Fields

- long **order**
- Knot\_ptr **inkbegin**
- Knot\_ptr **inkend**
- Knot\_ptr **outkbegin**
- Knot\_ptr **outkend**
- Knot\_ptr **kleft**
- Knot\_ptr **kright**
- Knot\_ptr **kfirst**
- Knot\_ptr **klast**
- Knot\_ptr **sbegin**
- **Breakpt** \* **bbegin**
- **Breakpt** \* **bend**
- int **ncoords**
- int **prestride**
- int **poststride**
- int **preoffset**
- int **postoffset**
- int **prewidth**
- int **postwidth**
- int **istransformed**
- **Knotspec** \* **next**
- **Knotspec** \* **kspectotrans**

### 4.557.1 Detailed Description

Definition at line 54 of file tobezier.cc.

The documentation for this struct was generated from the following file:

- src/libnurbs/internals/tobezier.cc

## 4.558 Knotvector Struct Reference

### Public Member Functions

- void **init** (long, long, long, INREAL \*)
- int **validate** (void)
- void **show** (const char \*)

### Data Fields

- long **order**
- long **knotcount**
- long **stride**
- Knot \* **knotlist**

### 4.558.1 Detailed Description

Definition at line 41 of file knotvector.h.

The documentation for this struct was generated from the following files:

- src/libnurbs/internals/knotvector.h
- src/libnurbs/internals/knotvector.cc

## 4.559 LayerHeader Struct Reference

### Data Fields

- unsigned char **layerNumber**  
*Layer number.*
- unsigned char **layerSpecificInformaiton**  
*Layer speccific information enumeration.*
- unsigned short **length**  
*information length*

### 4.559.1 Detailed Description

Definition at line 183 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.560 layout\_scale\_item Struct Reference

### Data Fields

- float **scale** [2]
- int **scalemode** [2]

### 4.560.1 Detailed Description

Definition at line 70 of file Component\_Layout.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_Layout.c

## 4.561 layoutmode Struct Reference

### Data Fields

- char \* **key**
- int **type**

### 4.561.1 Detailed Description

Definition at line 109 of file Component\_Layout.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_Layout.c

## 4.562 LinearObjectStatePdu Struct Reference

### Data Fields

- struct **SyntheticEnvironmentFamilyPdu** mySyntheticEnvironmentFamilyPdu
- struct **EntityID** objectID  
*Object in synthetic environment.*
- struct **EntityID** referencedObjectID  
*Object with which this point object is associated.*
- unsigned short **updateNumber**  
*unique update number of each state transition of an object*
- unsigned char **forceID**  
*force ID*
- unsigned char **numberOfSegments**  
*number of linear segment parameters*
- struct **SimulationAddress** requesterID  
*requesterID*
- struct **SimulationAddress** receivingID  
*receiver ID*
- struct **ObjectType** objectType  
*Object type.*
- void \* **linearSegmentParameters**  
*Linear segment parameters.*

### 4.562.1 Detailed Description

Definition at line 846 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.563 LinearSegmentParameter Struct Reference

### Data Fields

- unsigned char **segmentNumber**  
*number of segments*
- struct **SixByteChunk** **segmentAppearance**  
*segment appearance*
- struct **Vector3Double** **location**  
*location*
- struct **Orientation** **orientation**  
*orientation*
- unsigned short **segmentLength**  
*segmentLength*
- unsigned short **segmentWidth**  
*segmentWidth*
- unsigned short **segmentHeight**  
*segmentHeight*
- unsigned short **segmentDepth**  
*segment Depth*
- unsigned int **pad1**  
*segment Depth*

### 4.563.1 Detailed Description

Definition at line 927 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.564 linkedlist\_data\_s Struct Reference

### Data Fields

- **linkedlist\_datablock\_internal \* first\_block**
- **linkedlist\_datablock\_internal \* last\_block**

### 4.564.1 Detailed Description

Definition at line 123 of file zip.c.

The documentation for this struct was generated from the following file:

- src/libminizip/zip.c

## 4.565 linkedlist\_datablock\_internal\_s Struct Reference

### Data Fields

- struct **linkedlist\_datablock\_internal\_s** \* **next\_datablock**
- uLong **avail\_in\_this\_block**
- uLong **filled\_in\_this\_block**
- uLong **unused**
- unsigned char **data** [SIZEDATA\_INDATABLOCK]

### 4.565.1 Detailed Description

Definition at line 114 of file zip.c.

The documentation for this struct was generated from the following file:

- src/libminizip/zip.c

## 4.566 LogisticsFamilyPdu Struct Reference

### Data Fields

- struct **Pdu** **myPdu**

### 4.566.1 Detailed Description

Definition at line 700 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.567 macroblock Struct Reference

### Data Fields

- int **mb\_address**
- int **past\_mb\_addr**
- int **motion\_h\_forw\_code**
- unsigned int **motion\_h\_forw\_r**
- int **motion\_v\_forw\_code**
- unsigned int **motion\_v\_forw\_r**
- int **motion\_h\_back\_code**
- unsigned int **motion\_h\_back\_r**
- int **motion\_v\_back\_code**
- unsigned int **motion\_v\_back\_r**
- unsigned int **cbp**
- int **mb\_intra**
- int **bpict\_past\_forw**
- int **bpict\_past\_back**
- int **past\_intra\_addr**
- int **recon\_right\_for\_prev**
- int **recon\_down\_for\_prev**
- int **recon\_right\_back\_prev**
- int **recon\_down\_back\_prev**



### 4.567.1 Detailed Description

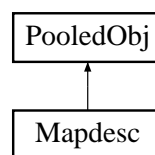
Definition at line 158 of file mpeg\_berkley.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/mpeg\_berkley.h

## 4.568 Mapdesc Class Reference

Inheritance diagram for Mapdesc:



### Public Member Functions

- **Mapdesc** (long, int, int, **Backend** &)
- int **isProperty** (long)
- REAL **getProperty** (long)
- void **setProperty** (long, REAL)
- int **isConstantSampling** (void)
- int **isDomainSampling** (void)
- int **isRangeSampling** (void)
- int **isSampling** (void)
- int **isParametricDistanceSampling** (void)
- int **isObjectSpaceParaSampling** (void)
- int **isObjectSpacePathSampling** (void)
- int **isSurfaceAreaSampling** (void)
- int **isPathLengthSampling** (void)
- int **isCulling** (void)
- int **isBboxSubdividing** (void)
- long **getType** (void)
- void **subdivide** (REAL \*, REAL \*, REAL, int, int)
- int **cullCheck** (REAL \*, int, int)
- void **xformBounding** (REAL \*, int, int, REAL \*, int)
- void **xformCulling** (REAL \*, int, int, REAL \*, int)
- void **xformSampling** (REAL \*, int, int, REAL \*, int)
- void **xformMat** (Maxmatrix, REAL \*, int, int, REAL \*, int)
- REAL **calcPartialVelocity** (REAL \*, int, int, int, REAL)
- int **project** (REAL \*, int, REAL \*, int, int)
- REAL **calcVelocityRational** (REAL \*, int, int)
- REAL **calcVelocityNonrational** (REAL \*, int, int)
- void **subdivide** (REAL \*, REAL \*, REAL, int, int, int, int)
- int **cullCheck** (REAL \*, int, int, int, int)
- void **xformBounding** (REAL \*, int, int, int, int, REAL \*, int, int)
- void **xformCulling** (REAL \*, int, int, int, int, REAL \*, int, int)

- void **xformSampling** (REAL \*, int, int, int, int, REAL \*, int, int)
- void **xformMat** (Maxmatrix, REAL \*, int, int, int, int, REAL \*, int, int)
- REAL **calcPartialVelocity** (REAL \*, REAL \*, int, int, int, int, int, int, REAL, REAL, int)
- int **project** (REAL \*, int, int, REAL \*, int, int, int, int)
- void **surfbbox** (REAL bb[2][MAXCOORDS])
- int **bbboxTooBig** (REAL \*, int, int, int, int, REAL[2][MAXCOORDS])
- int **xformAndCullCheck** (REAL \*, int, int, int, int)
- void **identify** (REAL[MAXCOORDS][MAXCOORDS])
- void **setBboxsize** (INREAL \*)
- void **setBmat** (INREAL \*, long, long)
- void **setCmat** (INREAL \*, long, long)
- void **setSmat** (INREAL \*, long, long)
- int **isRational** (void)
- int **getNcoords** (void)

## Data Fields

- REAL **pixel\_tolerance**
- REAL **error\_tolerance**
- REAL **object\_space\_error\_tolerance**
- REAL **clampfactor**
- REAL **minsavings**
- REAL **maxrate**
- REAL **maxsrate**
- REAL **maxtrate**
- REAL **bbboxsize** [MAXCOORDS]

## Friends

- class **Maplist**

### 4.568.1 Detailed Description

Definition at line 49 of file mapdesc.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/mapdesc.h
- src/libnurbs/internals/mapdesc.cc
- src/libnurbs/internals/mapdescv.cc

## 4.569 Maplist Class Reference

### Public Member Functions

- **Maplist** ( **Backend** &)
- void **define** (long, int, int)
- void **undefine** (long)
- int **isMap** (long)
- void **initialize** (void)
- **Mapdesc** \* **find** (long)
- **Mapdesc** \* **locate** (long)

### 4.569.1 Detailed Description

Definition at line 46 of file maplist.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/maplist.h
- src/libnurbs/internals/maplist.cc

## 4.570 Marking Struct Reference

### Data Fields

- unsigned char **characterSet**  
*The character set.*
- char **characters** [11]  
*The characters.*

### 4.570.1 Detailed Description

Definition at line 634 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.571 matpropstruct Struct Reference

### Data Fields

- struct **fw\_MaterialParameters** fw\_FrontMaterial
- struct **fw\_MaterialParameters** fw\_BackMaterial
- **s\_shader\_capabilities\_t**\* currentShaderProperties
- float **transparency**
- GLfloat **emissionColour** [3]
- GLint **cubeFace**
- int **cullFace**
- int **algorithm**
- bool **hatchedBool**
- bool **filledBool**
- GLfloat **hatchPercent** [2]
- GLfloat **hatchScale** [2]
- GLfloat **hatchColour** [4]
- GLfloat **pointSize**
- int **texCoordGeneratorType**

### 4.571.1 Detailed Description

Definition at line 153 of file Component\_Shape.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_Shape.h

## 4.572 org.web3d.x3d.sai.Matrix Interface Reference

### Public Member Functions

- void **setTransform** ( **SFVec3f** translation, **SFVec3f** rotation, **SFVec2f** scale, **SFVec3f** scaleOrientation, **SFVec2f** center)
- void **getTransform** ( **SFVec2f** translation, **SFVec3f** rotation, **SFVec2f** scale)
- void **inverse** (float[ ][ ] matrix)
- void **transpose** (float[ ][ ] matrix)
- void **multiplyLeft** (float[ ][ ] matrix, float[ ][ ] mult, int size)
- void **multiplyRight** (float[ ][ ] matrix, float[ ][ ] mult, int size)
- void **multiplyRowVector** (float[ ][ ] matrix, float[ ] vec, int size)
- void **multiplyColVector** (float[ ][ ] matrix, float[ ] vec, int size)

### 4.572.1 Detailed Description

Definition at line 3 of file Matrix.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/Matrix.java

## 4.573 org.web3d.x3d.sai.Matrix3 Class Reference

### Public Member Functions

- **Matrix3** (float[ ] init)
- void **setIdentity** ()
- void **set** (int row, int column, float value)
- float **get** (int row, int column)
- void **setTransform** ( **SFVec2f** translation, **SFVec3f** rotation, **SFVec2f** scale, **SFVec3f** scaleOrientation, **SFVec2f** centre)
- void **getTransform** ( **SFVec2f** translation, **SFVec3f** rotation, **SFVec2f** scale)
- float[ ][ ] **multiply** (float[ ][ ] multp, float[ ][ ] mat)
- **Matrix3** **inverse** ()
- **Matrix3** **transpose** ()
- **Matrix3** **multiplyLeft** ( **Matrix3** mat)
- **Matrix3** **multiplyRight** ( **Matrix3** mat)
- float[ ] **multiplyRowVector** (float[ ] vec)
- float[ ] **multiplyColVector** (float[ ] vec)

## Data Fields

- float[][] **matrix**

## Static Public Attributes

- static int **SIZE** = 3

### 4.573.1 Detailed Description

Definition at line 3 of file Matrix3.java.

The documentation for this class was generated from the following file:

- src/java/org/web3d/x3d/sai/Matrix3.java

## 4.574 org.web3d.x3d.sai.Matrix4 Class Reference

### Public Member Functions

- **Matrix4** (float[][] init)
- **Matrix4** (float[] init)
- void **setIdentity** ()
- void **set** (int row, int column, float value)
- float **get** (int row, int column)
- void **setTransform** ( **SFVec3f** translation, **SFRotation** rotation, **SFVec3f** scale, **SFRotation** scale↔ Orientation, **SFVec3f** centre)
- void **getTransform** ( **SFVec3f** translation, **SFRotation** rotation, **SFVec3f** scale)
- **Matrix4** **inverse** ()
- **Matrix4** **transpose** ()
- **Matrix4** **multiplyLeft** ( **Matrix4** mat)
- float[][] **multiply** (float[][] multp, float[][] mat)
- **Matrix4** **multiplyRight** ( **Matrix4** mat)
- float[] **multiplyRowVector** (float[] vec)
- float[] **multiplyColVector** (float[] vec)

## Data Fields

- float[][] **matrix**

## Static Public Attributes

- static int **SIZE** = 4

#### 4.574.1 Detailed Description

Definition at line 3 of file Matrix4.java.

The documentation for this class was generated from the following file:

- src/java/org/web3d/x3d/sai/Matrix4.java

### 4.575 mb\_addr\_inc\_entry Struct Reference

#### Data Fields

- int **value**
- int **num\_bits**

#### 4.575.1 Detailed Description

Definition at line 751 of file mpeg\_berkley.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/mpeg\_berkley.h

### 4.576 mb\_type\_entry Struct Reference

#### Data Fields

- unsigned int **mb\_quant**
- unsigned int **mb\_motion\_forward**
- unsigned int **mb\_motion\_backward**
- unsigned int **mb\_pattern**
- unsigned int **mb\_intra**
- int **num\_bits**

#### 4.576.1 Detailed Description

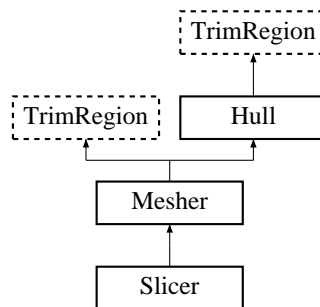
Definition at line 757 of file mpeg\_berkley.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/mpeg\_berkley.h

## 4.577 Mesher Class Reference

Inheritance diagram for Mesher:



### Public Member Functions

- **Mesher** ( **Backend** & )
- void **init** (unsigned int)
- void **mesh** (void)

### Additional Inherited Members

#### 4.577.1 Detailed Description

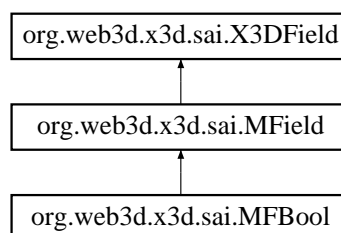
Definition at line 47 of file mesher.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/mesher.h
- src/libnurbs/internals/mesher.cc

## 4.578 org.web3d.x3d.sai.MFBool Interface Reference

Inheritance diagram for org.web3d.x3d.sai.MFBool:



## Public Member Functions

- void **getValue** (boolean[] vals)
- boolean **get1Value** (int index)
- void **setValue** (int size, boolean[] value)
- void **set1Value** (int index, boolean value) throws ArrayIndexOutOfBoundsException
- void **append** (boolean value)
- void **insertValue** (int index, boolean value)

### 4.578.1 Detailed Description

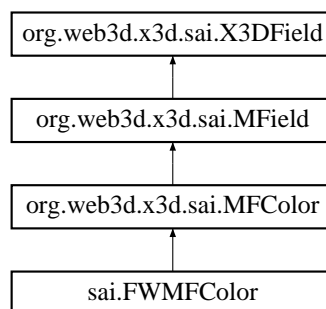
Definition at line 3 of file MFBool.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/MFBool.java

## 4.579 org.web3d.x3d.sai.MFColor Interface Reference

Inheritance diagram for org.web3d.x3d.sai.MFColor:



## Public Member Functions

- void **getValue** (float[][] value)
- void **getValue** (float[] value)
- void **get1Value** (int index, float[] value)
- void **setValue** (int numVals, float[] value)
- void **setValue** (int numVals, float[][] value)
- void **set1Value** (int index, float[] value)
- void **append** (float[] value)
- void **insertValue** (int index, float[] value)

### 4.579.1 Detailed Description

Definition at line 3 of file MFColor.java.

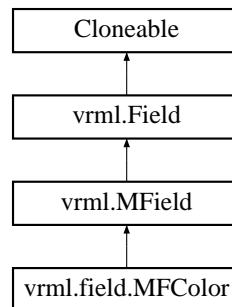
The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/MFColor.java



## 4.580 vrml.field.MFColor Class Reference

Inheritance diagram for vrml.field.MFColor:



### Public Member Functions

- **MFColor** (float[] colors)
- **MFColor** (int size, float[] colors)
- **MFColor** (float[][] colors)
- void **getValue** (float[] colors)
- void **getValue** (float[][] colors)
- void **get1Value** (int index, float[] colors)
- void **get1Value** (int index, **SFColor** sfColor)
- void **setValue** (float[] colors)
- void **setValue** (int size, float[] colors)
- void **set1Value** (int index, float red, float green, float blue)
- void **set1Value** (int index, **SFColor** sfColor)
- void **set1Value** (int index, **ConstSFColor** sfColor)
- void **addValue** (float red, float green, float blue)
- void **addValue** ( **SFColor** sfColor)
- void **addValue** ( **ConstSFColor** sfColor)
- void **insertValue** (int index, float red, float green, float blue)
- void **insertValue** (int index, **SFColor** sfColor)
- void **insertValue** (int index, **ConstSFColor** sfColor)
- String **toString** ()
- void **\_\_fromPerl** (BufferedReader in) throws IOException
- void **\_\_toPerl** (PrintWriter out) throws IOException

### Additional Inherited Members

#### 4.580.1 Detailed Description

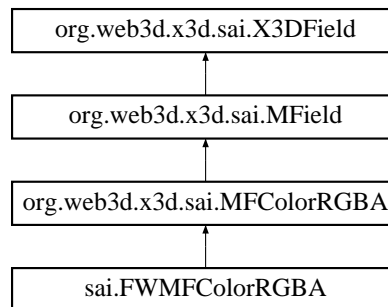
Definition at line 10 of file MFColor.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/MFColor.java

## 4.581 org.web3d.x3d.sai.MFColorRGBA Interface Reference

Inheritance diagram for org.web3d.x3d.sai.MFColorRGBA:



### Public Member Functions

- void **getValue** (float[ ][ ] value)
- void **getValue** (float[ ] value)
- void **get1Value** (int index, float[ ] value)
- void **setValue** (int numVolors, float[ ] value)
- void **setValue** (int numColors, float[ ][ ] value)
- void **set1Value** (int index, float[ ] value)
- void **append** (float[ ] value)
- void **insertValue** (int index, float[ ] value)

### 4.581.1 Detailed Description

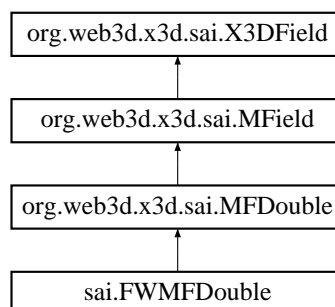
Definition at line 3 of file MFColorRGBA.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/MFColorRGBA.java

## 4.582 org.web3d.x3d.sai.MFDouble Interface Reference

Inheritance diagram for org.web3d.x3d.sai.MFDouble:



## Public Member Functions

- void **getValue** (double[] values)
- double **get1Value** (int index) throws ArrayIndexOutOfBoundsException
- void **setValue** (int size, double[] value)
- void **set1Value** (int index, double value) throws ArrayIndexOutOfBoundsException
- void **append** (double[] value)
- void **insertValue** (int index, double[] value)

### 4.582.1 Detailed Description

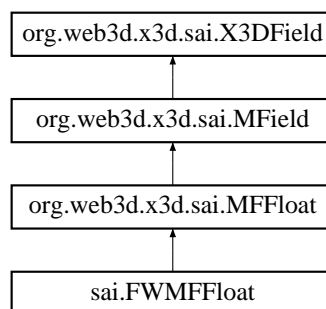
Definition at line 3 of file MFDouble.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/MFDouble.java

## 4.583 org.web3d.x3d.sai.MFFloat Interface Reference

Inheritance diagram for org.web3d.x3d.sai.MFFloat:



## Public Member Functions

- void **getValue** (float[] values)
- float **get1Value** (int index) throws ArrayIndexOutOfBoundsException
- void **setValue** (int size, float[] value)
- void **set1Value** (int index, float value) throws ArrayIndexOutOfBoundsException
- void **append** (float[] value)
- void **insertValue** (int index, float[] value)

### 4.583.1 Detailed Description

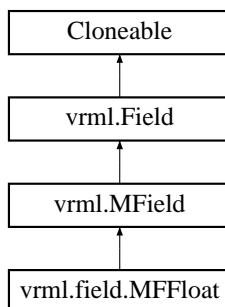
Definition at line 3 of file MFFloat.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/MFFloat.java

## 4.584 vrml.field.MFFloat Class Reference

Inheritance diagram for vrml.field.MFFloat:



### Public Member Functions

- **MFFloat** (float[] f)
- **MFFloat** (int size, float[] f)
- void **getValue** (float[] f)
- float **get1Value** (int index)
- void **setValue** (float[] f)
- void **setValue** (int size, float[] f)
- void **set1Value** (int index, float f)
- void **set1Value** (int index, **SFFloat** sfFloat)
- void **set1Value** (int index, **ConstSFFloat** sfFloat)
- void **addValue** (float f)
- void **addValue** ( **SFFloat** sfFloat)
- void **addValue** ( **ConstSFFloat** sfFloat)
- void **insertValue** (int index, float f)
- void **insertValue** (int index, **SFFloat** sfFloat)
- void **insertValue** (int index, **ConstSFFloat** sfFloat)
- String **toString** ()
- void **\_\_fromPerl** (BufferedReader in) throws IOException
- void **\_\_toPerl** (PrintWriter out) throws IOException

### Additional Inherited Members

#### 4.584.1 Detailed Description

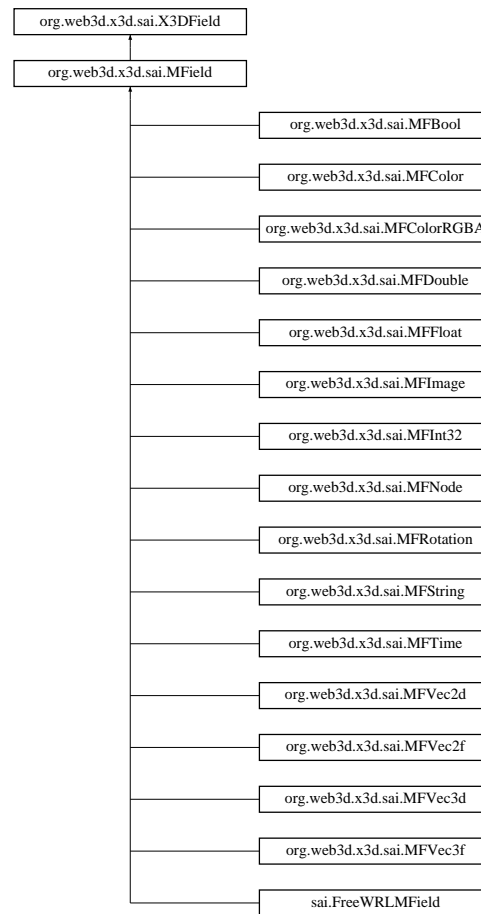
Definition at line 10 of file MFFloat.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/MFFloat.java

## 4.585 org.web3d.x3d.sai.MField Interface Reference

Inheritance diagram for org.web3d.x3d.sai.MField:



### Public Member Functions

- **int size ()** throws InvalidFieldException, ConnectionException
- **void clear ()** throws InvalidFieldException, ConnectionException
- **void remove (int index)** throws InvalidFieldException, ConnectionException, ArrayIndexOutOfBoundsException←  
Exception

### 4.585.1 Detailed Description

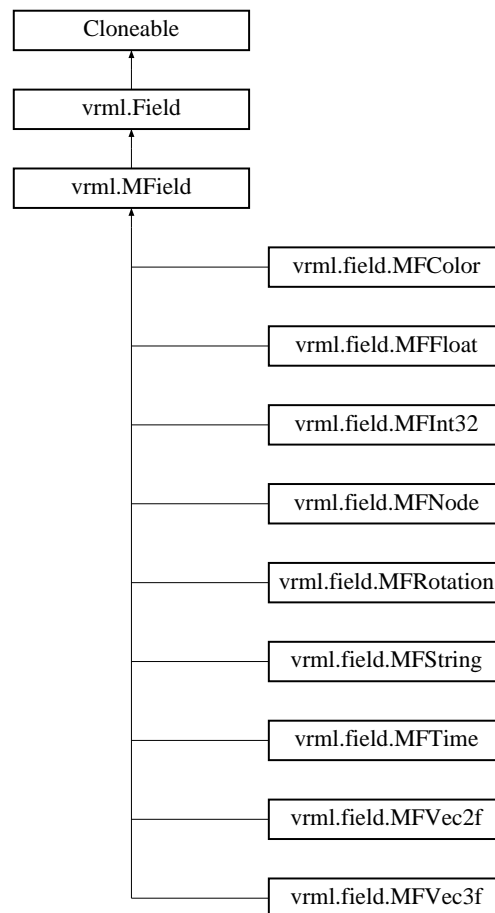
Definition at line 3 of file MField.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/MField.java

## 4.586 vrml.MField Class Reference

Inheritance diagram for vrml.MField:



### Public Member Functions

- int **getSize** ()
- void **clear** ()
- void **delete** (int index)

### Data Fields

- **Vector** **\_\_vect** = new **Vector**()

### Protected Member Functions

- final void **\_\_update1Read** (int index)
- final void **\_\_set1Value** (int index, **ConstField** fld)
- final void **\_\_insertValue** (int index, **ConstField** fld)
- final void **\_\_addValue** ( **ConstField** fld)

### 4.586.1 Detailed Description

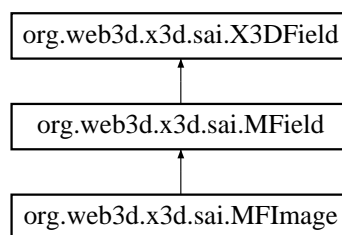
Definition at line 4 of file MField.java.

The documentation for this class was generated from the following file:

- src/java/vrml/MField.java

## 4.587 org.web3d.x3d.sai.MFImage Interface Reference

Inheritance diagram for org.web3d.x3d.sai.MFImage:



### Public Member Functions

- int **getWidth** (int imgIndex)
- int **getHeight** (int imgIndex)
- int **getComponents** (int imgIndex)
- void **getPixels** (int imgIndex, int[] pixels)
- WritableRenderedImage **getImage** (int imgIndex)
- void **setImage** (int imgIndex, RenderedImage img)
- void **setSubImage** (int imgIndex, RenderedImage img, int srcWidth, int srcHeight, int srcXOffset, int srcYOffset, int destXOffset, int destYOffset)
- void **set1Value** (int index, int value)
- void **set1Value** (int imgIndex, int width, int height, int components, int[] pixels)
- void **setValue** (int[] value)
- void **setImage** (RenderedImage[] img)
- void **append** (RenderedImage value)
- void **insertValue** (int index, RenderedImage value)

### 4.587.1 Detailed Description

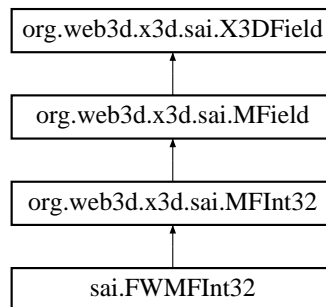
Definition at line 4 of file MFImage.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/MFImage.java

## 4.588 org.web3d.x3d.sai.MFInt32 Interface Reference

Inheritance diagram for org.web3d.x3d.sai.MFInt32:



### Public Member Functions

- void **getValue** (int[] values)
- int **get1Value** (int index) throws `ArrayIndexOutOfBoundsException`
- void **setValue** (int size, int[] value)
- void **set1Value** (int index, int value) throws `ArrayIndexOutOfBoundsException`
- void **append** (int[] value)
- void **insertValue** (int index, int[] value)

### 4.588.1 Detailed Description

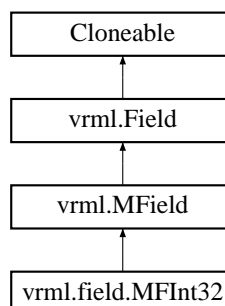
Definition at line 3 of file MFInt32.java.

The documentation for this interface was generated from the following file:

- `src/java/org/web3d/x3d/sai/MFInt32.java`

## 4.589 vrml.field.MFInt32 Class Reference

Inheritance diagram for vrml.field.MFInt32:





## Public Member Functions

- **MFInt32** (int[] value)
- **MFInt32** (int size, int[] value)
- void **getValue** (int[] value)
- int **get1Value** (int index)
- void **setValue** (int[] value)
- void **setValue** (int size, int[] value)
- void **set1Value** (int index, int value)
- void **set1Value** (int index, **SFInt32** sflnt32)
- void **set1Value** (int index, **ConstSFInt32** sflnt32)
- void **addValue** (int value)
- void **addValue** ( **SFInt32** sflnt32)
- void **addValue** ( **ConstSFInt32** sflnt32)
- void **insertValue** (int index, int value)
- void **insertValue** (int index, **SFInt32** sflnt32)
- void **insertValue** (int index, **ConstSFInt32** sflnt32)
- String **toString** ()
- void **\_\_fromPerl** (BufferedReader in) throws IOException
- void **\_\_toPerl** (PrintWriter out) throws IOException

## Additional Inherited Members

### 4.589.1 Detailed Description

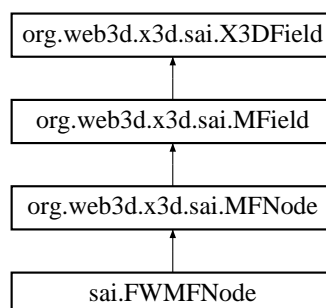
Definition at line 10 of file MFInt32.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/MFInt32.java

## 4.590 org.web3d.x3d.sai.MFNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.MFNode:



## Public Member Functions

- void **getValue** ( **X3DNode**[] nodes)
- **X3DNode** **get1Value** (int index)
- void **setValue** (int size, **X3DNode**[] value)
- void **set1Value** (int index, **X3DNode** value)
- void **append** ( **X3DNode** value)
- void **insertValue** (int index, **X3DNode** value)

### 4.590.1 Detailed Description

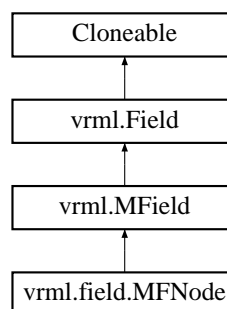
Definition at line 3 of file MFNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/MFNode.java

## 4.591 vrml.field.MFNode Class Reference

Inheritance diagram for vrml.field.MFNode:



## Public Member Functions

- **MFNode** ( **BaseNode**[] node)
- **MFNode** (int size, **BaseNode**[] node)
- void **getValue** ( **BaseNode**[] node)
- **BaseNode** **get1Value** (int index)
- void **setValue** ( **BaseNode**[] node)
- void **setValue** (int size, **BaseNode**[] node)
- void **set1Value** (int index, **BaseNode** node)
- void **set1Value** (int index, **SFNode** sfNode)
- void **set1Value** (int index, **ConstSFNode** sfNode)
- void **addValue** ( **BaseNode** node)
- void **addValue** ( **SFNode** sfNode)
- void **addValue** ( **ConstSFNode** sfNode)
- void **insertValue** (int index, **BaseNode** node)
- void **insertValue** (int index, **SFNode** sfNode)
- void **insertValue** (int index, **ConstSFNode** sfNode)
- String **toString** ()
- void **\_\_fromPerl** (BufferedReader in) throws IOException
- void **\_\_toPerl** (PrintWriter out) throws IOException

## Additional Inherited Members

### 4.591.1 Detailed Description

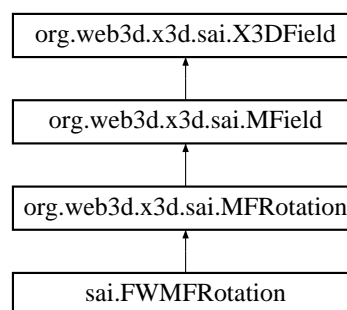
Definition at line 10 of file MFNode.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/MFNode.java

## 4.592 org.web3d.x3d.sai.MFRotation Interface Reference

Inheritance diagram for org.web3d.x3d.sai.MFRotation:



## Public Member Functions

- void **getValue** (float[ ][ ] value)
- void **getValue** (float[ ] value)
- void **get1Value** (int index, float[ ] value)
- void **setValue** (int numRotations, float[ ] value)
- void **setValue** (int numRotations, float[ ][ ] value)
- void **set1Value** (int index, float[ ] value)
- void **append** (float[ ] value)
- void **insertValue** (int index, float[ ] value)

### 4.592.1 Detailed Description

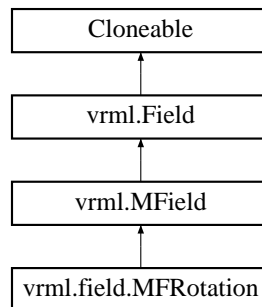
Definition at line 3 of file MFRotation.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/MFRotation.java

## 4.593 vrml.field.MFRotation Class Reference

Inheritance diagram for vrml.field.MFRotation:



### Public Member Functions

- **MFRotation** (float[] rotations)
- **MFRotation** (int size, float[] rotations)
- **MFRotation** (float[][] rotations)
- void **getValue** (float[] rotations)
- void **getValue** (float[][] rotations)
- void **get1Value** (int index, float[] rotations)
- void **get1Value** (int index, **SFRotation** sfRotation)
- void **setValue** (float[] rotations)
- void **setValue** (int size, float[] rotations)
- void **set1Value** (int index, float axisX, float axisY, float axisZ, float angle)
- void **set1Value** (int index, **SFRotation** sfRotation)
- void **set1Value** (int index, **ConstSFRotation** sfRotation)
- void **addValue** (float axisX, float axisY, float axisZ, float angle)
- void **addValue** ( **SFRotation** sfRotation)
- void **addValue** ( **ConstSFRotation** sfRotation)
- void **insertValue** (int index, float axisX, float axisY, float axisZ, float angle)
- void **insertValue** (int index, **SFRotation** sfRotation)
- void **insertValue** (int index, **ConstSFRotation** sfRotation)
- String **toString** ()
- void **\_\_fromPerl** (BufferedReader in) throws IOException
- void **\_\_toPerl** (PrintWriter out) throws IOException

### Additional Inherited Members

#### 4.593.1 Detailed Description

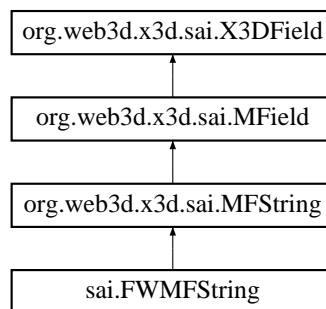
Definition at line 10 of file MFRotation.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/MFRotation.java

## 4.594 org.web3d.x3d.sai.MFString Interface Reference

Inheritance diagram for org.web3d.x3d.sai.MFString:



### Public Member Functions

- void **getValue** (String[] value)
- String **get1Value** (int index)
- void **setValue** (int numStrings, String[] value)
- void **set1Value** (int index, String value)
- void **append** (String[] value)
- void **insertValue** (int index, String[] value)

### 4.594.1 Detailed Description

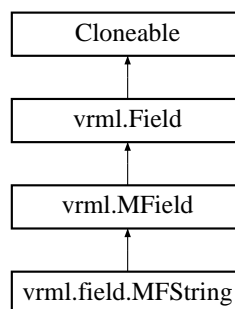
Definition at line 3 of file MFString.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/MFString.java

## 4.595 vrml.field.MFString Class Reference

Inheritance diagram for vrml.field.MFString:



## Public Member Functions

- **MFString** (String[] s)
- **MFString** (int size, String[] s)
- void **getValue** (String[] s)
- String **get1Value** (int index)
- void **setValue** (String[] s)
- void **setValue** (int size, String[] s)
- void **set1Value** (int index, String s)
- void **set1Value** (int index, **SFString** sfString)
- void **set1Value** (int index, **ConstSFString** sfString)
- void **addValue** (String s)
- void **addValue** ( **SFString** sfString)
- void **addValue** ( **ConstSFString** sfString)
- void **insertValue** (int index, String s)
- void **insertValue** (int index, **SFString** sfString)
- void **insertValue** (int index, **ConstSFString** sfString)
- String **toString** ()
- void **\_\_fromPerl** (BufferedReader in) throws IOException
- void **\_\_toPerl** (PrintWriter out) throws IOException

## Additional Inherited Members

### 4.595.1 Detailed Description

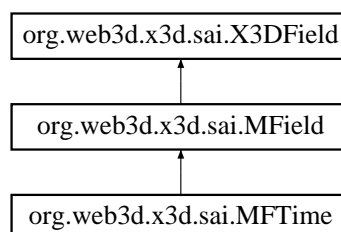
Definition at line 10 of file MFString.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/MFString.java

## 4.596 org.web3d.x3d.sai.MFTime Interface Reference

Inheritance diagram for org.web3d.x3d.sai.MFTime:



## Public Member Functions

- void **getValue** (double[] value)
- double **get1Value** (int index)
- long **get1JavaValue** (int index)
- void **setValue** (int size, double[] value)
- void **setValue** (int size, long[] value)
- void **set1Value** (int index, double value)
- void **set1Value** (int index, long value)
- void **append** (double value)
- void **append** (long value)
- void **insertValue** (int index, long value)
- void **insertValue** (int index, double value)

### 4.596.1 Detailed Description

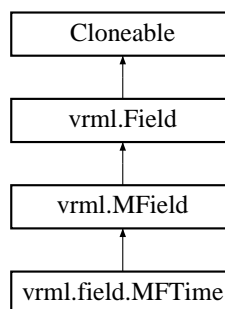
Definition at line 3 of file MFTime.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/MFTime.java

## 4.597 vrml.field.MFTime Class Reference

Inheritance diagram for vrml.field.MFTime:



## Public Member Functions

- **MFTime** (double[] value)
- **MFTime** (int size, double[] value)
- void **getValue** (double[] value)
- double **get1Value** (int index)
- void **setValue** (double[] value)
- void **setValue** (int size, double[] value)
- void **set1Value** (int index, double value)
- void **set1Value** (int index, **SFTime** sfTime)
- void **set1Value** (int index, **ConstSFTime** sfTime)
- void **addValue** (double value)
- void **addValue** ( **SFTime** sfTime)
- void **addValue** ( **ConstSFTime** sfTime)
- void **insertValue** (int index, double value)
- void **insertValue** (int index, **SFTime** sfTime)
- void **insertValue** (int index, **ConstSFTime** sfTime)
- String **toString** ()
- void **\_\_fromPerl** (BufferedReader in) throws IOException
- void **\_\_toPerl** (PrintWriter out) throws IOException

## Additional Inherited Members

### 4.597.1 Detailed Description

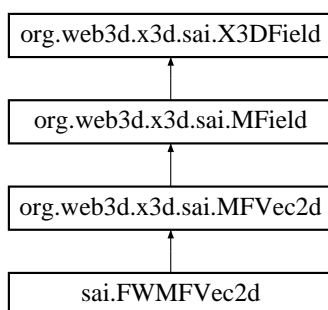
Definition at line 10 of file MFTIME.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/MFTIME.java

## 4.598 org.web3d.x3d.sai.MFVec2d Interface Reference

Inheritance diagram for org.web3d.x3d.sai.MFVec2d:



## Public Member Functions

- void **getValue** (double[][] value)
- void **getValue** (double[] value)
- void **get1Value** (int index, double[] value)
- void **setValue** (int size, double[] value)
- void **setValue** (int size, double[][] value)
- void **set1Value** (int index, double[] value)
- void **append** (double[] value)
- void **insertValue** (int index, double[] value)

### 4.598.1 Detailed Description

Definition at line 3 of file MFVec2d.java.

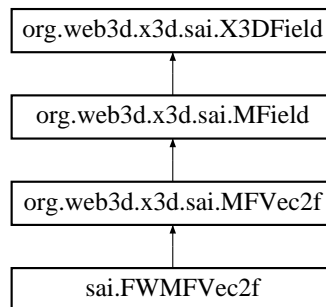
The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/MFVec2d.java



## 4.599 org.web3d.x3d.sai.MFVec2f Interface Reference

Inheritance diagram for org.web3d.x3d.sai.MFVec2f:



### Public Member Functions

- void **getValue** (float[ ][ ] value)
- void **getValue** (float[ ] value)
- void **get1Value** (int index, float[ ] value)
- void **setValue** (int size, float[ ] value)
- void **setValue** (int size, float[ ][ ] value)
- void **set1Value** (int index, float[ ] value)
- void **append** (float[ ] value)
- void **insertValue** (int index, float[ ] value)

### 4.599.1 Detailed Description

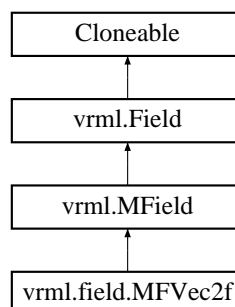
Definition at line 3 of file MFVec2f.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/MFVec2f.java

## 4.600 vrml.field.MFVec2f Class Reference

Inheritance diagram for vrml.field.MFVec2f:



## Public Member Functions

- **MVec2f** (float[] vec2fs)
- **MVec2f** (int size, float[] vec2fs)
- **MVec2f** (float[][] vec2fs)
- void **getValue** (float[] vec2fs)
- void **getValue** (float[][] vec2fs)
- void **get1Value** (int index, float[] vec2fs)
- void **get1Value** (int index, **SVec2f** sfVec2f)
- void **setValue** (float[] vec2fs)
- void **setValue** (int size, float[] vec2fs)
- void **set1Value** (int index, float x, float y)
- void **set1Value** (int index, **SVec2f** sfVec2f)
- void **set1Value** (int index, **ConstSVec2f** sfVec2f)
- void **addValue** (float x, float y)
- void **addValue** ( **SVec2f** sfVec2f)
- void **addValue** ( **ConstSVec2f** sfVec2f)
- void **insertValue** (int index, float x, float y)
- void **insertValue** (int index, **SVec2f** sfVec2f)
- void **insertValue** (int index, **ConstSVec2f** sfVec2f)
- String **toString** ()
- void **\_\_fromPerl** (BufferedReader in) throws IOException
- void **\_\_toPerl** (PrintWriter out) throws IOException

## Additional Inherited Members

### 4.600.1 Detailed Description

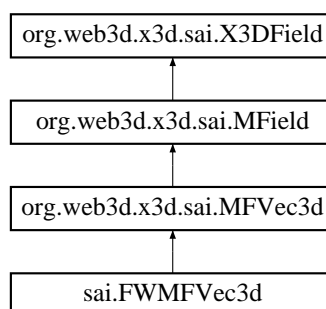
Definition at line 10 of file MVec2f.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/MVec2f.java

## 4.601 org.web3d.x3d.sai.MVec3d Interface Reference

Inheritance diagram for org.web3d.x3d.sai.MVec3d:



## Public Member Functions

- void **getValue** (double[ ][ ] value)
- void **getValue** (double[ ] value)
- void **get1Value** (int index, double[ ] value)
- void **setValue** (int size, double[ ] value)
- void **setValue** (int size, double[ ][ ] value)
- void **set1Value** (int index, double[ ] value)
- void **append** (double[ ] value)
- void **insertValue** (int index, double[ ] value)

### 4.601.1 Detailed Description

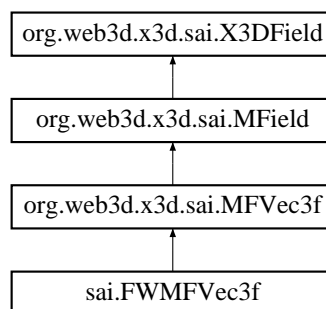
Definition at line 3 of file MFVec3d.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/MFVec3d.java

## 4.602 org.web3d.x3d.sai.MFVec3f Interface Reference

Inheritance diagram for org.web3d.x3d.sai.MFVec3f:



## Public Member Functions

- void **getValue** (float[ ][ ] value)
- void **getValue** (float[ ] value)
- void **get1Value** (int index, float[ ] value)
- void **setValue** (int size, float[ ] value)
- void **setValue** (int size, float[ ][ ] value)
- void **set1Value** (int index, float[ ] value)
- void **append** (float[ ] value)
- void **insertValue** (int index, float[ ] value)

### 4.602.1 Detailed Description

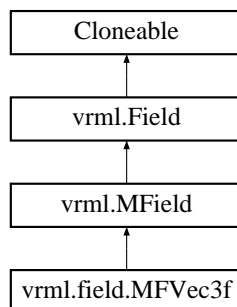
Definition at line 3 of file MFVec3f.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/MFVec3f.java

## 4.603 vrml.field.MFVec3f Class Reference

Inheritance diagram for vrml.field.MFVec3f:



### Public Member Functions

- **MFVec3f** (float[] vec3fs)
- **MFVec3f** (int size, float[] vec3fs)
- **MFVec3f** (float[][] vec3fs)
- void **getValue** (float[] vec3fs)
- void **getValue** (float[][] vec3fs)
- void **get1Value** (int index, float[] vec3fs)
- void **get1Value** (int index, **SFVec3f** sfVec3f)
- void **setValue** (float[] vec3fs)
- void **setValue** (int size, float[] vec3fs)
- void **set1Value** (int index, float x, float y, float z)
- void **set1Value** (int index, **SFVec3f** sfVec3f)
- void **set1Value** (int index, **ConstSFVec3f** sfVec3f)
- void **addValue** (float x, float y, float z)
- void **addValue** ( **SFVec3f** sfVec3f)
- void **addValue** ( **ConstSFVec3f** sfVec3f)
- void **insertValue** (int index, float x, float y, float z)
- void **insertValue** (int index, **SFVec3f** sfVec3f)
- void **insertValue** (int index, **ConstSFVec3f** sfVec3f)
- String **toString** ()
- void **\_\_fromPerl** (BufferedReader in) throws IOException
- void **\_\_toPerl** (PrintWriter out) throws IOException

### Additional Inherited Members

#### 4.603.1 Detailed Description

Definition at line 10 of file MFVec3f.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/MFVec3f.java

## 4.604 MinefieldDataPdu Struct Reference

### Data Fields

- struct **MinefieldFamilyPdu** **myMinefieldFamilyPdu**
- struct **EntityID** **minefieldID**  
*Minefield ID.*
- struct **EntityID** **requestingEntityID**  
*ID of entity making request.*
- unsigned short **minefieldSequenceNumber**  
*Minefield sequence number.*
- unsigned char **requestID**  
*request ID*
- unsigned char **pduSequenceNumber**  
*pdu sequence number*
- unsigned char **numberOfPdus**  
*number of pdus in response*
- unsigned char **numberOfMinesInThisPdu**  
*how many mines are in this PDU*
- unsigned char **numberOfSensorTypes**  
*how many sensor type are in this PDU*
- unsigned char **pad2**  
*padding*
- unsigned int **dataFilter**  
*32 boolean fields*
- struct **EntityType** **mineType**  
*Mine type.*
- void \* **sensorTypes**  
*Sensor types, each 16 bits long.*
- unsigned char **pad3**  
*Padding to get things 32-bit aligned.*
- void \* **mineLocation**  
*Mine locations.*

### 4.604.1 Detailed Description

Definition at line 1443 of file DIS.h.

### 4.604.2 Field Documentation

#### 4.604.2.1 pad3

```
unsigned char MinefieldDataPdu::pad3
```

Padding to get things 32-bit aligned.

^^^this is wrong—dyanmically sized padding needed

Definition at line 1470 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

### 4.605 MinefieldFamilyPdu Struct Reference

#### Data Fields

- struct **Pdu** myPdu

#### 4.605.1 Detailed Description

Definition at line 1316 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

### 4.606 MinefieldQueryPdu Struct Reference

#### Data Fields

- struct **MinefieldFamilyPdu** myMinefieldFamilyPdu
- struct **EntityID** minefieldID  
*Minefield ID.*
- struct **EntityID** requestingEntityID  
*EID of entity making the request.*
- unsigned char **requestID**  
*request ID*
- unsigned char **numberOfPerimeterPoints**  
*Number of perimeter points for the minefield.*
- unsigned char **pad2**  
*Padding.*
- unsigned char **numberOfSensorTypes**  
*Number of sensor types.*
- unsigned int **dataFilter**  
*data filter, 32 boolean fields*
- struct **EntityType** requestedMineType  
*Entity type of mine being requested.*
- void \* **requestedPerimeterPoints**  
*perimeter points of request*
- void \* **sensorTypes**  
*Sensor types, each 16 bits long.*

### 4.606.1 Detailed Description

Definition at line 2108 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.607 MinefieldResponseNackPdu Struct Reference

### Data Fields

- struct **MinefieldFamilyPdu** myMinefieldFamilyPdu
- struct **EntityID** minefieldID  
*Minefield ID.*
- struct **EntityID** requestingEntityID  
*entity ID making the request*
- unsigned char **requestID**  
*request ID*
- unsigned char **numberOfMissingPdus**  
*how many pdus were missing*
- void \* **missingPduSequenceNumbers**  
*PDU sequence numbers that were missing.*

### 4.607.1 Detailed Description

Definition at line 2024 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.608 MinefieldStatePdu Struct Reference

### Data Fields

- struct **MinefieldFamilyPdu** myMinefieldFamilyPdu
- struct **EntityID** minefieldID  
*Minefield ID.*
- unsigned short **minefieldSequence**  
*Minefield sequence.*
- unsigned char **forceID**  
*force ID*
- unsigned char **numberOfPerimeterPoints**  
*Number of perimeter points.*
- struct **EntityType** minefieldType

- type of minefield*
- unsigned short **numberOfMineTypes**
  - how many mine types*
- struct **Vector3Double** **minefieldLocation**
  - location of minefield in world coords*
- struct **Orientation** **minefieldOrientation**
  - orientation of minefield*
- unsigned short **appearance**
  - appearance bitflags*
- unsigned short **protocolMode**
  - protocolMode*
- void \* **perimeterPoints**
  - perimeter points for the minefield*
- void \* **mineType**
  - Type of mines.*

#### 4.608.1 Detailed Description

Definition at line 1660 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

### 4.609 mode\_name Struct Reference

#### Data Fields

- int **mode**
- const char \* **name**

#### 4.609.1 Detailed Description

Definition at line 170 of file X3DParser.c.

The documentation for this struct was generated from the following file:

- src/lib/x3d\_parser/X3DParser.c

### 4.610 ModulationType Struct Reference

#### Data Fields

- unsigned short **spreadSpectrum**
  - spread spectrum, 16 bit boolean array*
- unsigned short **major**
  - major*
- unsigned short **detail**
  - detail*
- unsigned short **system**
  - system*



### 4.610.1 Detailed Description

Definition at line 338 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.611 monoChain Class Reference

### Public Member Functions

- **monoChain** ( **directedLine** \*cHead, **directedLine** \*cTail)
- void **setNext** ( **monoChain** \*n)
- void **setPrev** ( **monoChain** \*p)
- void **setNextPolygon** ( **monoChain** \*np)
- **monoChain** \* **getNext** ()
- **monoChain** \* **getPrev** ()
- **directedLine** \* **getHead** ()
- **directedLine** \* **getTail** ()
- void **resetCurrent** ()
- void **deleteLoop** ()
- void **deleteLoopList** ()
- void **insert** ( **monoChain** \*nc)
- Int **numChainsSingleLoop** ()
- Int **numChainsAllLoops** ()
- **monoChain** \*\* **toArrayAllLoops** (Int &num\_chains)
- Int **toArraySingleLoop** ( **monoChain** \*\*array, Int index)
- Real **chainIntersectHoriz** (Real y)
- **directedLine** \* **find** (Real y)
- void **printOneChain** ()
- void **printChainLoop** ()
- void **printAllLoops** ()

### Data Fields

- Int **isKey**
- Real **keyY**

### 4.611.1 Detailed Description

Definition at line 41 of file monoChain.h.

The documentation for this class was generated from the following files:

- src/libnurbs/nurbtess/monoChain.h
- src/libnurbs/nurbtess/monoChain.cc

## 4.612 Monotonizer Class Reference

### Public Member Functions

- **Monotonizer** ( **ArcTessellator** &at, **Pool** &ap, **Pool** &p, jmp\_buf &j)
- int **decompose** ( **Bin** &, **REAL**)

### 4.612.1 Detailed Description

Definition at line 49 of file monotonizer.h.

The documentation for this class was generated from the following file:

- src/libnurbs/internals/monotonizer.h

## 4.613 motion\_vectors\_entry Struct Reference

### Data Fields

- int **code**
- int **num\_bits**

### 4.613.1 Detailed Description

Definition at line 780 of file mpeg\_berkley.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/mpeg\_berkley.h

## 4.614 Multi\_Any Struct Reference

### Data Fields

- int **n**
- char \* **p**

### 4.614.1 Detailed Description

Definition at line 133 of file FWTYPE.h.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/FWTYPE.h

## 4.615 Multi\_Bool Struct Reference

### Data Fields

- int **n**
- int \* **p**
- size\_t **n**

### 4.615.1 Detailed Description

Definition at line 2543 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.616 Multi\_Color Struct Reference

### Data Fields

- int **n**
- struct **SFColor** \* **p**
- size\_t **n**

### 4.616.1 Detailed Description

Definition at line 2549 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.617 Multi\_ColorRGBA Struct Reference

### Data Fields

- int **n**
- struct **SFColorRGBA** \* **p**
- size\_t **n**

### 4.617.1 Detailed Description

Definition at line 2551 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.618 Multi\_Double Struct Reference

### Data Fields

- int **n**
- double \* **p**
- size\_t **n**

### 4.618.1 Detailed Description

Definition at line 2563 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.619 Multi\_Float Struct Reference

### Data Fields

- int **n**
- float \* **p**
- size\_t **n**

### 4.619.1 Detailed Description

Definition at line 2537 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.620 Multi\_Int32 Struct Reference

### Data Fields

- int **n**
- int \* **p**
- size\_t **n**

### 4.620.1 Detailed Description

Definition at line 2545 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.621 Multi\_Matrix3d Struct Reference

### Data Fields

- int **n**
- struct **SFMatrix3d** \* **p**
- size\_t **n**

### 4.621.1 Detailed Description

Definition at line 2567 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.622 Multi\_Matrix3f Struct Reference

### Data Fields

- int **n**
- struct **SFMatrix3f** \* **p**
- size\_t **n**

### 4.622.1 Detailed Description

Definition at line 2565 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.623 Multi\_Matrix4d Struct Reference

### Data Fields

- int **n**
- struct **SFMatrix4d** \* **p**
- size\_t **n**

### 4.623.1 Detailed Description

Definition at line 2571 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.624 Multi\_Matrix4f Struct Reference

### Data Fields

- int **n**
- struct **SFMatrix4f** \* **p**
- size\_t **n**

### 4.624.1 Detailed Description

Definition at line 2569 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.625 Multi\_Node Struct Reference

### Data Fields

- int **n**
- struct **X3D\_Node** \*\* **p**
- size\_t **n**
- void \*\* **p**

### 4.625.1 Detailed Description

Definition at line 2547 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.626 Multi\_Rotation Struct Reference

### Data Fields

- int **n**
- struct **SFRotation** \* **p**
- size\_t **n**

### 4.626.1 Detailed Description

Definition at line 2539 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.627 Multi\_String Struct Reference

### Data Fields

- int **n**
- struct **Uni\_String** \*\* **p**
- size\_t **n**

### 4.627.1 Detailed Description

Definition at line 2555 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.628 Multi\_Time Struct Reference

### Data Fields

- int **n**
- double \* **p**
- size\_t **n**

### 4.628.1 Detailed Description

Definition at line 2553 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.629 Multi\_Vec2d Struct Reference

### Data Fields

- int **n**
- struct **SFVec2d** \* **p**
- size\_t **n**

### 4.629.1 Detailed Description

Definition at line 2573 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h



## 4.630 Multi\_Vec2f Struct Reference

### Data Fields

- int **n**
- struct **SFVec2f** \* **p**
- size\_t **n**

### 4.630.1 Detailed Description

Definition at line 2557 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.631 Multi\_Vec3d Struct Reference

### Data Fields

- int **n**
- struct **SFVec3d** \* **p**
- size\_t **n**

### 4.631.1 Detailed Description

Definition at line 2561 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.632 Multi\_Vec3f Struct Reference

### Data Fields

- int **n**
- struct **SFVec3f** \* **p**
- size\_t **n**
- struct **SFColor** \* **p**

### 4.632.1 Detailed Description

Definition at line 2541 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.633 Multi\_Vec4d Struct Reference

### Data Fields

- int **n**
- struct **SFVec4d** \* **p**
- size\_t **n**

### 4.633.1 Detailed Description

Definition at line 2577 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.634 Multi\_Vec4f Struct Reference

### Data Fields

- int **n**
- struct **SFVec4f** \* **p**
- size\_t **n**

### 4.634.1 Detailed Description

Definition at line 2575 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.635 multiTexParams Struct Reference

### Data Fields

- int **multitex\_mode** [2]
- int **multitex\_source** [2]
- int **multitex\_function**

### 4.635.1 Detailed Description

Definition at line 49 of file RenderTextures.c.

The documentation for this struct was generated from the following files:

- src/lib/OpenGL/RenderTextures.c
- src/lib/OpenGL/Textures.c

## 4.636 myArgs Struct Reference

### Data Fields

- struct **X3D\_Node** \* **node**
- ttglobal **tg**

### 4.636.1 Detailed Description

Definition at line 148 of file Component\_ProgrammableShaders.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_ProgrammableShaders.c

## 4.637 MyVertex Struct Reference

### Data Fields

- struct **SFVec3f** **vert**
- struct **SFVec3f** **norm**
- struct **SFVec2f** **tc**
- struct **SFVec3f** **flat\_norm**
- struct **SFColorRGBA** **col**

### 4.637.1 Detailed Description

Definition at line 54 of file Component\_Geometry3D.c.

The documentation for this struct was generated from the following files:

- src/lib/scenegraph/Component\_Geometry3D.c
- src/lib/x3d\_parser/Bindable.c

## 4.638 name\_num Struct Reference

### Data Fields

- char \* **facename**
- char \* **family**
- char \* **style**
- char \* **style2**
- int **num**
- int **bold**
- int **italic**
- int **ifamily**

### 4.638.1 Detailed Description

Definition at line 638 of file Component\_Text.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_Text.c

## 4.639 NamedLocation Struct Reference

### Data Fields

- unsigned short **stationName**  
*station name enumeration*
- unsigned short **stationNumber**  
*station number*

### 4.639.1 Detailed Description

Definition at line 413 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.640 navmode Struct Reference

### Data Fields

- char \* **key**
- int **type**

### 4.640.1 Detailed Description

Definition at line 506 of file Viewer.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Viewer.c

## 4.641 vrml.external.Node Class Reference

### Public Member Functions

- String **getType** ()
- **EventIn** **getEventIn** (String name) throws InvalidEventInException
- **EventOut** **getEventOut** (String name) throws InvalidEventOutException

### Data Fields

- int **EventType** = FieldTypes.UnknownType
- String **outNode**
- String **inNode**
- String **command**
- String **RLreturn**
- int **nodeptr** = 0
- int **offset** = 0
- int **datasize** = 0
- String **datatype**
- int **ScriptType** = 0

### 4.641.1 Detailed Description

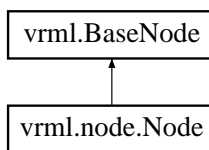
Definition at line 11 of file Node.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/Node.java

## 4.642 vrml.node.Node Class Reference

Inheritance diagram for vrml.node.Node:



### Public Member Functions

- **Node** (String id)
- final **Field** **getEventIn** (String eventInName)
- final **ConstField** **getEventOut** (String eventOutName)
- final **Field** **getExposedField** (String exposedFieldName)

### 4.642.1 Detailed Description

Definition at line 12 of file Node.java.

The documentation for this class was generated from the following file:

- src/java/vrml/node/Node.java

## 4.643 nodedistance Struct Reference

### Data Fields

- struct **X3D\_Node** \* **node**
- float **dist**

### 4.643.1 Detailed Description

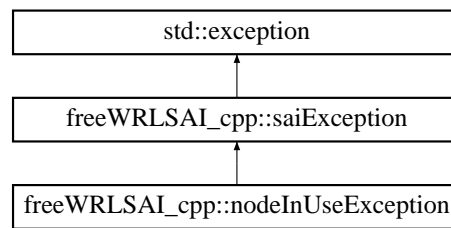
Definition at line 55 of file Component\_Picking.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_Picking.c

## 4.644 freeWRLSAI\_cpp::nodeInUseException Class Reference

Inheritance diagram for freeWRLSAI\_cpp::nodeInUseException:



### Public Member Functions

- virtual const char \* **what** ()

### Additional Inherited Members

#### 4.644.1 Detailed Description

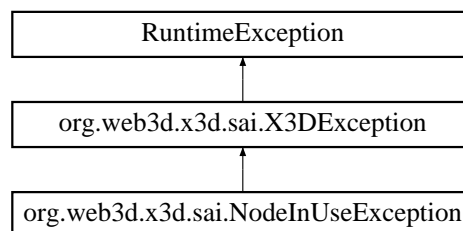
Definition at line 206 of file SAexception.h.

The documentation for this class was generated from the following file:

- src/SAI\_Cpp/SAexception.h

## 4.645 org.web3d.x3d.sai.NodeInUseException Class Reference

Inheritance diagram for org.web3d.x3d.sai.NodeInUseException:



### Public Member Functions

- **NodeInUseException** (String msg)

#### 4.645.1 Detailed Description

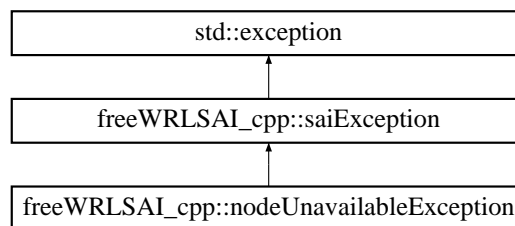
Definition at line 3 of file NodeInUseException.java.

The documentation for this class was generated from the following file:

- src/java/org/web3d/x3d/sai/NodeInUseException.java

### 4.646 freeWRLSAI\_cpp::nodeUnavailableException Class Reference

Inheritance diagram for freeWRLSAI\_cpp::nodeUnavailableException:



#### Public Member Functions

- virtual const char \* **what** ()

#### Additional Inherited Members

#### 4.646.1 Detailed Description

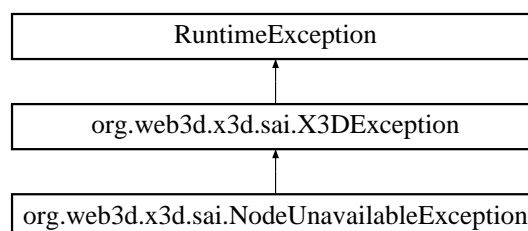
Definition at line 195 of file SAlexception.h.

The documentation for this class was generated from the following file:

- src/SAI\_Cpp/SAlexception.h

### 4.647 org.web3d.x3d.sai.NodeUnavailableException Class Reference

Inheritance diagram for org.web3d.x3d.sai.NodeUnavailableException:





## Public Member Functions

- **NodeUnavailableException** (String msg)

### 4.647.1 Detailed Description

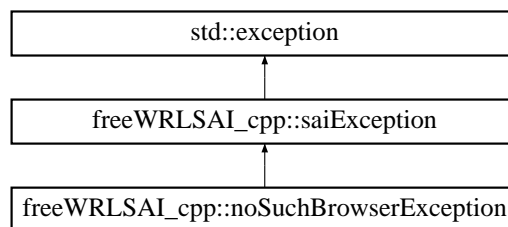
Definition at line 3 of file NodeUnavailableException.java.

The documentation for this class was generated from the following file:

- src/java/org/web3d/x3d/sai/NodeUnavailableException.java

## 4.648 freeWRLSAI\_cpp::noSuchBrowserException Class Reference

Inheritance diagram for freeWRLSAI\_cpp::noSuchBrowserException:



## Public Member Functions

- virtual const char \* **what** ()

## Additional Inherited Members

### 4.648.1 Detailed Description

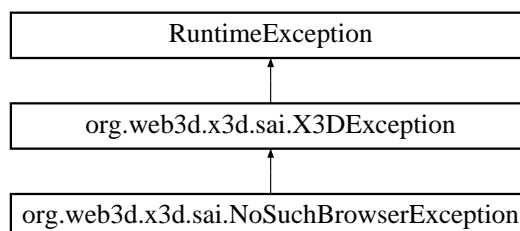
Definition at line 73 of file SAlexception.h.

The documentation for this class was generated from the following file:

- src/SAI\_Cpp/SAlexception.h

## 4.649 org.web3d.x3d.sai.NoSuchBrowserException Class Reference

Inheritance diagram for org.web3d.x3d.sai.NoSuchBrowserException:



## Public Member Functions

- **NoSuchBrowserException** (String msg)

### 4.649.1 Detailed Description

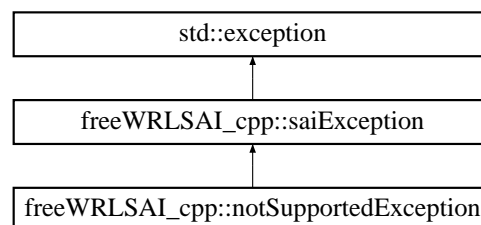
Definition at line 3 of file NoSuchBrowserException.java.

The documentation for this class was generated from the following file:

- src/java/org/web3d/x3d/sai/NoSuchBrowserException.java

## 4.650 freeWRLSAI\_cpp::notSupportedException Class Reference

Inheritance diagram for freeWRLSAI\_cpp::notSupportedException:



## Public Member Functions

- virtual const char \* **what** ()

## Additional Inherited Members

### 4.650.1 Detailed Description

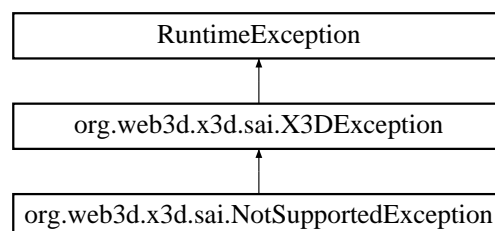
Definition at line 229 of file SAException.h.

The documentation for this class was generated from the following file:

- src/SAI\_Cpp/SAException.h

## 4.651 org.web3d.x3d.sai.NotSupportedException Class Reference

Inheritance diagram for org.web3d.x3d.sai.NotSupportedException:



## Public Member Functions

- **NotSupportedException** (String msg)

### 4.651.1 Detailed Description

Definition at line 3 of file NotSupportedException.java.

The documentation for this class was generated from the following file:

- src/java/org/web3d/x3d/sai/NotSupportedException.java

## 4.652 NPClass Struct Reference

### Data Fields

- uint32\_t **structVersion**
- NPAllocateFunctionPtr **allocate**
- NPDeallocateFunctionPtr **deallocate**
- NPInvalidateFunctionPtr **invalidate**
- NPHasMethodFunctionPtr **hasMethod**
- NPInvokeFunctionPtr **invoke**
- NPInvokeDefaultFunctionPtr **invokeDefault**
- NPHasPropertyFunctionPtr **hasProperty**
- NPGetPropertyFunctionPtr **getProperty**
- NPSetPropertyFunctionPtr **setProperty**
- NPRemovePropertyFunctionPtr **removeProperty**
- NPEnumerationFunctionPtr **enumerate**
- NPConstructFunctionPtr **construct**

### 4.652.1 Detailed Description

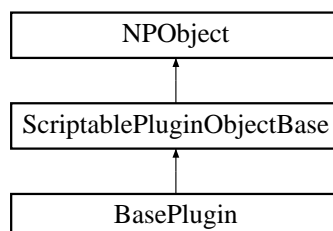
Definition at line 327 of file npruntime.h.

The documentation for this struct was generated from the following file:

- src/plugin\_win32/include/npruntime.h

## 4.653 NPObject Struct Reference

Inheritance diagram for NPObject:



## Data Fields

- **NPCClass \* \_class**
- **uint32\_t referenceCount**

### 4.653.1 Detailed Description

Definition at line 355 of file npruntime.h.

The documentation for this struct was generated from the following file:

- src/plugin\_win32/include/npruntime.h

## 4.654 nsByteRange Struct Reference

### Data Fields

- **PRInt32 offset**
- **PRUint32 length**
- **struct nsByteRange \* next**

### 4.654.1 Detailed Description

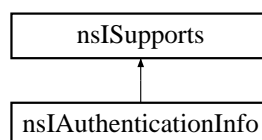
Definition at line 125 of file nsplugindefs.h.

The documentation for this struct was generated from the following file:

- src/plugin\_win32/include/nsplugindefs.h

## 4.655 nsIAuthenticationInfo Interface Reference

Inheritance diagram for nsIAuthenticationInfo:



### Data Fields

- readonly attribute const\_char\_ptr **username**  
*AuthenticationInfo (username/password pair)*
- readonly attribute const\_char\_ptr **password**

### 4.655.1 Detailed Description

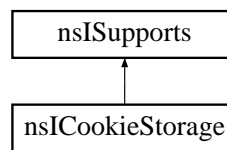
Definition at line 56 of file nsIJVMAuthTools.idl.

The documentation for this interface was generated from the following file:

- src/plugin\_win32/include/nsIJVMAuthTools.idl

## 4.656 nsICookieStorage Interface Reference

Inheritance diagram for nsICookieStorage:



### Public Member Functions

- void **getCookie** (in string aCookieURL, in voidPtr aCookieBuffer, in PRUint32Ref aCookieSize)  
*Retrieves a cookie from the browser's persistent cookie store.*
- void **setCookie** (in string aCookieURL, in constVoidPtr aCookieBuffer, in unsigned long aCookieSize)  
*Stores a cookie in the browser's persistent cookie store.*

### 4.656.1 Detailed Description

Definition at line 51 of file nsICookieStorage.idl.

### 4.656.2 Member Function Documentation

#### 4.656.2.1 getCookie()

```
void nsICookieStorage::getCookie (
 in string aCookieURL,
 in voidPtr aCookieBuffer,
 in PRUint32Ref aCookieSize)
```

Retrieves a cookie from the browser's persistent cookie store.

#### Parameters

|                      |                                                                 |
|----------------------|-----------------------------------------------------------------|
| <i>aCookieURL</i>    | - URL string to look up cookie with.                            |
| <i>aCookieBuffer</i> | - buffer large enough to accomodate cookie data.                |
| <i>aCookieSize</i>   | - on input, size of the cookie buffer, on output cookie's size. |

#### 4.656.2.2 setCookie()

```
void nsICookieStorage::setCookie (
 in string aCookieURL,
 in constVoidPtr aCookieBuffer,
 in unsigned long aCookieSize)
```

Stores a cookie in the browser's persistent cookie store.

##### Parameters

|                      |                                  |
|----------------------|----------------------------------|
| <i>aCookieURL</i>    | - URL string store cookie with.  |
| <i>aCookieBuffer</i> | - buffer containing cookie data. |
| <i>aCookieSize</i>   | - specifies size of cookie data. |

The documentation for this interface was generated from the following file:

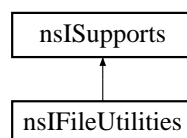
- src/plugin\_win32/include/nsICookieStorage.idl

## 4.657 nsIFileUtilities Interface Reference

The **nsIFileUtilities** (p. 426) interface provides access to random file operations.

```
import "nsIFileUtilities.idl";
```

Inheritance diagram for nsIFileUtilities:



### Public Member Functions

- void **getProgramPath** (out constCharPtr aProgramPath)  
*Returns the name of the browser executable program.*
- void **getTempDirPath** (out constCharPtr aTempDirPath)  
*Returns the name of the temporary directory.*
- void **newTempFileName** (in string aPrefix, in unsigned long aLength, in charPtr aBuffer)  
*Returns a unique temporary file name.*

#### 4.657.1 Detailed Description

The **nsIFileUtilities** (p. 426) interface provides access to random file operations.

To obtain: QueryInterface on **nsIPluginManager** (p. 462).

Definition at line 50 of file nsIFileUtilities.idl.

## 4.657.2 Member Function Documentation

### 4.657.2.1 getProgramPath()

```
void nsFileUtilities::getProgramPath (
 out constCharPtr aProgramPath)
```

Returns the name of the browser executable program.

#### Parameters

|                     |                                    |
|---------------------|------------------------------------|
| <i>aProgramPath</i> | - the returned path to the program |
|---------------------|------------------------------------|

#### Returns

- NS\_OK if this operation was successful

### 4.657.2.2 getTempDirPath()

```
void nsFileUtilities::getTempDirPath (
 out constCharPtr aTempDirPath)
```

Returns the name of the temporary directory.

#### Parameters

|                     |                                           |
|---------------------|-------------------------------------------|
| <i>aTempDirPath</i> | - the returned path to the temp directory |
|---------------------|-------------------------------------------|

#### Returns

- NS\_OK if this operation was successful

### 4.657.2.3 newTempFileName()

```
void nsFileUtilities::newTempFileName (
 in string aPrefix,
 in unsigned long aLength,
 in charPtr aBuffer)
```

Returns a unique temporary file name.

## Parameters

|                |                                                          |
|----------------|----------------------------------------------------------|
| <i>aPrefix</i> | - a string to prefix to the temporary file name          |
| <i>aLength</i> | - the length of the resulting buffer to receive the data |
| <i>aBuffer</i> | - the returned temp file name                            |

## Returns

- NS\_OK if this operation was successful

The documentation for this interface was generated from the following file:

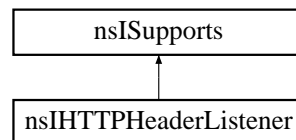
- src/plugin\_win32/include/nsIFileUtilities.idl

## 4.658 nsIHTTPHeaderListener Interface Reference

The **nsIHTTPHeaderListener** (p. 428) interface allows plugin authors to access HTTP Response headers after issuing an **nsIPluginHost** (p. 434)::{GetURL,PostURL}() call.

```
import "nsIHTTPHeaderListener.idl";
```

Inheritance diagram for nsIHTTPHeaderListener:



### Public Member Functions

- void **newResponseHeader** (in string headerName, in string headerValue)  
*Called for each HTTP Response header.*
- void **statusLine** (in string line)  
*Called once for the HTTP Response status line.*

### 4.658.1 Detailed Description

The **nsIHTTPHeaderListener** (p. 428) interface allows plugin authors to access HTTP Response headers after issuing an **nsIPluginHost** (p. 434)::{GetURL,PostURL}() call.

IMPORTANT NOTE: The plugin author must provide an instance to {GetURL,PostURL}() that implements both **nsIPluginStreamListener** (p. 475) and **nsIHTTPHeaderListener** (p. 428). This instance is passed in through {GetURL,PostURL}()'s streamListener parameter. The browser will then QI thi streamListener to see if it implements **nsIHTTPHeaderListener** (p. 428).

Definition at line 55 of file nsIHTTPHeaderListener.idl.



## 4.658.2 Member Function Documentation

### 4.658.2.1 newResponseHeader()

```
void nsIHTTPHeaderListener::newResponseHeader (
 in string headerName,
 in string headerValue)
```

Called for each HTTP Response header.

NOTE: You must copy the values of the params.

### 4.658.2.2 statusLine()

```
void nsIHTTPHeaderListener::statusLine (
 in string line)
```

Called once for the HTTP Response status line.

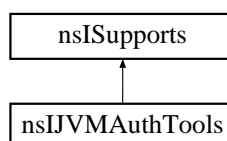
Value does NOT include a terminating newline. NOTE: You must copy this value.

The documentation for this interface was generated from the following file:

- src/plugin\_win32/include/nsIHTTPHeaderListener.idl

## 4.659 nsIJVMAuthTools Interface Reference

Inheritance diagram for nsIJVMAuthTools:



## Public Member Functions

- **nsIAuthenticationInfo GetAuthenticationInfo** (in string protocol, in string host, in PRInt32 port, in string scheme, in string realm)  
*Export AuthenticationInfo interface to JPI.*
- void **SetAuthenticationInfo** (in string protocol, in string host, in PRInt32 port, in string scheme, in string realm, in string username, in string password)  
*Import username/password pair from JPI.*

### 4.659.1 Detailed Description

Definition at line 67 of file nsIJVMAuthTools.idl.

### 4.659.2 Member Function Documentation

#### 4.659.2.1 GetAuthenticationInfo()

```
nsIAuthenticationInfo nsIJVMAuthTools::GetAuthenticationInfo (
 in string protocol,
 in string host,
 in PRInt32 port,
 in string scheme,
 in string realm)
```

Export AuthenticationInfo interface to JPI.

##### Parameters

|                                       |                                              |
|---------------------------------------|----------------------------------------------|
| <i>protocol</i>                       | the protocol that support (http/https)       |
| <i>host</i>                           | host name                                    |
| <i>port</i>                           | port number                                  |
| <i>scheme</i>                         | scheme                                       |
| <i>realm</i>                          | realm                                        |
| <b>nsIAuthenticationInfo</b> (p. 424) | the AuthenticationInfo interface that export |

##### Returns

NS\_OK if success, other if fail

#### 4.659.2.2 SetAuthenticationInfo()

```
void nsIJVMAuthTools::SetAuthenticationInfo (
 in string protocol,
 in string host,
 in PRInt32 port,
 in string scheme,
 in string realm,
 in string username,
 in string password)
```

Import username/password pair from JPI.

## Parameters

|                 |                                        |
|-----------------|----------------------------------------|
| <i>protocol</i> | the protocol that support (http/https) |
| <i>host</i>     | host name                              |
| <i>port</i>     | port number                            |
| <i>scheme</i>   | scheme                                 |
| <i>realm</i>    | realm                                  |
| <i>username</i> | user name                              |
| <i>password</i> | password                               |

## Returns

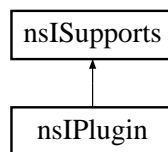
NS\_OK if success, other if fail

The documentation for this interface was generated from the following file:

- src/plugin\_win32/include/nsIJVMAuthTools.idl

## 4.660 nsIPlugin Interface Reference

Inheritance diagram for nsIPlugin:



### Public Member Functions

- void **createPluginInstance** (out **nsIPluginInstance** aResult)  
*Creates a new plugin instance, based on a MIME type.*
- void **initialize** ()  
*Initializes the plugin and will be called before any new instances are created.*
- void **shutdown** ()  
*Called when the browser is done with the plugin factory, or when the plugin is disabled by the user.*
- void **getMIMEDescription** (out constCharPtr aMIMEDescription)  
*Returns the MIME description for the plugin.*
- void **getValue** (in nsPluginVariable aVariable, in voidPtr aValue)  
*Returns the value of a variable associated with the plugin.*

### 4.660.1 Detailed Description

Definition at line 51 of file nsIPlugin.idl.

## 4.660.2 Member Function Documentation

### 4.660.2.1 createPluginInstance()

```
void nsIPlugin::createPluginInstance (
 out nsIPluginInstance aResult)
```

Creates a new plugin instance, based on a MIME type.

This allows different implemenations to be created depending on the specified MIME type.

### 4.660.2.2 getMIMEDescription()

```
void nsIPlugin::getMIMEDescription (
 out constCharPtr aMIMEDescription)
```

Returns the MIME description for the plugin.

The MIME description is a colon-separated string containg the plugin MIME type, plugin data file extension, and plugin name, e.g.:

"application/x-simple-plugin:smp:Simple Sample Plug-in"

(Corresponds to NPP\_GetMIMEDescription.)

#### Parameters

|                         |                                  |
|-------------------------|----------------------------------|
| <i>aMIMEDescription</i> | - the resulting MIME description |
|-------------------------|----------------------------------|

#### Returns

- NS\_OK if this operation was successful

### 4.660.2.3 getValue()

```
void nsIPlugin::getValue (
 in nsPluginVariable aVariable,
 in voidPtr aValue)
```

Returns the value of a variable associated with the plugin.

(Corresponds to NPP\_GetValue.)

#### Parameters

|                  |                                                   |
|------------------|---------------------------------------------------|
| <i>aVariable</i> | - the plugin variable to get                      |
| <i>aValue</i>    | the address of where to store the resulting value |

**Returns**

- NS\_OK if this operation was successful

**4.660.2.4 initialize()**

```
void nsIPlugin::initialize ()
```

Initializes the plugin and will be called before any new instances are created.

It is passed browserInterfaces on which QueryInterface may be used to obtain an **nsIPluginManager** (p. 462), and other interfaces.

**Parameters**

|                          |                                                                               |
|--------------------------|-------------------------------------------------------------------------------|
| <i>browserInterfaces</i> | - an object that allows access to other browser interfaces via QueryInterface |
|--------------------------|-------------------------------------------------------------------------------|

**Returns**

- NS\_OK if this operation was successful

**4.660.2.5 shutdown()**

```
void nsIPlugin::shutdown ()
```

Called when the browser is done with the plugin factory, or when the plugin is disabled by the user.

(Corresponds to NPP\_Shutdown.)

**Returns**

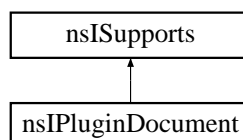
- NS\_OK if this operation was successful

The documentation for this interface was generated from the following file:

- src/plugin\_win32/include/nsIPlugin.idl

**4.661 nsIPluginDocument Interface Reference**

Inheritance diagram for nsIPluginDocument:



## Public Member Functions

- void **setStreamListener** (in nsIStreamListener aStreamListener)  
*Sets the stream listener for this plugin document.*
- void **print** ()  
*Causes the plugin to print in full-page mode.*

## Data Fields

- readonly attribute boolean **willHandleInstantiation**  
*Check whether the document is planning to handle plug-in instantiation itself.*

### 4.661.1 Detailed Description

Definition at line 42 of file nsIPluginDocument.idl.

### 4.661.2 Field Documentation

#### 4.661.2.1 willHandleInstantiation

readonly attribute boolean nsIPluginDocument::willHandleInstantiation

Check whether the document is planning to handle plug-in instantiation itself.

If not, then the plugin content node should do it.

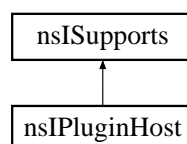
Definition at line 60 of file nsIPluginDocument.idl.

The documentation for this interface was generated from the following file:

- src/plugin\_win32/include/nsIPluginDocument.idl

## 4.662 nsIPluginHost Interface Reference

Inheritance diagram for nsIPluginHost:



## Public Member Functions

- void **init** ()
- void **destroy** ()
- void **loadPlugins** ()
- void **reloadPlugins** (in boolean reloadPages)
 

*Causes the plugins directory to be searched again for new plugin libraries.*
- **nsIPlugin** **getPlugin** (in string aMimeType)
- void **instantiateEmbeddedPlugin** (in string aMimeType, in nsIURI aURL, in **nsIPluginInstanceOwner** aOwner)
 

*Owner*
- void **instantiateFullPagePlugin** (in string aMimeType, in nsIURI aURL, in nsIStreamListenerRef aStreamListener, in **nsIPluginInstanceOwner** aOwner)
 

*Listener*
- nsIStreamListener **instantiatePluginForChannel** (in nsIChannel aChannel, in **nsIPluginInstanceOwner** aOwner)
 

*Instantiate an embedded plugin for an existing channel.*
- void **setUpPluginInstance** (in string aMimeType, in nsIURI aURL, in **nsIPluginInstanceOwner** aOwner)
- void **isPluginEnabledForType** (in string aMimeType)
- void **isPluginEnabledForExtension** (in string aExtension, in constCharStarRef aMimeType)
- void **getPlugins** (in unsigned long aPluginCount, out nsIDOMPlugin aPluginArray)
- void **getPluginTags** (out unsigned long aPluginCount, [retval, array, size\_is(aPluginCount)] out **nsIPluginTag** aResults)
- void **stopPluginInstance** (in **nsIPluginInstance** aInstance)
- void **handleBadPlugin** (in PRLibraryPtr aLibrary, in **nsIPluginInstance** instance)
- NS\_IMETHOD **GetURL** (nsISupports \*pluginInst, const char \*url, const char \*target=NULL, **nsIPluginStreamListener** \*streamListener=NULL, const char \*altHost=NULL, const char \*referrer=NULL, PRBool forceJSEnabled=PR\_FALSE)=0
 

*Fetches a URL.*
- NS\_IMETHOD **PostURL** (nsISupports \*pluginInst, const char \*url, PRUint32 postDataLen, const char \*postData, PRBool isFile=PR\_FALSE, const char \*target=NULL, **nsIPluginStreamListener** \*streamListener=NULL, const char \*altHost=NULL, const char \*referrer=NULL, PRBool forceJSEnabled=PR\_FALSE, PRUint32 postHeadersLength=0, const char \*postHeaders=NULL)=0
 

*Posts to a URL with post data and/or post headers.*
- void **findProxyForURL** (in string aURL, out string aResult)
 

*Returns the proxy info for a given URL.*
- void **UserAgent** (in nativeChar resultingAgentString)
- void **setIsScriptableInstance** (in **nsIPluginInstance** aInstance, in boolean aScriptable)
 

*To notify the plugin manager that the plugin created a script object.*
- void **parsePostBufferToFixHeaders** (in string aInPostData, in unsigned long aInPostDataLen, out string aOutPostData, out unsigned long aOutPostDataLen)
 

*This method parses post buffer to find out case insensitive "Content-length" string and CR or LF some where after that, then it assumes there is http headers in the input buffer and continue to search for end of headers (CRLF or LFLF).*
- void **createTmpFileToPost** (in string aPostDataURL, out string aTmpFileName)
 

*To create tmp file with Content len header in, it will use by http POST.*
- void **newPluginNativeWindow** (out nsPluginNativeWindowPtr aPluginNativeWindow)
 

*Creates a new plugin native window object.*
- void **deletePluginNativeWindow** (in nsPluginNativeWindowPtr aPluginNativeWindow)
 

*Deletes plugin native window object created by NewPluginNativeWindow.*
- void **instantiateDummyJavaPlugin** (in **nsIPluginInstanceOwner** aOwner)
 

*Instantiate a "dummy" java plugin if a java plugin that supports NPRuntime is installed.*
- void **getPluginName** (in **nsIPluginInstance** aInstance, [shared] out string aPluginName)
 

*Get the plugin name for the plugin instance.*
- **nsIPluginTag** **getPluginTagForInstance** (in **nsIPluginInstance** aInstance)
 

*Get the plugin tag associated with a given plugin instance.*

## Data Fields

- readonly attribute unsigned long **pluginCount**

### 4.662.1 Detailed Description

Definition at line 69 of file nsIPluginHost.idl.

### 4.662.2 Member Function Documentation

#### 4.662.2.1 findProxyForURL()

```
void nsIPluginHost::findProxyForURL (
 in string aURL,
 out string aResult)
```

Returns the proxy info for a given URL.

The caller is required to free the resulting memory with nsIMalloc::Free. The result will be in the following format

i) "DIRECT" – no proxy ii) "PROXY xxx.xxx.xxx.xxx" – use proxy iii) "SOCKS xxx.xxx.xxx.xxx" – use SOCKS iv) Mixed. e.g. "PROXY 111.111.111.111;PROXY 112.112.112.112", "PROXY 111.111.111.111;SOCKS 112.112.112.112"....

Which proxy/SOCKS to use is determined by the plugin.

#### 4.662.2.2 getPluginName()

```
void nsIPluginHost::getPluginName (
 in nsIPluginInstance aInstance,
 [shared] out string aPluginName)
```

Get the plugin name for the plugin instance.

##### Parameters

|                    |                                                                                                                                                                                |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>aInstance</i>   | the plugin instance object                                                                                                                                                     |
| <i>aPluginName</i> | returns a pointer to a shared readonly string value, it's only valid for the lifetime of the plugin instance - you must copy the string value if you need it longer than that. |

#### 4.662.2.3 getPluginTagForInstance()

```
nsIPluginTag nsIPluginHost::getPluginTagForInstance (
 in nsIPluginInstance aInstance)
```



Get the plugin tag associated with a given plugin instance.

#### Parameters

|                  |                            |
|------------------|----------------------------|
| <i>aInstance</i> | the plugin instance object |
|------------------|----------------------------|

#### Returns

plugin tag object

### 4.662.2.4 GetURL()

```
NS_IMETHOD nsIPluginHost::GetURL (
 nsISupports * pluginInst,
 const char * url,
 const char * target = NULL,
 nsIPluginStreamListener * streamListener = NULL,
 const char * altHost = NULL,
 const char * referrer = NULL,
 PRBool forceJSEnabled = PR_FALSE) [pure virtual]
```

Fetches a URL.

(Corresponds to NPN\_GetURL and NPN\_GetURLNotify.)

#### Parameters

|                       |                                                                                                                                                                                            |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>pluginInst</i>     | - the plugin making the request. If NULL, the URL is fetched in the background.                                                                                                            |
| <i>url</i>            | - the URL to fetch                                                                                                                                                                         |
| <i>target</i>         | - the target window into which to load the URL, or NULL if the data should be returned to the plugin via <i>streamListener</i> .                                                           |
| <i>streamListener</i> | - a stream listener to be used to return data to the plugin. May be NULL if <i>target</i> is not NULL.                                                                                     |
| <i>altHost</i>        | - an IP-address string that will be used instead of the host specified in the URL. This is used to prevent DNS-spoofing attacks. Can be defaulted to NULL meaning use the host in the URL. |
| <i>referrer</i>       | - the referring URL (may be NULL)                                                                                                                                                          |
| <i>forceJSEnabled</i> | - forces JavaScript to be enabled for 'javascript:' URLs, even if the user currently has JavaScript disabled (usually specify PR_FALSE)                                                    |

#### Returns

- NS\_OK if this operation was successful

### 4.662.2.5 instantiateDummyJavaPlugin()

```
void nsIPluginHost::instantiateDummyJavaPlugin (
 in nsIPluginInstanceOwner aOwner)
```

Instantiate a "dummy" java plugin if a java plugin that supports NPRuntime is installed.

This plugin is used for exposing window.java and window.Packages. If the java plugin supports NPRuntime and instantiation was successful, aOwners instance will be non-null, if not, it will be null.

#### 4.662.2.6 instantiatePluginForChannel()

```
nsIStreamListener nsIPluginHost::instantiatePluginForChannel (
 in nsIChannel aChannel,
 in nsIPluginInstanceOwner aOwner)
```

Instantiate an embedded plugin for an existing channel.

The caller is responsible for opening the channel. It may or may not be already opened when this function is called.

#### 4.662.2.7 parsePostBufferToFixHeaders()

```
void nsIPluginHost::parsePostBufferToFixHeaders (
 in string aInPostData,
 in unsigned long aInPostDataLen,
 out string aOutPostData,
 out unsigned long aOutPostDataLen)
```

This method parses post buffer to find out case insensitive "Content-length" string and CR or LF some where after that, then it assumes there is http headers in the input buffer and continue to search for end of headers (CRLF or LFLF).

It will *always malloc()* output buffer (caller is responsible to free it) if input buffer starts with LF, which comes from 4.x spec <http://developer.netscape.com/docs/manuals/communicator/plugin/pgfn2.htm#1007754> "If no custom headers are required, simply add a blank line ('\n') to the beginning of the file or buffer.", it skips that '

' and considers rest of the input buffer as data. If "Content-length" string and end of headers is found it substitutes single LF with CRLF in the headers, so the end of headers always will be CRLFCRLF (single CR in headers, if any, remain untouched) else it puts "Content-length: "+size\_of\_data+CRLFCRLF at the beginning of the output buffer and memcpy data to the output buffer

On failure outPostData and outPostDataLen will be set in 0.

##### Parameters

|                        |                              |
|------------------------|------------------------------|
| <i>aInPostData</i>     | - the post data              |
| <i>aInPostDataLen</i>  | - the length aInPostData     |
| <i>aOutPostData</i>    | - the buffer                 |
| <i>aOutPostDataLen</i> | - the length of aOutPostData |

#### 4.662.2.8 PostURL()

```
NS_IMETHOD nsIPluginHost::PostURL (
```

```

nsISupports * pluginInst,
const char * url,
PRUint32 postDataLen,
const char * postData,
PRBool isFile = PR_FALSE,
const char * target = NULL,
 nsIPluginStreamListener * streamListener = NULL,
const char * altHost = NULL,
const char * referrer = NULL,
PRBool forceJSEnabled = PR_FALSE,
PRUint32 postHeadersLength = 0,
const char * postHeaders = NULL) [pure virtual]

```

Posts to a URL with post data and/or post headers.

(Corresponds to NPN\_PostURL and NPN\_PostURLNotify.)

#### Parameters

|                          |                                                                                                                                                                                            |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>pluginInst</i>        | - the plugin making the request. If NULL, the URL is fetched in the background.                                                                                                            |
| <i>url</i>               | - the URL to fetch                                                                                                                                                                         |
| <i>postDataLength</i>    | - the length of postData (if non-NULL)                                                                                                                                                     |
| <i>postData</i>          | - the data to POST. NULL specifies that there is not post data                                                                                                                             |
| <i>isFile</i>            | - whether the postData specifies the name of a file to post instead of data. The file will be deleted afterwards.                                                                          |
| <i>target</i>            | - the target window into which to load the URL, or NULL if the data should be returned to the plugin via streamListener.                                                                   |
| <i>streamListener</i>    | - a stream listener to be used to return data to the plugin. May be NULL if target is not NULL.                                                                                            |
| <i>altHost</i>           | - an IP-address string that will be used instead of the host specified in the URL. This is used to prevent DNS-spoofing attacks. Can be defaulted to NULL meaning use the host in the URL. |
| <i>referrer</i>          | - the referring URL (may be NULL)                                                                                                                                                          |
| <i>forceJSEnabled</i>    | - forces JavaScript to be enabled for 'javascript:' URLs, even if the user currently has JavaScript disabled (usually specify PR_FALSE)                                                    |
| <i>postHeadersLength</i> | - the length of postHeaders (if non-NULL)                                                                                                                                                  |
| <i>postHeaders</i>       | - the headers to POST. Must be in the form of "HeaderName: HeaderValue\r\n". Each header, including the last, must be followed by "\r\n". NULL specifies that there are no post headers    |

#### Returns

- NS\_OK if this operation was successful

#### 4.662.2.9 reloadPlugins()

```

void nsIPluginHost::reloadPlugins (
 in boolean reloadPages)

```

Causes the plugins directory to be searched again for new plugin libraries.

## Parameters

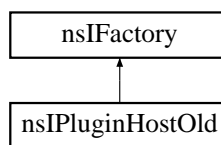
|                          |                                                                     |
|--------------------------|---------------------------------------------------------------------|
| <code>reloadPages</code> | - indicates whether currently visible pages should also be reloaded |
|--------------------------|---------------------------------------------------------------------|

The documentation for this interface was generated from the following file:

- `src/plugin_win32/include/nsIPluginHost.idl`

## 4.663 nsIPluginHostOld Interface Reference

Inheritance diagram for nsIPluginHostOld:



### Public Member Functions

- void **init** ()
- void **destroy** ()
- void **loadPlugins** ()
- **nsIPlugin** **getPluginFactory** (in string aMimeType)
- void **instantiateEmbeddedPlugin** (in string aMimeType, in nsIURI aURL, in **nsIPluginInstanceOwner** aOwner)
- void **instantiateFullPagePlugin** (in string aMimeType, in nsIURI aURL, in nsIStreamListenerRef aStreamListener, in **nsIPluginInstanceOwner** aOwner)
- nsIStreamListener **instantiatePluginForChannel** (in nsIChannel aChannel, in **nsIPluginInstanceOwner** aOwner)  
*Instantiate an embedded plugin for an existing channel.*
- void **setUpPluginInstance** (in string aMimeType, in nsIURI aURL, in **nsIPluginInstanceOwner** aOwner)
- void **isPluginEnabledForType** (in string aMimeType)
- void **isPluginEnabledForExtension** (in string aExtension, in constCharStarRef aMimeType)
- void **getPlugins** (in unsigned long aPluginCount, out nsIDOMPlugin aPluginArray)
- void **getPluginTags** (out unsigned long aPluginCount, [retval, array, size\_is(aPluginCount)] out **nsIPluginTag** aResults)
- void **stopPluginInstance** (in **nsIPluginInstance** aInstance)
- void **handleBadPlugin** (in PRLibraryPtr aLibrary, in **nsIPluginInstance** instance)

### Data Fields

- readonly attribute unsigned long **pluginCount**

#### 4.663.1 Detailed Description

Definition at line 64 of file `nsIPluginHostOld.idl`.

## 4.663.2 Member Function Documentation

### 4.663.2.1 instantiatePluginForChannel()

```
nsIStreamListener nsIPluginHostOld::instantiatePluginForChannel (
 in nsIChannel aChannel,
 in nsIPluginInstanceOwner aOwner)
```

Instantiate an embedded plugin for an existing channel.

The caller is responsible for opening the channel. It may or may not be already opened when this function is called.

The documentation for this interface was generated from the following file:

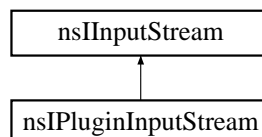
- src/plugin\_win32/include/nsIPluginHostOld.idl

## 4.664 nsIPluginInputStream Interface Reference

The **nsIPluginInputStream** (p. 441) interface ...

```
import "nsIPluginInputStream.idl";
```

Inheritance diagram for nsIPluginInputStream:



### Public Member Functions

- void **getLastModified** (out unsigned long aResult)  
*Corresponds to NPStream's lastmodified field.*
- void **requestRead** (out **nsByteRange** aRangeList)

### 4.664.1 Detailed Description

The **nsIPluginInputStream** (p. 441) interface ...

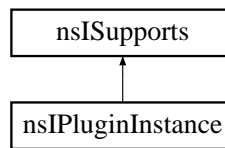
Definition at line 45 of file nsIPluginInputStream.idl.

The documentation for this interface was generated from the following file:

- src/plugin\_win32/include/nsIPluginInputStream.idl

## 4.665 nsIPluginInstance Interface Reference

Inheritance diagram for nsIPluginInstance:



### Public Member Functions

- void **initialize** (in **nsIPluginInstanceOwner** aOwner, in string aMIMETYPE)  
*Initializes a newly created plugin instance.*
- void **start** ()  
*Called to instruct the plugin instance to start.*
- void **stop** ()  
*Called to instruct the plugin instance to stop, thereby suspending its state.*
- void **setWindow** (in nsPluginWindowPtr aWindow)  
*Called when the window containing the plugin instance changes.*
- void **newStreamToPlugin** (out **nsIPluginStreamListener** aListener)  
*Called to tell the plugin that the initial src/data stream is ready.*
- void **newStreamFromPlugin** (in string aType, in string aTarget, out nsIOutputStream aResult)  
*This operation is called by the plugin instance when it wishes to send a stream of data to the browser.*
- void **print** (in nsPluginPrintPtr aPlatformPrint)  
*Called to instruct the plugin instance to print itself to a printer.*
- void **getValue** (in nsPluginInstanceVariable aVariable, in voidPtr aValue)  
*Returns the value of a variable associated with the plugin instance.*
- void **handleEvent** (in nsPluginEventPtr aEvent, out boolean aHandled)  
*Handles an event.*
- void **invalidateRect** (in nsPluginRectPtr aRect)  
*Corresponds to NPN\_InvalidateRect.*
- void **invalidateRegion** (in nsPluginRegion aRegion)  
*Corresponds to NPN\_InvalidateRegion.*
- void **forceRedraw** ()  
*Corresponds to NPN\_ForceRedraw.*
- void **getMIMETYPE** ([const, shared] out string aValue)  
*Returns the MIME type of the plugin instance.*
- void **showStatus** (in string aMessage)  
*This operation causes status information to be displayed on the window associated with the plugin instance.*
- void **invalidateOwner** ()  
*Drop our reference to our owner.*
- JSObjectPtr **GetJSObject** (in JSContextPtr cx)
- void **pushPopupsEnabledState** (in boolean aEnabled)
- void **popPopupsEnabledState** ()
- void **defineJavaProperties** ()

## Data Fields

- readonly attribute JSContextPtr **JSContext**  
*Get the JavaScript context to this plugin instance.*
- attribute **nsIPluginInstanceOwner** owner
- readonly attribute AString **formValue**
- readonly attribute PRUint16 **pluginAPIVersion**

### 4.665.1 Detailed Description

Definition at line 57 of file nsIPluginInstance.idl.

### 4.665.2 Member Function Documentation

#### 4.665.2.1 getMimeType()

```
void nsIPluginInstance::getMimeType (
 [const, shared] out string aValue)
```

Returns the MIME type of the plugin instance.

(Corresponds to NPP\_New's MimeType argument.)

##### Parameters

|                  |                       |
|------------------|-----------------------|
| <i>aMimeType</i> | - resulting MIME type |
|------------------|-----------------------|

##### Returns

- NS\_OK if this operation was successful

#### 4.665.2.2 getValue()

```
void nsIPluginInstance::getValue (
 in nsPluginInstanceVariable aVariable,
 in voidPtr aValue)
```

Returns the value of a variable associated with the plugin instance.

##### Parameters

|                  |                                                     |
|------------------|-----------------------------------------------------|
| <i>aVariable</i> | - the plugin instance variable to get               |
| <i>aValue</i>    | - the address of where to store the resulting value |

**Returns**

- NS\_OK if this operation was successful

**4.665.2.3 handleEvent()**

```
void nsIPluginInstance::handleEvent (
 in nsPluginEventPtr aEvent,
 out boolean aHandled)
```

Handles an event.

Note that for Unix and Mac the **nsPluginEvent** (p. 490) structure is different from the old NPEvent structure – it's no longer the native event record, but is instead a struct. This was done for future extensibility, and so that the Mac could receive the window argument too. For Windows and OS2, it's always been a struct, so there's no change for them.

(Corresponds to NPP\_HandleEvent.)

**Parameters**

|                 |                                       |
|-----------------|---------------------------------------|
| <i>aEvent</i>   | - the event to be handled             |
| <i>aHandled</i> | - set to PR_TRUE if event was handled |

**Returns**

- NS\_OK if this operation was successful

**4.665.2.4 initialize()**

```
void nsIPluginInstance::initialize (
 in nsIPluginInstanceOwner aOwner,
 in string aMIMEType)
```

Initializes a newly created plugin instance.

**Parameters**

|               |                                  |
|---------------|----------------------------------|
| <i>aOwner</i> | - the plugin instance owner      |
| <i>aMime</i>  | - the mime type for the instance |

**Returns**

- NS\_OK if this operation was successful



#### 4.665.2.5 newStreamFromPlugin()

```
void nsIPluginInstance::newStreamFromPlugin (
 in string aType,
 in string aTarget,
 out nsIOutputStream aResult)
```

This operation is called by the plugin instance when it wishes to send a stream of data to the browser.

It constructs a new output stream to which the plugin may send the data. When complete, the Close and Release methods should be called on the output stream.

(Corresponds to NPN\_NewStream.)

##### Parameters

|                |                                              |
|----------------|----------------------------------------------|
| <i>aType</i>   | - MIME type of the stream to create          |
| <i>aTarget</i> | - the target window name to receive the data |
| <i>aResult</i> | - the resulting output stream                |

##### Returns

- NS\_OK if this operation was successful

#### 4.665.2.6 newStreamToPlugin()

```
void nsIPluginInstance::newStreamToPlugin (
 out nsIPluginStreamListener aListener)
```

Called to tell the plugin that the initial src/data stream is ready.

Expects the plugin to return a **nsIPluginStreamListener** (p. 475).

(Corresponds to NPP\_NewStream.)

##### Parameters

|                  |                                                             |
|------------------|-------------------------------------------------------------|
| <i>aListener</i> | - listener the browser will use to give the plugin the data |
|------------------|-------------------------------------------------------------|

##### Returns

- NS\_OK if this operation was successful

#### 4.665.2.7 print()

```
void nsIPluginInstance::print (
 in nsPluginPrintPtr aPlatformPrint)
```

Called to instruct the plugin instance to print itself to a printer.

(Corresponds to NPP\_Print.)

#### Parameters

|                       |                                          |
|-----------------------|------------------------------------------|
| <i>aPlatformPrint</i> | - platform-specific printing information |
|-----------------------|------------------------------------------|

#### Returns

- NS\_OK if this operation was successful

### 4.665.2.8 setWindow()

```
void nsIPluginInstance::setWindow (
 in nsPluginWindowPtr aWindow)
```

Called when the window containing the plugin instance changes.

(Corresponds to NPP\_SetWindow.)

#### Parameters

|                |                               |
|----------------|-------------------------------|
| <i>aWindow</i> | - the plugin window structure |
|----------------|-------------------------------|

#### Returns

- NS\_OK if this operation was successful

### 4.665.2.9 showStatus()

```
void nsIPluginInstance::showStatus (
 in string aMessage)
```

This operation causes status information to be displayed on the window associated with the plugin instance.

(Corresponds to NPN\_Status.)

#### Parameters

|                 |                                 |
|-----------------|---------------------------------|
| <i>aMessage</i> | - the status message to display |
|-----------------|---------------------------------|

**Returns**

- NS\_OK if this operation was successful

**4.665.2.10 start()**

```
void nsIPluginInstance::start ()
```

Called to instruct the plugin instance to start.

This will be called after the plugin is first created and initialized, and may be called after the plugin is stopped (via the Stop method) if the plugin instance is returned to in the browser window's history.

**Returns**

- NS\_OK if this operation was successful

**4.665.2.11 stop()**

```
void nsIPluginInstance::stop ()
```

Called to instruct the plugin instance to stop, thereby suspending its state.

This method will be called whenever the browser window goes on to display another page and the page containing the plugin goes into the window's history list.

**Returns**

- NS\_OK if this operation was successful

**4.665.3 Field Documentation****4.665.3.1 JSContext**

```
readonly attribute JSContextPtr nsIPluginInstance::JSContext
```

Get the JavaScript context to this plugin instance.

**Parameters**

|                   |                                    |
|-------------------|------------------------------------|
| <i>aJSContext</i> | - the resulting JavaScript context |
|-------------------|------------------------------------|

**Returns**

- NS\_OK if this operation was successful

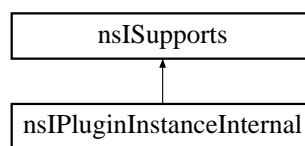
Definition at line 192 of file nsIPluginInstance.idl.

The documentation for this interface was generated from the following file:

- src/plugin\_win32/include/nsIPluginInstance.idl

## 4.666 nsIPluginInstanceInternal Class Reference

Inheritance diagram for nsIPluginInstanceInternal:

**Public Member Functions**

- virtual JSObject \* **GetJSObject** (JSContext \*cx)=0
- virtual nsresult **GetFormValue** (nsAString &aValue)=0
- virtual nsresult **PushPopupsEnabledState** (PRBool aEnabled)=0
- virtual nsresult **PopPopupsEnabledState** ()=0
- virtual PRUint16 **GetPluginAPIVersion** ()=0
- virtual nsresult **DefineJavaProperties** ()=0

### 4.666.1 Detailed Description

Definition at line 51 of file nsIPluginInstanceInternal.h.

The documentation for this class was generated from the following file:

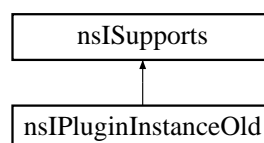
- src/plugin\_win32/include/nsIPluginInstanceInternal.h

## 4.667 nsIPluginInstanceOld Interface Reference

The **nsIPluginInstance** (p. 442) interface is the minimum interface plugin developers need to support in order to implement a plugin instance.

```
import "nsIPluginInstanceOld.idl";
```

Inheritance diagram for nsIPluginInstanceOld:



## Public Member Functions

- void **initialize** (in **nsIPluginInstancePeer** aPeer)  
*Initializes a newly created plugin instance, passing to it the plugin instance peer which it should use for all communication back to the browser.*
- void **start** ()  
*Called to instruct the plugin instance to start.*
- void **stop** ()  
*Called to instruct the plugin instance to stop, thereby suspending its state.*
- void **destroy** ()  
*Called to instruct the plugin instance to destroy itself.*
- void **setWindow** (in nsPluginWindowPtr aWindow)  
*Called when the window containing the plugin instance changes.*
- void **newStream** (out **nsIPluginStreamListener** aListener)  
*Called to tell the plugin that the initial src/data stream is ready.*
- void **print** (in nsPluginPrintPtr aPlatformPrint)  
*Called to instruct the plugin instance to print itself to a printer.*
- void **getValue** (in nsPluginInstanceVariable aVariable, in voidPtr aValue)  
*Returns the value of a variable associated with the plugin instance.*
- void **handleEvent** (in nsPluginEventPtr aEvent, out boolean aHandled)  
*Handles an event.*

## Data Fields

- readonly attribute **nsIPluginInstancePeer** peer  
*Returns a reference back to the plugin instance peer.*

### 4.667.1 Detailed Description

The **nsIPluginInstance** (p. 442) interface is the minimum interface plugin developers need to support in order to implement a plugin instance.

The plugin manager may QueryInterface for more specific types, e.g. **nsILiveConnectPluginInstance**.

(Corresponds to NPP object.)

The old NPP\_Destroy call has been factored into two plugin instance methods:

Stop – called when the plugin instance is to be stopped (e.g. by displaying another plugin manager window, causing the page containing the plugin to become removed from the display).

Destroy – called once, before the plugin instance peer is to be destroyed. This method is used to destroy the plugin instance.

Definition at line 75 of file nsIPluginInstanceOld.idl.

### 4.667.2 Member Function Documentation

#### 4.667.2.1 destroy()

```
void nsIPluginInstanceOld::destroy ()
```

Called to instruct the plugin instance to destroy itself.

This is called when it become no longer possible to return to the plugin instance, either because the browser window's history list of pages is being trimmed, or because the window containing this page in the history is being closed.

##### Returns

- NS\_OK if this operation was successful

#### 4.667.2.2 getValue()

```
void nsIPluginInstanceOld::getValue (
 in nsPluginInstanceVariable aVariable,
 in voidPtr aValue)
```

Returns the value of a variable associated with the plugin instance.

##### Parameters

|                  |                                                     |
|------------------|-----------------------------------------------------|
| <i>aVariable</i> | - the plugin instance variable to get               |
| <i>aValue</i>    | - the address of where to store the resulting value |

##### Returns

- NS\_OK if this operation was successful

#### 4.667.2.3 handleEvent()

```
void nsIPluginInstanceOld::handleEvent (
 in nsPluginEventPtr aEvent,
 out boolean aHandled)
```

Handles an event.

An nsIEventHandler can also get registered with with nsIPluginManager2::RegisterWindow and will be called whenever an event comes in for that window.

Note that for Unix and Mac the **nsPluginEvent** (p. 490) structure is different from the old NPEvent structure – it's no longer the native event record, but is instead a struct. This was done for future extensibility, and so that the Mac could receive the window argument too. For Windows and OS2, it's always been a struct, so there's no change for them.

(Corresponds to NPP\_HandleEvent.)

## Parameters

|                 |                                       |
|-----------------|---------------------------------------|
| <i>aEvent</i>   | - the event to be handled             |
| <i>aHandled</i> | - set to PR_TRUE if event was handled |

## Returns

- NS\_OK if this operation was successful

**4.667.2.4 initialize()**

```
void nsIPluginInstanceOld::initialize (
 in nsIPluginInstancePeer aPeer)
```

Initializes a newly created plugin instance, passing to it the plugin instance peer which it should use for all communication back to the browser.

## Parameters

|              |                                          |
|--------------|------------------------------------------|
| <i>aPeer</i> | - the corresponding plugin instance peer |
|--------------|------------------------------------------|

## Returns

- NS\_OK if this operation was successful

**4.667.2.5 newStream()**

```
void nsIPluginInstanceOld::newStream (
 out nsIPluginStreamListener aListener)
```

Called to tell the plugin that the initial src/data stream is ready.

Expects the plugin to return a **nsIPluginStreamListener** (p. 475).

(Corresponds to NPP\_NewStream.)

## Parameters

|                  |                                                             |
|------------------|-------------------------------------------------------------|
| <i>aListener</i> | - listener the browser will use to give the plugin the data |
|------------------|-------------------------------------------------------------|

## Returns

- NS\_OK if this operation was successful

#### 4.667.2.6 print()

```
void nsIPluginInstanceOld::print (
 in nsPluginPrintPtr aPlatformPrint)
```

Called to instruct the plugin instance to print itself to a printer.

(Corresponds to NPP\_Print.)

##### Parameters

|                       |                                          |
|-----------------------|------------------------------------------|
| <i>aPlatformPrint</i> | - platform-specific printing information |
|-----------------------|------------------------------------------|

##### Returns

- NS\_OK if this operation was successful

#### 4.667.2.7 setWindow()

```
void nsIPluginInstanceOld::setWindow (
 in nsPluginWindowPtr aWindow)
```

Called when the window containing the plugin instance changes.

(Corresponds to NPP\_SetWindow.)

##### Parameters

|                |                               |
|----------------|-------------------------------|
| <i>aWindow</i> | - the plugin window structure |
|----------------|-------------------------------|

##### Returns

- NS\_OK if this operation was successful

#### 4.667.2.8 start()

```
void nsIPluginInstanceOld::start ()
```

Called to instruct the plugin instance to start.

This will be called after the plugin is first created and initialized, and may be called after the plugin is stopped (via the Stop method) if the plugin instance is returned to in the browser window's history.

##### Returns

- NS\_OK if this operation was successful



### 4.667.2.9 stop()

```
void nsIPluginInstanceOld::stop ()
```

Called to instruct the plugin instance to stop, thereby suspending its state.

This method will be called whenever the browser window goes on to display another page and the page containing the plugin goes into the window's history list.

#### Returns

- NS\_OK if this operation was successful

## 4.667.3 Field Documentation

### 4.667.3.1 peer

```
readonly attribute nsIPluginInstancePeer nsIPluginInstanceOld::peer
```

Returns a reference back to the plugin instance peer.

This method is used whenever the browser needs to obtain the peer back from a plugin instance. The implementation of this method should be sure to increment the reference count on the peer by calling AddRef.

#### Parameters

|              |                                      |
|--------------|--------------------------------------|
| <i>aPeer</i> | - the resulting plugin instance peer |
|--------------|--------------------------------------|

#### Returns

- NS\_OK if this operation was successful

Definition at line 96 of file nsIPluginInstanceOld.idl.

The documentation for this interface was generated from the following file:

- src/plugin\_win32/include/nsIPluginInstanceOld.idl

## 4.668 nsIPluginInstanceOwner Interface Reference

Inheritance diagram for nsIPluginInstanceOwner:



## Public Member Functions

- void **setInstance** (in **nsIPluginInstance** aInstance)  
*Let the owner know what its instance is.*
- void **getInstance** (in nsIPluginInstanceRef aInstance)  
*Get the instance associated with this owner.*
- nsresult **GetInstance** ( **nsIPluginInstance** \*\*aInstance)
- void **getWindow** (in nsPluginWindowStarRef aWindow)  
*Get a handle to the window structure of the owner.*
- void **createWidget** ()  
*Create a place for the plugin to live in the owner's environment.*
- NS\_IMETHOD **GetURL** (const char \*aURL, const char \*aTarget, void \*aPostData, PRUint32 aPostDataLen, void \*aHeadersData, PRUint32 aHeadersDataLen, PRBool aIsFile=PR\_FALSE)=0  
*Called when there is a valid target so that the proper frame can be updated with new content.*
- void **showStatus** (in string aStatusMsg)  
*Show a status message in the host environment.*
- NS\_IMETHOD **ShowStatus** (const PRUnichar \*aStatusMsg)=0
- void **invalidateRect** (in nsPluginRectPtr aRect)  
*Invalidate the rectangle.*
- void **invalidateRegion** (in nsPluginRegion aRegion)  
*Invalidate the region.*
- void **forceRedraw** ()  
*Force a redraw.*
- void **getNetscapeWindow** (in voidPtr aValue)  
*Get NetscapeWindow, corresponds to NPNVnetscapeWindow.*

## Data Fields

- readonly attribute nsPluginMode **mode**  
*Get the display mode for the plugin instance.*
- readonly attribute nsIDocument **document**  
*Get the associated document.*

### 4.668.1 Detailed Description

Definition at line 48 of file nsIPluginInstanceOwner.idl.

### 4.668.2 Member Function Documentation

#### 4.668.2.1 createWidget()

```
void nsIPluginInstanceOwner::createWidget ()
```

Create a place for the plugin to live in the owner's environment.

this may or may not create a window depending on the windowless state of the plugin instance.

### 4.668.2.2 GetURL()

```
NS_IMETHOD nsIPluginInstanceOwner::GetURL (
 const char * aURL,
 const char * aTarget,
 void * aPostData,
 PRUint32 aPostDataLen,
 void * aHeadersData,
 PRUint32 aHeadersDataLen,
 PRBool aIsFile = PR_FALSE) [pure virtual]
```

Called when there is a valid target so that the proper frame can be updated with new content.

will not be called with nsnull aTarget.

### 4.668.2.3 getWindow()

```
void nsIPluginInstanceOwner::getWindow (
 in nsPluginWindowStarRef aWindow)
```

Get a handle to the window structure of the owner.

This pointer cannot be made persistent by the caller.

The documentation for this interface was generated from the following file:

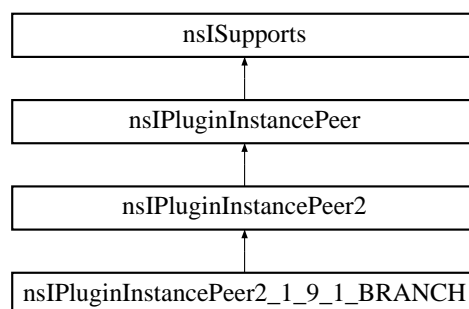
- src/plugin\_win32/include/nsIPluginInstanceOwner.idl

## 4.669 nsIPluginInstancePeer Interface Reference

The **nsIPluginInstancePeer** (p.455) interface is the set of operations implemented by the browser to support a plugin instance.

```
import "nsIPluginInstancePeer.idl";
```

Inheritance diagram for nsIPluginInstancePeer:



## Public Member Functions

- void **getValue** (in nsPluginInstancePeerVariable aVariable, in voidPtr aValue)  
*Returns the value of a variable associated with the plugin manager.*
- void **newStream** (in nsMimeType aType, in string aTarget, out nsIOutputStream aResult)  
*This operation is called by the plugin instance when it wishes to send a stream of data to the browser.*
- void **showStatus** (in string aMessage)  
*This operation causes status information to be displayed on the window associated with the plugin instance.*
- void **setWindowSize** (in unsigned long aWidth, in unsigned long aHeight)  
*Set the desired size of the window in which the plugin instance lives.*

## Data Fields

- readonly attribute nsMimeType **MIMETYPE**  
*Returns the MIME type of the plugin instance.*
- readonly attribute nsPluginMode **mode**  
*Returns the mode of the plugin instance, i.e.*

### 4.669.1 Detailed Description

The **nsIPluginInstancePeer** (p. 455) interface is the set of operations implemented by the browser to support a plugin instance.

When a plugin instance is constructed, a **nsIPluginInstancePeer** (p. 455) is passed to its initializer representing the instantiation of the plugin on the page.

Other interfaces may be obtained from **nsIPluginInstancePeer** (p. 455) by calling QueryInterface, e.g. **nsIPluginTagInfo** (p. 479).

Definition at line 68 of file nsIPluginInstancePeer.idl.

### 4.669.2 Member Function Documentation

#### 4.669.2.1 getValue()

```
void nsIPluginInstancePeer::getValue (
 in nsPluginInstancePeerVariable aVariable,
 in voidPtr aValue)
```

Returns the value of a variable associated with the plugin manager.

(Corresponds to NPN\_GetValue.)

#### Parameters

|                  |                                                     |
|------------------|-----------------------------------------------------|
| <i>aVariable</i> | - the plugin manager variable to get                |
| <i>aValue</i>    | - the address of where to store the resulting value |

**Returns**

- NS\_OK if this operation was successful

**4.669.2.2 newStream()**

```
void nsIPluginInstancePeer::newStream (
 in nsMIMEType aType,
 in string aTarget,
 out nsIOutputStream aResult)
```

This operation is called by the plugin instance when it wishes to send a stream of data to the browser.

It constructs a new output stream to which the plugin may send the data. When complete, the Close and Release methods should be called on the output stream.

(Corresponds to NPN\_NewStream.)

**Parameters**

|                |                                              |
|----------------|----------------------------------------------|
| <i>aType</i>   | - MIME type of the stream to create          |
| <i>aTarget</i> | - the target window name to receive the data |
| <i>aResult</i> | - the resulting output stream                |

**Returns**

- NS\_OK if this operation was successful

**4.669.2.3 setWindowSize()**

```
void nsIPluginInstancePeer::setWindowSize (
 in unsigned long aWidth,
 in unsigned long aHeight)
```

Set the desired size of the window in which the plugin instance lives.

**Parameters**

|                |                     |
|----------------|---------------------|
| <i>aWidth</i>  | - new window width  |
| <i>aHeight</i> | - new window height |

**Returns**

- NS\_OK if this operation was successful

#### 4.669.2.4 showStatus()

```
void nsIPluginInstancePeer::showStatus (
 in string aMessage)
```

This operation causes status information to be displayed on the window associated with the plugin instance.

(Corresponds to NPN\_Status.)

##### Parameters

|                 |                                 |
|-----------------|---------------------------------|
| <i>aMessage</i> | - the status message to display |
|-----------------|---------------------------------|

##### Returns

- NS\_OK if this operation was successful

### 4.669.3 Field Documentation

#### 4.669.3.1 MIMETYPE

```
readonly attribute nsMIMETYPE nsIPluginInstancePeer::MIMETYPE
```

Returns the MIME type of the plugin instance.

(Corresponds to NPP\_New's MIMETYPE argument.)

##### Parameters

|                  |                       |
|------------------|-----------------------|
| <i>aMIMETYPE</i> | - resulting MIME type |
|------------------|-----------------------|

##### Returns

- NS\_OK if this operation was successful

Definition at line 88 of file nsIPluginInstancePeer.idl.

#### 4.669.3.2 mode

```
readonly attribute nsPluginMode nsIPluginInstancePeer::mode
```

Returns the mode of the plugin instance, i.e.

whether the plugin is embedded in the html, or full page.

(Corresponds to NPP\_New's mode argument.)

## Parameters

|               |                      |
|---------------|----------------------|
| <i>result</i> | - the resulting mode |
|---------------|----------------------|

## Returns

- NS\_OK if this operation was successful

Definition at line 99 of file nsIPluginInstancePeer.idl.

The documentation for this interface was generated from the following file:

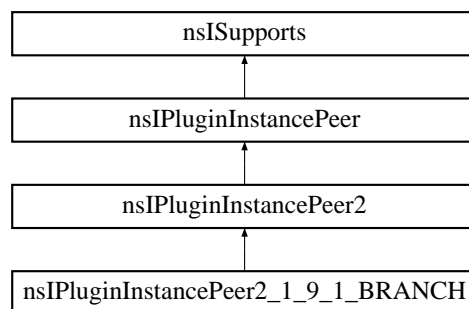
- src/plugin\_win32/include/nsIPluginInstancePeer.idl

## 4.670 nsIPluginInstancePeer2 Interface Reference

The **nsIPluginInstancePeer2** (p. 459) interface extends the **nsIPluginInstancePeer** (p. 455) interface, providing access to functionality provided by newer browsers.

```
import "nsIPluginInstancePeer2.idl";
```

Inheritance diagram for nsIPluginInstancePeer2:



### Data Fields

- readonly attribute JSObjectPtr **JSWindow**  
*Get the JavaScript window object corresponding to this plugin instance.*
- readonly attribute unsigned long **JSThread**  
*Get the JavaScript execution thread corresponding to this plugin instance.*
- readonly attribute JSContextPtr **JSContext**  
*Get the JavaScript context to this plugin instance.*

### Additional Inherited Members

#### 4.670.1 Detailed Description

The **nsIPluginInstancePeer2** (p. 459) interface extends the **nsIPluginInstancePeer** (p. 455) interface, providing access to functionality provided by newer browsers.

All functionality in **nsIPluginInstancePeer** (p. 455) can be mapped to the 4.X plugin API.

Definition at line 65 of file nsIPluginInstancePeer2.idl.

## 4.670.2 Field Documentation

### 4.670.2.1 JSContext

```
readonly attribute JSContextPtr nsIPluginInstancePeer2::JSContext
```

Get the JavaScript context to this plugin instance.

#### Parameters

|                   |                                    |
|-------------------|------------------------------------|
| <i>aJSContext</i> | - the resulting JavaScript context |
|-------------------|------------------------------------|

#### Returns

- NS\_OK if this operation was successful

Definition at line 90 of file nsIPluginInstancePeer2.idl.

### 4.670.2.2 JSThread

```
readonly attribute unsigned long nsIPluginInstancePeer2::JSThread
```

Get the JavaScript execution thread corresponding to this plugin instance.

#### Parameters

|                  |                                      |
|------------------|--------------------------------------|
| <i>aJSThread</i> | - the resulting JavaScript thread id |
|------------------|--------------------------------------|

#### Returns

- NS\_OK if this operation was successful

Definition at line 82 of file nsIPluginInstancePeer2.idl.

### 4.670.2.3 JSWindow

```
readonly attribute JSObjectPtr nsIPluginInstancePeer2::JSWindow
```

Get the JavaScript window object corresponding to this plugin instance.



## Parameters

|                  |                                          |
|------------------|------------------------------------------|
| <i>aJSWindow</i> | - the resulting JavaScript window object |
|------------------|------------------------------------------|

## Returns

- NS\_OK if this operation was successful

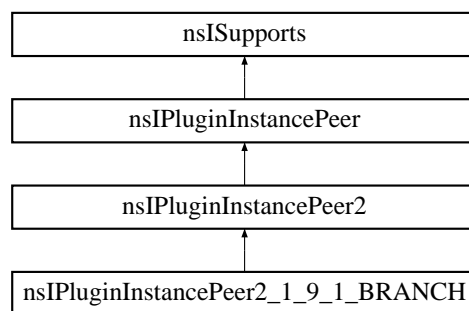
Definition at line 73 of file nsIPluginInstancePeer2.idl.

The documentation for this interface was generated from the following file:

- src/plugin\_win32/include/nsIPluginInstancePeer2.idl

## 4.671 nsIPluginInstancePeer2\_1\_9\_1\_BRANCH Interface Reference

Inheritance diagram for nsIPluginInstancePeer2\_1\_9\_1\_BRANCH:



### Public Member Functions

- void **invalidateOwner** ()  
*Drop our reference to our owner.*

### Additional Inherited Members

#### 4.671.1 Detailed Description

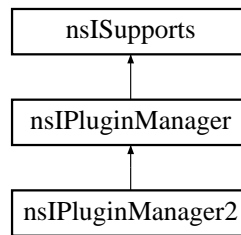
Definition at line 94 of file nsIPluginInstancePeer2.idl.

The documentation for this interface was generated from the following file:

- src/plugin\_win32/include/nsIPluginInstancePeer2.idl

## 4.672 nsIPluginManager Interface Reference

Inheritance diagram for nsIPluginManager:



### Public Member Functions

- void **GetValue** (in nsPluginManagerVariable variable, in nativeVoid value)  
*Returns the value of a variable associated with the plugin manager.*
- void **reloadPlugins** (in boolean reloadPages)  
*Causes the plugins directory to be searched again for new plugin libraries.*
- void **UserAgent** (in nativeChar resultingAgentString)  
*Returns the user agent string for the browser.*
- NS\_IMETHOD **GetURL** (nsISupports \*pluginInst, const char \*url, const char \*target=NULL, **nsIPluginStreamListener** \*streamListener=NULL, const char \*altHost=NULL, const char \*referrer=NULL, PRBool forceJSEnabled=PR\_FALSE)=0  
*Fetches a URL.*
- NS\_IMETHOD **PostURL** (nsISupports \*pluginInst, const char \*url, PRUint32 postDataLen, const char \*postData, PRBool isFile=PR\_FALSE, const char \*target=NULL, **nsIPluginStreamListener** \*streamListener=NULL, const char \*altHost=NULL, const char \*referrer=NULL, PRBool forceJSEnabled=PR\_FALSE, PRUint32 postHeadersLength=0, const char \*postHeaders=NULL)=0  
*Posts to a URL with post data and/or post headers.*
- void **RegisterPlugin** (in REFNSIID aCID, in string aPluginName, in string aDescription, in nativeChar aMimeTypes, in nativeChar aMimeDescriptions, in nativeChar aFileExtensions, in long aCount)  
*Persistently register a plugin with the plugin manager.*
- void **UnregisterPlugin** (in REFNSIID aCID)  
*Unregister a plugin from the plugin manager.*
- NS\_IMETHOD **GetURLWithHeaders** (nsISupports \*pluginInst, const char \*url, const char \*target=NULL, **nsIPluginStreamListener** \*streamListener=NULL, const char \*altHost=NULL, const char \*referrer=NULL, PRBool forceJSEnabled=PR\_FALSE, PRUint32 getHeadersLength=0, const char \*getHeaders=NULL)=0  
*Fetches a URL, with Headers.*

### 4.672.1 Detailed Description

Definition at line 77 of file nsIPluginManager.idl.

### 4.672.2 Member Function Documentation

### 4.672.2.1 GetURL()

```
NS_IMETHOD nsIPluginManager::GetURL (
 nsISupports * pluginInst,
 const char * url,
 const char * target = NULL,
 nsIPluginStreamListener * streamListener = NULL,
 const char * altHost = NULL,
 const char * referrer = NULL,
 PRBool forceJSEnabled = PR_FALSE) [pure virtual]
```

Fetches a URL.

(Corresponds to NPN\_GetURL and NPN\_GetURLNotify.)

#### Parameters

|                       |                                                                                                                                                                                            |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>pluginInst</i>     | - the plugin making the request. If NULL, the URL is fetched in the background.                                                                                                            |
| <i>url</i>            | - the URL to fetch                                                                                                                                                                         |
| <i>target</i>         | - the target window into which to load the URL, or NULL if the data should be returned to the plugin via streamListener.                                                                   |
| <i>streamListener</i> | - a stream listener to be used to return data to the plugin. May be NULL if target is not NULL.                                                                                            |
| <i>altHost</i>        | - an IP-address string that will be used instead of the host specified in the URL. This is used to prevent DNS-spoofing attacks. Can be defaulted to NULL meaning use the host in the URL. |
| <i>referrer</i>       | - the referring URL (may be NULL)                                                                                                                                                          |
| <i>forceJSEnabled</i> | - forces JavaScript to be enabled for 'javascript:' URLs, even if the user currently has JavaScript disabled (usually specify PR_FALSE)                                                    |

#### Returns

- NS\_OK if this operation was successful

### 4.672.2.2 GetURLWithHeaders()

```
NS_IMETHOD nsIPluginManager::GetURLWithHeaders (
 nsISupports * pluginInst,
 const char * url,
 const char * target = NULL,
 nsIPluginStreamListener * streamListener = NULL,
 const char * altHost = NULL,
 const char * referrer = NULL,
 PRBool forceJSEnabled = PR_FALSE,
 PRUint32 getHeadersLength = 0,
 const char * getHeaders = NULL) [pure virtual]
```

Fetches a URL, with Headers.

#### See also

**GetURL** (p. 462). Identical except for additional params headers and headersLen

## Parameters

|                         |                                                                                                                                                                                       |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>getHeadersLength</i> | - the length of getHeaders (if non-NULL)                                                                                                                                              |
| <i>getHeaders</i>       | - the headers to GET. Must be in the form of "HeaderName: HeaderValue\r\n". Each header, including the last, must be followed by "\r\n". NULL specifies that there are no get headers |

## Returns

- NS\_OK if this operation was successful

**4.672.2.3 GetValue()**

```
void nsIPluginManager::GetValue (
 in nsPluginManagerVariable variable,
 in nativeVoid value)
```

Returns the value of a variable associated with the plugin manager.

(Corresponds to NPN\_GetValue.)

## Parameters

|                 |                                                     |
|-----------------|-----------------------------------------------------|
| <i>variable</i> | - the plugin manager variable to get                |
| <i>value</i>    | - the address of where to store the resulting value |

## Returns

- NS\_OK if this operation was successful

**4.672.2.4 PostURL()**

```
NS_IMETHOD nsIPluginManager::PostURL (
 nsISupports * pluginInst,
 const char * url,
 PRUint32 postDataLen,
 const char * postData,
 PRBool isFile = PR_FALSE,
 const char * target = NULL,
 nsIPluginStreamListener * streamListener = NULL,
 const char * altHost = NULL,
 const char * referrer = NULL,
 PRBool forceJSEnabled = PR_FALSE,
 PRUint32 postHeadersLength = 0,
 const char * postHeaders = NULL) [pure virtual]
```

Posts to a URL with post data and/or post headers.

(Corresponds to NPN\_PostURL and NPN\_PostURLNotify.)

## Parameters

|                          |                                                                                                                                                                                            |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>pluginInst</i>        | - the plugin making the request. If NULL, the URL is fetched in the background.                                                                                                            |
| <i>url</i>               | - the URL to fetch                                                                                                                                                                         |
| <i>postDataLength</i>    | - the length of postData (if non-NULL)                                                                                                                                                     |
| <i>postData</i>          | - the data to POST. NULL specifies that there is not post data                                                                                                                             |
| <i>isFile</i>            | - whether the postData specifies the name of a file to post instead of data. The file will be deleted afterwards.                                                                          |
| <i>target</i>            | - the target window into which to load the URL, or NULL if the data should be returned to the plugin via streamListener.                                                                   |
| <i>streamListener</i>    | - a stream listener to be used to return data to the plugin. May be NULL if target is not NULL.                                                                                            |
| <i>altHost</i>           | - an IP-address string that will be used instead of the host specified in the URL. This is used to prevent DNS-spoofing attacks. Can be defaulted to NULL meaning use the host in the URL. |
| <i>referrer</i>          | - the referring URL (may be NULL)                                                                                                                                                          |
| <i>forceJSEnabled</i>    | - forces JavaScript to be enabled for 'javascript:' URLs, even if the user currently has JavaScript disabled (usually specify PR_FALSE)                                                    |
| <i>postHeadersLength</i> | - the length of postHeaders (if non-NULL)                                                                                                                                                  |
| <i>postHeaders</i>       | - the headers to POST. Must be in the form of "HeaderName: HeaderValue\r\n". Each header, including the last, must be followed by "\r\n". NULL specifies that there are no post headers    |

## Returns

- NS\_OK if this operation was successful

## 4.672.2.5 RegisterPlugin()

```
void nsIPluginManager::RegisterPlugin (
 in REFNSIID aCID,
 in string aPluginName,
 in string aDescription,
 in nativeChar aMimeTypes,
 in nativeChar aMimeDescriptions,
 in nativeChar aFileExtensions,
 in long aCount)
```

Persistently register a plugin with the plugin manager.

aMimeTypes, aMimeDescriptions, and aFileExtensions are parallel arrays that contain information about the MIME types that the plugin supports.

## Parameters

|                          |                                                                                            |
|--------------------------|--------------------------------------------------------------------------------------------|
| <i>aCID</i>              | - the plugin's CID                                                                         |
| <i>aPluginName</i>       | - the plugin's name                                                                        |
| <i>aDescription</i>      | - a description of the plugin                                                              |
| <i>aMimeTypes</i>        | - an array of MIME types that the plugin is prepared to handle                             |
| <i>aMimeDescriptions</i> | - an array of descriptions for the MIME types that the plugin can handle.                  |
| <i>aFileExtensions</i>   | - an array of file extensions for the MIME types that the plugin can handle.               |
| <i>aCount</i>            | - the number of elements in the aMimeTypes, aMimeDescriptions, and aFileExtensions arrays. |

**Returns**

- NS\_OK if the operation was successful.

**4.672.2.6 reloadPlugins()**

```
void nsIPluginManager::reloadPlugins (
 in boolean reloadPages)
```

Causes the plugins directory to be searched again for new plugin libraries.

(Corresponds to NPN\_ReloadPlugins.)

**Parameters**

|                    |                                                                     |
|--------------------|---------------------------------------------------------------------|
| <i>reloadPages</i> | - indicates whether currently visible pages should also be reloaded |
|--------------------|---------------------------------------------------------------------|

**4.672.2.7 UnregisterPlugin()**

```
void nsIPluginManager::UnregisterPlugin (
 in REFNSIID aCID)
```

Unregister a plugin from the plugin manager.

**Parameters**

|             |                                      |
|-------------|--------------------------------------|
| <i>aCID</i> | the CID of the plugin to unregister. |
|-------------|--------------------------------------|

**Returns**

- NS\_OK if the operation was successful.

**4.672.2.8 UserAgent()**

```
void nsIPluginManager::UserAgent (
 in nativeChar resultingAgentString)
```

Returns the user agent string for the browser.

(Corresponds to NPN\_UserAgent.)

## Parameters

|                             |                                   |
|-----------------------------|-----------------------------------|
| <i>resultingAgentString</i> | - the resulting user agent string |
|-----------------------------|-----------------------------------|

The documentation for this interface was generated from the following file:

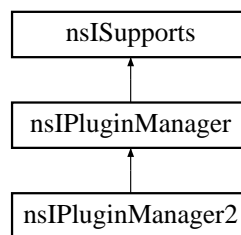
- src/plugin\_win32/include/nsIPluginManager.idl

## 4.673 nsIPluginManager2 Interface Reference

Plugin Manager 2 Interface These extensions to **nsIPluginManager** (p. 462) are only available in Communicator 5.0.

```
import "nsIPluginManager2.idl";
```

Inheritance diagram for nsIPluginManager2:



### Public Member Functions

- void **beginWaitCursor** ()  
*Puts up a wait cursor.*
- void **endWaitCursor** ()  
*Restores the previous (non-wait) cursor.*
- void **supportsURLProtocol** (in string aProtocol, out boolean aResult)  
*Returns true if a URL protocol (e.g.*
- void **notifyStatusChange** (in **nsIPlugin** aPlugin, in nsresult aStatus)  
*This method may be called by the plugin to indicate that an error has occurred, e.g.*
- void **findProxyForURL** (in string aURL, out string aResult)  
*Returns the proxy info for a given URL.*
- void **registerWindow** (in nsIEventHandler aHandler, in nsPluginPlatformWindowRef aWindow)  
*Registers a top-level window with the browser.*
- void **unregisterWindow** (in nsIEventHandler aHandler, in nsPluginPlatformWindowRef aWindow)  
*Unregisters a top-level window with the browser.*
- void **allocateMenuID** (in nsIEventHandler aHandler, in boolean alsSubmenu, out short aResult)  
*Allocates a new menu ID (for the Mac).*
- void **deallocateMenuID** (in nsIEventHandler aHandler, in short aMenuID)  
*Deallocates a menu ID (for the Mac).*
- void **hasAllocatedMenuID** (in nsIEventHandler aHandler, in short aMenuID, out boolean aResult)  
*Indicates whether this event handler has allocated the given menu ID.*

### 4.673.1 Detailed Description

Plugin Manager 2 Interface These extensions to **nsIPluginManager** (p. 462) are only available in Communicator 5.0.

Definition at line 50 of file nsIPluginManager2.idl.

### 4.673.2 Member Function Documentation

#### 4.673.2.1 allocateMenuID()

```
void nsIPluginManager2::allocateMenuID (
 in nsIEventHandler aHandler,
 in boolean aIsSubmenu,
 out short aResult)
```

Allocates a new menu ID (for the Mac).

##### Parameters

|                   |                                        |
|-------------------|----------------------------------------|
| <i>aHandler</i>   | - the event handler for the window     |
| <i>aIsSubmenu</i> | - whether this is a sub-menu ID or not |
| <i>aResult</i>    | - the resulting menu ID                |

##### Returns

- NS\_OK if this operation was successful

#### 4.673.2.2 beginWaitCursor()

```
void nsIPluginManager2::beginWaitCursor ()
```

Puts up a wait cursor.

##### Returns

- NS\_OK if this operation was successful

#### 4.673.2.3 deallocateMenuID()

```
void nsIPluginManager2::deallocateMenuID (
 in nsIEventHandler aHandler,
 in short aMenuID)
```

Deallocates a menu ID (for the Mac).



## Parameters

|                 |                                    |
|-----------------|------------------------------------|
| <i>aHandler</i> | - the event handler for the window |
| <i>aMenuID</i>  | - the menu ID                      |

## Returns

- NS\_OK if this operation was successful

**4.673.2.4 endWaitCursor()**

```
void nsIPluginManager2::endWaitCursor ()
```

Restores the previous (non-wait) cursor.

## Returns

- NS\_OK if this operation was successful

**4.673.2.5 findProxyForURL()**

```
void nsIPluginManager2::findProxyForURL (
 in string aURL,
 out string aResult)
```

Returns the proxy info for a given URL.

The caller is required to free the resulting memory with nsIMalloc::Free. The result will be in the following format

i) "DIRECT" – no proxy ii) "PROXY xxx.xxx.xxx.xxx" – use proxy iii) "SOCKS xxx.xxx.xxx.xxx" – use SOCKS iv) Mixed. e.g. "PROXY 111.111.111.111;PROXY 112.112.112.112", "PROXY 111.111.111.111;SOCKS 112.112.112.112"....

Which proxy/SOCKS to use is determined by the plugin.

**4.673.2.6 hasAllocatedMenuID()**

```
void nsIPluginManager2::hasAllocatedMenuID (
 in nsIEventHandler aHandler,
 in short aMenuID,
 out boolean aResult)
```

Indicates whether this event handler has allocated the given menu ID.

## Parameters

|                 |                                               |
|-----------------|-----------------------------------------------|
| <i>aHandler</i> | - the event handler for the window            |
| <i>aMenuID</i>  | - the menu ID                                 |
| <i>aResult</i>  | - returns PR_TRUE if the menu ID is allocated |

## Returns

- NS\_OK if this operation was successful

**4.673.2.7 notifyStatusChange()**

```
void nsIPluginManager2::notifyStatusChange (
 in nsIPlugin aPlugin,
 in nsresult aStatus)
```

This method may be called by the plugin to indicate that an error has occurred, e.g.

that the plugin has failed or is shutting down spontaneously. This allows the browser to clean up any plugin-specific state.

## Parameters

|                |                                       |
|----------------|---------------------------------------|
| <i>aPlugin</i> | - the plugin whose status is changing |
| <i>aStatus</i> | - the error status value              |

## Returns

- NS\_OK if this operation was successful

**4.673.2.8 registerWindow()**

```
void nsIPluginManager2::registerWindow (
 in nsIEventHandler aHandler,
 in nsPluginPlatformWindowRef aWindow)
```

Registers a top-level window with the browser.

Events received by that window will be dispatched to the event handler specified.

## Parameters

|                 |                                    |
|-----------------|------------------------------------|
| <i>aHandler</i> | - the event handler for the window |
| <i>aWindow</i>  | - the platform window reference    |

**Returns**

- NS\_OK if this operation was successful

**4.673.2.9 supportsURLProtocol()**

```
void nsIPluginManager2::supportsURLProtocol (
 in string aProtocol,
 out boolean aResult)
```

Returns true if a URL protocol (e.g.

"http") is supported.

**Parameters**

|                  |                                     |
|------------------|-------------------------------------|
| <i>aProtocol</i> | - the protocol name                 |
| <i>aResult</i>   | - true if the protocol is supported |

**Returns**

- NS\_OK if this operation was successful

**4.673.2.10 unregisterWindow()**

```
void nsIPluginManager2::unregisterWindow (
 in nsIEventHandler aHandler,
 in nsPluginPlatformWindowRef aWindow)
```

Unregisters a top-level window with the browser.

The handler and window pair should be the same as that specified to RegisterWindow.

**Parameters**

|                 |                                    |
|-----------------|------------------------------------|
| <i>aHandler</i> | - the event handler for the window |
| <i>aWindow</i>  | - the platform window reference    |

**Returns**

- NS\_OK if this operation was successful

The documentation for this interface was generated from the following file:

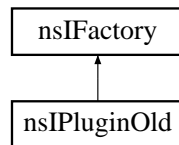
- src/plugin\_win32/include/nsIPluginManager2.idl

## 4.674 nsIPluginOld Interface Reference

The **nsIPlugin** (p. 431) interface is the minimum interface plugin developers need to support in order to implement a plugin.

```
import "nsIPluginOld.idl";
```

Inheritance diagram for nsIPluginOld:



### Public Member Functions

- void **createPluginInstance** (in nsISupports aOuter, in nsIIDRef aIID, in string aPluginMIMETYPE, [retval, iid\_is(aIID)] out nsQIResult aResult)  
*Creates a new plugin instance, based on a MIME type.*
- void **initialize** ()  
*Initializes the plugin and will be called before any new instances are created.*
- void **shutdown** ()  
*Called when the browser is done with the plugin factory, or when the plugin is disabled by the user.*
- void **getMIMEDescription** (out constCharPtr aMIMEDescription)  
*Returns the MIME description for the plugin.*
- void **getValue** (in nsPluginVariable aVariable, in voidPtr aValue)  
*Returns the value of a variable associated with the plugin.*

### 4.674.1 Detailed Description

The **nsIPlugin** (p. 431) interface is the minimum interface plugin developers need to support in order to implement a plugin.

The plugin manager may QueryInterface for more specific plugin types, e.g. nsILiveConnectPlugin.

The old NPP\_New plugin operation is now subsumed by two operations:

CreateInstance – called once, after the plugin instance is created. This method is used to initialize the new plugin instance (although the actual plugin instance object will be created by the plugin manager).

nsIPluginInstance::Start – called when the plugin instance is to be started. This happens in two circumstances: (1) after the plugin instance is first initialized, and (2) after a plugin instance is returned to (e.g. by going back in the window history) after previously being stopped by the Stop method.

Definition at line 82 of file nsIPluginOld.idl.

### 4.674.2 Member Function Documentation

#### 4.674.2.1 createPluginInstance()

```
void nsIPluginOld::createPluginInstance (
 in nsISupports aOuter,
 in nsIIDRef aIID,
 in string aPluginMimeType,
 [retval, iid_is(aIID)] out nsQIResult aResult)
```

Creates a new plugin instance, based on a MIME type.

This allows different implementations to be created depending on the specified MIME type.

#### 4.674.2.2 getMIMEDescription()

```
void nsIPluginOld::getMIMEDescription (
 out constCharPtr aMIMEDescription)
```

Returns the MIME description for the plugin.

The MIME description is a colon-separated string containing the plugin MIME type, plugin data file extension, and plugin name, e.g.:

"application/x-simple-plugin:smp:Simple LiveConnect Sample Plug-in"

(Corresponds to NPP\_GetMIMEDescription.)

##### Parameters

|                         |                                  |
|-------------------------|----------------------------------|
| <i>aMIMEDescription</i> | - the resulting MIME description |
|-------------------------|----------------------------------|

##### Returns

- NS\_OK if this operation was successful

#### 4.674.2.3 getValue()

```
void nsIPluginOld::getValue (
 in nsPluginVariable aVariable,
 in voidPtr aValue)
```

Returns the value of a variable associated with the plugin.

(Corresponds to NPP\_GetValue.)

##### Parameters

|                  |                                                     |
|------------------|-----------------------------------------------------|
| <i>aVariable</i> | - the plugin variable to get                        |
| <i>aValue</i>    | - the address of where to store the resulting value |

**Returns**

- NS\_OK if this operation was successful

**4.674.2.4 initialize()**

```
void nsIPluginOld::initialize ()
```

Initializes the plugin and will be called before any new instances are created.

It is passed browserInterfaces on which QueryInterface may be used to obtain an **nsIPluginManager** (p. 462), and other interfaces.

**Parameters**

|                          |                                                                               |
|--------------------------|-------------------------------------------------------------------------------|
| <i>browserInterfaces</i> | - an object that allows access to other browser interfaces via QueryInterface |
|--------------------------|-------------------------------------------------------------------------------|

**Returns**

- NS\_OK if this operation was successful

**4.674.2.5 shutdown()**

```
void nsIPluginOld::shutdown ()
```

Called when the browser is done with the plugin factory, or when the plugin is disabled by the user.

(Corresponds to NPP\_Shutdown.)

**Returns**

- NS\_OK if this operation was successful

The documentation for this interface was generated from the following file:

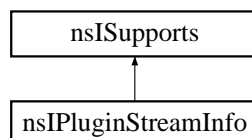
- src/plugin\_win32/include/nsIPluginOld.idl

**4.675 nsIPluginStreamInfo Interface Reference**

**nsIPluginStreamInfo** (p. 474)

```
import "nsIPluginStreamInfo.idl";
```

Inheritance diagram for nsIPluginStreamInfo:



## Public Member Functions

- void **isSeekable** (out boolean aSeekable)
- void **getURL** (out constCharPtr aURL)
- void **requestRead** (in nsByteRangePtr aRangeList)

## Data Fields

- readonly attribute string **contentType**
- readonly attribute unsigned long **length**
- readonly attribute unsigned long **lastModified**
- attribute long **streamOffset**

### 4.675.1 Detailed Description

**nsIPluginStreamInfo** (p. 474)

@status DEPRECATED

Originally published XPCOM Plugin API is now deprecated Developers are welcome to use NPAPI, please refer to: <http://mozilla.org/projects/plugins/>

Definition at line 56 of file nsIPluginStreamInfo.idl.

The documentation for this interface was generated from the following file:

- src/plugin\_win32/include/nsIPluginStreamInfo.idl

## 4.676 nsIPluginStreamListener Interface Reference

**nsIPluginStreamListener** (p. 475)

```
import "nsIPluginStreamListener.idl";
```

Inheritance diagram for nsIPluginStreamListener:



## Public Member Functions

- void **onStartBinding** (in **nsIPluginStreamInfo** aPluginInfo)  
*Notify the observer that the URL has started to load.*
- void **onDataAvailable** (in **nsIPluginStreamInfo** aPluginInfo, in nsIInputStream aInputStream, in unsigned long aLength)  
*Notify the client that data is available in the input stream.*
- void **onFileAvailable** (in **nsIPluginStreamInfo** aPluginInfo, in string aFileName)  
*Notify the client that data is available in the file.*
- void **onStopBinding** (in **nsIPluginStreamInfo** aPluginInfo, in nsresult aStatus)  
*Notify the observer that the URL has finished loading.*

## Data Fields

- readonly attribute nsPluginStreamType **streamType**

*Gets the type of the stream.*

### 4.676.1 Detailed Description

**nsIPluginStreamListener** (p. 475)

@status DEPRECATED

Originally published XPCOM Plugin API is now deprecated Developers are welcome to use NPAPI, please refer to: <http://mozilla.org/projects/plugins/> The **nsIPluginStreamListener** (p. 475) interface defines the minimum set of functionality that the browser will support if it allows plugins. Plugins can call QueryInterface to determine if a plugin manager implements more specific APIs or other browser interfaces for the plugin to use (e.g. nsINetworkManager).

Definition at line 64 of file nsIPluginStreamListener.idl.

### 4.676.2 Member Function Documentation

#### 4.676.2.1 onDataAvailable()

```
void nsIPluginStreamListener::onDataAvailable (
 in nsIPluginStreamInfo aPluginInfo,
 in nsIInputStream aInputStream,
 in unsigned long aLength)
```

Notify the client that data is available in the input stream.

This method is called whenever data is written into the input stream by the networking library...

#### Parameters

|                     |                                                                                                      |
|---------------------|------------------------------------------------------------------------------------------------------|
| <i>aPluginInfo</i>  | - plugin stream info                                                                                 |
| <i>aInputStream</i> | - the input stream containing the data. This stream can be either a blocking or non-blocking stream. |
| <i>aLength</i>      | - the amount of data that was just pushed into the stream.                                           |

#### Returns

- the return value is currently ignored.



#### 4.676.2.2 onFileAvailable()

```
void nsIPluginStreamListener::onFileAvailable (
 in nsIPluginStreamInfo aPluginInfo,
 in string aFileName)
```

Notify the client that data is available in the file.

##### Parameters

|                    |                                            |
|--------------------|--------------------------------------------|
| <i>aPluginInfo</i> | - plugin stream info                       |
| <i>aFileName</i>   | - the name of the file containing the data |

##### Returns

- the return value is currently ignored.

#### 4.676.2.3 onStartBinding()

```
void nsIPluginStreamListener::onStartBinding (
 in nsIPluginStreamInfo aPluginInfo)
```

Notify the observer that the URL has started to load.

This method is called only once, at the beginning of a URL load.

##### Parameters

|                    |                      |
|--------------------|----------------------|
| <i>aPluginInfo</i> | - plugin stream info |
|--------------------|----------------------|

##### Returns

- the return value is currently ignored, in the future it may be used to cancel the URL load..

#### 4.676.2.4 onStopBinding()

```
void nsIPluginStreamListener::onStopBinding (
 in nsIPluginStreamInfo aPluginInfo,
 in nsresult aStatus)
```

Notify the observer that the URL has finished loading.

This method is called once when the networking library has finished processing the URL transaction initiated via the nsINetService::Open(...) call.

This method is called regardless of whether the URL loaded successfully.

#### Parameters

|                    |                                             |
|--------------------|---------------------------------------------|
| <i>aPluginInfo</i> | - plugin stream info                        |
| <i>aStatus</i>     | - reason why the stream has been terminated |

#### Returns

- the return value is currently ignored.

### 4.676.3 Field Documentation

#### 4.676.3.1 streamType

readonly attribute nsPluginStreamType nsIPluginStreamListener::streamType

Gets the type of the stream.

#### Parameters

|                    |                          |
|--------------------|--------------------------|
| <i>aStreamType</i> | - the type of the stream |
|--------------------|--------------------------|

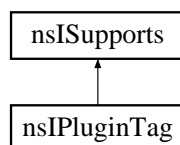
Definition at line 118 of file nsIPluginStreamListener.idl.

The documentation for this interface was generated from the following file:

- src/plugin\_win32/include/nsIPluginStreamListener.idl

## 4.677 nsIPluginTag Interface Reference

Inheritance diagram for nsIPluginTag:



## Data Fields

- readonly attribute UTF8String **description**
- readonly attribute UTF8String **filename**
- readonly attribute UTF8String **version**
- readonly attribute UTF8String **name**
- attribute boolean **disabled**
- attribute boolean **blocklisted**

### 4.677.1 Detailed Description

Definition at line 42 of file nsIPluginTag.idl.

The documentation for this interface was generated from the following file:

- src/plugin\_win32/include/nsIPluginTag.idl

## 4.678 nsIPluginTagInfo Interface Reference

Plugin Tag Info Interface This interface provides information about the HTML tag on the page.

```
import "nsIPluginTagInfo.idl";
```

Inheritance diagram for nsIPluginTagInfo:



## Public Member Functions

- void **getAttributes** (in PRUint16Ref aCount, in constCharStarConstStar aNames, in constCharStarConstStar aValues)  
*QueryInterface on **nsIPluginInstancePeer** (p. 455) to get this.*
- void **getAttribute** (in string aName, out constCharPtr aResult)  
*Gets the value for the named attribute.*
- void **getTagText** (out constCharPtr aTagText)  
*Get the complete text of the HTML tag that was used to instantiate this plugin.*
- void **getParameters** (in PRUint16Ref aCount, in constCharStarConstStar aNames, in constCharStarConstStar aValues)  
*Get a ptr to the paired list of parameter names and values, returns the length of the array.*
- void **getParameter** (in string aName, out constCharPtr aResult)  
*Get the value for the named parameter.*
- void **getDocumentBase** (out constCharPtr aDocumentBase)  
*Get the document base.*
- void **getDocumentEncoding** (out constCharPtr aDocumentEncoding)  
*Return an encoding whose name is specified in: <http://java.sun.com/products/jdk/1.4/docs/guide/intl/intl.doc.html#25303>.*
- void **getAlignment** (out constCharPtr aEligment)  
*Get object alignment.*

## Data Fields

- readonly attribute nsPluginTagType **tagType**  
*Get the type of the HTML tag that was used ot instantiate this plugin.*
- readonly attribute unsigned long **width**  
*Get object width.*
- readonly attribute unsigned long **height**  
*Get object height.*
- readonly attribute unsigned long **borderVertSpace**  
*Get border vertical space.*
- readonly attribute unsigned long **borderHorizSpace**  
*Get border horizontal space.*
- readonly attribute unsigned long **uniqueID**  
*Returns a unique id for the current document containing plugin.*
- readonly attribute nsIDOMElement **DOMElement**  
*Returns the DOM element corresponding to the tag which references this plugin in the document.*

### 4.678.1 Detailed Description

Plugin Tag Info Interface This interface provides information about the HTML tag on the page.

Some day this might get superseded by a DOM API.

Definition at line 63 of file nsIPluginTagInfo.idl.

### 4.678.2 Member Function Documentation

#### 4.678.2.1 `getAttribute()`

```
void nsIPluginTagInfo::getAttribute (
 in string aName,
 out constCharPtr aResult)
```

Gets the value for the named attribute.

#### Parameters

|                |                                     |
|----------------|-------------------------------------|
| <i>aName</i>   | - the name of the attribute to find |
| <i>aResult</i> | - the resulting attribute           |

#### Returns

- NS\_OK if this operation was successful, NS\_ERROR\_FAILURE if this operation failed. result is set to NULL if the attribute is not found else to the found value.

### 4.678.2.2 `getAttributes()`

```
void nsIPluginTagInfo::getAttributes (
 in PRUint16Ref aCount,
 in constCharStarConstStar aNames,
 in constCharStarConstStar aValues)
```

QueryInterface on **nsIPluginInstancePeer** (p. 455) to get this.

(Corresponds to NPP\_New's argc, argn, and argv arguments.) Get a ptr to the paired list of attribute names and values, returns the length of the array.

Each name or value is a null-terminated string.

### 4.678.2.3 `getParameter()`

```
void nsIPluginTagInfo::getParameter (
 in string aName,
 out constCharPtr aResult)
```

Get the value for the named parameter.

Returns null if the parameter was not set.

#### Parameters

|                |                         |
|----------------|-------------------------|
| <i>aName</i>   | - name of the parameter |
| <i>aResult</i> | - parameter value       |

#### Returns

- NS\_OK if this operation was successful

### 4.678.2.4 `getParameters()`

```
void nsIPluginTagInfo::getParameters (
 in PRUint16Ref aCount,
 in constCharStarConstStar aNames,
 in constCharStarConstStar aValues)
```

Get a ptr to the paired list of parameter names and values, returns the length of the array.

Each name or value is a null-terminated string.

## 4.678.3 Field Documentation

### 4.678.3.1 **DOMElement**

readonly attribute nsIDOMElement nsIPluginTagInfo::DOMElement

Returns the DOM element corresponding to the tag which references this plugin in the document.

## Parameters

|                    |                         |
|--------------------|-------------------------|
| <i>aDOMElement</i> | - resulting DOM element |
|--------------------|-------------------------|

## Returns

- NS\_OK if this operation was successful

Definition at line 168 of file nsIPluginTagInfo.idl.

### 4.678.3.2 tagType

readonly attribute nsPluginTagType nsIPluginTagInfo::tagType

Get the type of the HTML tag that was used ot instantiate this plugin.

Currently supported tags are EMBED, OBJECT and APPLET.

Definition at line 93 of file nsIPluginTagInfo.idl.

The documentation for this interface was generated from the following file:

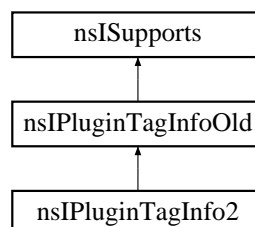
- src/plugin\_win32/include/nsIPluginTagInfo.idl

## 4.679 nsIPluginTagInfo2 Interface Reference

**nsIPluginTagInfo2** (p. 482)

```
import "nsIPluginTagInfo2.idl";
```

Inheritance diagram for nsIPluginTagInfo2:



## Public Member Functions

- void **getTagText** (out constCharPtr aTagText)  
*Get the complete text of the HTML tag that was used to instantiate this plugin.*
- void **getParameters** (in PRUint16Ref aCount, in constCharStarConstStar aNames, in constCharStarConstStar aValues)  
*Get a ptr to the paired list of parameter names and values, returns the length of the array.*
- void **getParameter** (in string aName, out constCharPtr aResult)  
*Get the value for the named parameter.*
- void **getDocumentBase** (out constCharPtr aDocumentBase)  
*Get the document base.*
- void **getDocumentEncoding** (out constCharPtr aDocumentEncoding)  
*Return an encoding whose name is specified in: <http://java.sun.com/products/jdk/1.4/docs/guide/intl/intl.doc.html#25303>.*
- void **getAlignment** (out constCharPtr aEligment)  
*Get object alignment.*

## Data Fields

- readonly attribute nsPluginTagType **tagType**  
*Get the type of the HTML tag that was used to instantiate this plugin.*
- readonly attribute unsigned long **width**  
*Get object width.*
- readonly attribute unsigned long **height**  
*Get object height.*
- readonly attribute unsigned long **borderVertSpace**  
*Get border vertical space.*
- readonly attribute unsigned long **borderHorizSpace**  
*Get border horizontal space.*
- readonly attribute unsigned long **uniqueID**  
*Returns a unique id for the current document containing plugin.*
- readonly attribute nsIDOMElement **DOMElement**  
*Returns the DOM element corresponding to the tag which references this plugin in the document.*

### 4.679.1 Detailed Description

**nsIPluginTagInfo2** (p. 482)

@status DEPRECATED

Originally published XPCOM Plugin API is now deprecated Developers are welcome to use NPAPI, please refer to: <http://mozilla.org/projects/plugins/>

Definition at line 52 of file nsIPluginTagInfo2.idl.

### 4.679.2 Member Function Documentation

#### 4.679.2.1 `getParameter()`

```
void nsIPluginTagInfo2::getParameter (
 in string aName,
 out constCharPtr aResult)
```

Get the value for the named parameter.

Returns null if the parameter was not set.



## Parameters

|                |                         |
|----------------|-------------------------|
| <i>aName</i>   | - name of the parameter |
| <i>aResult</i> | - parameter value       |

## Returns

- NS\_OK if this operation was successful

**4.679.2.2 getParameters()**

```
void nsIPluginTagInfo2::getParameters (
 in PRUint16Ref aCount,
 in constCharStarConstStar aNames,
 in constCharStarConstStar aValues)
```

Get a ptr to the paired list of parameter names and values, returns the length of the array.

Each name or value is a null-terminated string.

**4.679.3 Field Documentation****4.679.3.1 DOMElement**

```
readonly attribute nsIDOMElement nsIPluginTagInfo2::DOMElement
```

Returns the DOM element corresponding to the tag which references this plugin in the document.

## Parameters

|                    |                         |
|--------------------|-------------------------|
| <i>aDOMElement</i> | - resulting DOM element |
|--------------------|-------------------------|

## Returns

- NS\_OK if this operation was successful

Definition at line 133 of file nsIPluginTagInfo2.idl.

**4.679.3.2 tagType**

```
readonly attribute nsPluginTagType nsIPluginTagInfo2::tagType
```

Get the type of the HTML tag that was used to instantiate this plugin.

Currently supported tags are EMBED, OBJECT and APPLET.

Definition at line 58 of file nsIPluginTagInfo2.idl.

The documentation for this interface was generated from the following file:

- src/plugin\_win32/include/nsIPluginTagInfo2.idl

## 4.680 nsIPluginTagInfoOld Interface Reference

Plugin Tag Info Interface This interface provides information about the HTML tag on the page.

```
import "nsIPluginTagInfoOld.idl";
```

Inheritance diagram for nsIPluginTagInfoOld:



### Public Member Functions

- void **getAttributes** (in PRUint16Ref aCount, in constCharStarConstStar aNames, in constCharStarConstStar aValues)  
*QueryInterface on **nsIPluginInstancePeer** (p. 455) to get this.*
- void **getAttribute** (in string aName, out constCharPtr aResult)  
*Gets the value for the named attribute.*

### 4.680.1 Detailed Description

Plugin Tag Info Interface This interface provides information about the HTML tag on the page.

Some day this might get superseded by a DOM API.

Definition at line 64 of file nsIPluginTagInfoOld.idl.

### 4.680.2 Member Function Documentation

#### 4.680.2.1 getAttribute()

```
void nsIPluginTagInfoOld::getAttribute (
 in string aName,
 out constCharPtr aResult)
```

Gets the value for the named attribute.

## Parameters

|                |                                     |
|----------------|-------------------------------------|
| <i>aName</i>   | - the name of the attribute to find |
| <i>aResult</i> | - the resulting attribute           |

## Returns

- NS\_OK if this operation was successful, NS\_ERROR\_FAILURE if this operation failed. result is set to NULL if the attribute is not found else to the found value.

## 4.680.2.2 getAttributes()

```
void nsIPluginTagInfoOld::getAttributes (
 in PRUint16Ref aCount,
 in constCharStarConstStar aNames,
 in constCharStarConstStar aValues)
```

QueryInterface on **nsIPluginInstancePeer** (p. 455) to get this.

(Corresponds to NPP\_New's argc, argn, and argv arguments.) Get a ptr to the paired list of attribute names and values, returns the length of the array.

Each name or value is a null-terminated string.

The documentation for this interface was generated from the following file:

- src/plugin\_win32/include/nsIPluginTagInfoOld.idl

## 4.681 nsIScriptablePlugin Interface Reference

Interface for exposing scriptable plugin methods to JavaScript via XPCConnect.

```
import "nsIScriptablePlugin.idl";
```

Inheritance diagram for nsIScriptablePlugin:



## Data Fields

- readonly attribute nsQIResult **scriptablePeer**  
*The object to be wrapped and exposed to JavaScript.*
- readonly attribute nsIIDPtr **scriptableInterface**  
*The interface that XPCConnect should use when exposing the peer object to JavaScript.*

### 4.681.1 Detailed Description

Interface for exposing scriptable plugin methods to JavaScript via XPCConnect.

Definition at line 45 of file nsIScriptablePlugin.idl.

### 4.681.2 Field Documentation

#### 4.681.2.1 scriptableInterface

```
readonly attribute nsIIDPtr nsIScriptablePlugin::scriptableInterface
```

The interface that XPCConnect should use when exposing the peer object to JavaScript.

All scriptable methods on the interface will be available to JavaScript.

Definition at line 58 of file nsIScriptablePlugin.idl.

#### 4.681.2.2 scriptablePeer

```
readonly attribute nsQIResult nsIScriptablePlugin::scriptablePeer
```

The object to be wrapped and exposed to JavaScript.

It should be an XPCOM object, and it can be the same object as the plugin.

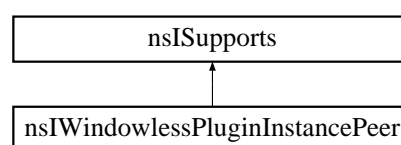
Definition at line 51 of file nsIScriptablePlugin.idl.

The documentation for this interface was generated from the following file:

- src/plugin\_win32/include/nsIScriptablePlugin.idl

## 4.682 nsIWindowlessPluginInstancePeer Interface Reference

Inheritance diagram for nsIWindowlessPluginInstancePeer:



## Public Member Functions

- void **invalidateRect** (in nsPluginRectPtr aRect)  
*Corresponds to NPN\_InvalidateRect.*
- void **invalidateRegion** (in nsPluginRegion aRegion)  
*Corresponds to NPN\_InvalidateRegion.*
- void **forceRedraw** ()  
*Corresponds to NPN\_ForceRedraw.*

### 4.682.1 Detailed Description

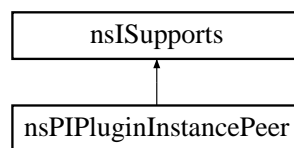
Definition at line 46 of file nsIWindowlessPlugInstPeer.idl.

The documentation for this interface was generated from the following file:

- src/plugin\_win32/include/nsIWindowlessPlugInstPeer.idl

## 4.683 nsPIPluginInstancePeer Interface Reference

Inheritance diagram for nsPIPluginInstancePeer:



## Data Fields

- readonly attribute **nsIPluginInstanceOwner** owner

### 4.683.1 Detailed Description

Definition at line 45 of file nsPIPluginInstancePeer.idl.

The documentation for this interface was generated from the following file:

- src/plugin\_win32/include/nsPIPluginInstancePeer.idl

## 4.684 nsPluginEmbedPrint Struct Reference

## Data Fields

- **nsPluginWindow** window
- void \* **platformPrint**

### 4.684.1 Detailed Description

Definition at line 312 of file nsplugindefs.h.

The documentation for this struct was generated from the following file:

- src/plugin\_win32/include/nsplugindefs.h

## 4.685 nsPluginEvent Struct Reference

### Data Fields

- void \* **event**

### 4.685.1 Detailed Description

Definition at line 326 of file nsplugindefs.h.

The documentation for this struct was generated from the following file:

- src/plugin\_win32/include/nsplugindefs.h

## 4.686 nsPluginFullPrint Struct Reference

### Data Fields

- PRBool **pluginPrinted**
- PRBool **printOne**
- void \* **platformPrint**

### 4.686.1 Detailed Description

Definition at line 304 of file nsplugindefs.h.

The documentation for this struct was generated from the following file:

- src/plugin\_win32/include/nsplugindefs.h

## 4.687 nsPluginLogging Class Reference

### Static Public Attributes

- static PRLogModuleInfo \* **gNPNLog**
- static PRLogModuleInfo \* **gNPPLog**
- static PRLogModuleInfo \* **gPluginLog**

### 4.687.1 Detailed Description

Definition at line 85 of file nsPluginLogging.h.

The documentation for this class was generated from the following file:

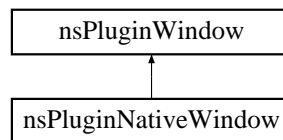
- src/plugin\_win32/include/nsPluginLogging.h

## 4.688 nsPluginNativeWindow Class Reference

base class for native plugin window implementations

```
#include <nsPluginNativeWindow.h>
```

Inheritance diagram for nsPluginNativeWindow:



### Public Member Functions

- nsresult **GetPluginInstance** (nsCOMPtr< **nsIPluginInstance** > &aPluginInstance)  
*!!! CAUTION !!!*
- nsresult **SetPluginInstance** ( **nsIPluginInstance** \*aPluginInstance)
- nsresult **GetPluginWidget** (nsIWidget \*\*aWidget)
- nsresult **SetPluginWidget** (nsIWidget \*aWidget)
- virtual nsresult **CallSetWindow** (nsCOMPtr< **nsIPluginInstance** > &aPluginInstance)

### Protected Attributes

- nsCOMPtr< **nsIPluginInstance** > **mPluginInstance**
- nsCOMPtr< nsIWidget > **mWidget**

### Additional Inherited Members

### 4.688.1 Detailed Description

base class for native plugin window implementations

Definition at line 54 of file nsPluginNativeWindow.h.

### 4.688.2 Member Function Documentation

### 4.688.2.1 GetPluginInstance()

```
nsresult nsPluginNativeWindow::GetPluginInstance (
 nsCOMPtr< nsIPluginInstance > & aPluginInstance) [inline]
```

!!! CAUTION !!!

The base class `|nsPluginWindow|` is defined as a struct in `nsplugindefs.h` (p. ??), thus it does not have a destructor of its own. One should never attempt to delete `|nsPluginNativeWindow|` object instance (or derivatives) using a pointer of `|nsPluginWindow*|` type. Should such necessity occur it must be properly casted first.

Definition at line 76 of file `nsPluginNativeWindow.h`.

The documentation for this class was generated from the following file:

- `src/plugin_win32/include/nsPluginNativeWindow.h`

## 4.689 nsPluginPrint Struct Reference

### Data Fields

- `PRUint16 mode`
- - union {
    - `nsPluginFullPrint fullPrint`
    - `nsPluginEmbedPrint embedPrint`
  - `print`

### 4.689.1 Detailed Description

Definition at line 317 of file `nsplugindefs.h`.

The documentation for this struct was generated from the following file:

- `src/plugin_win32/include/nsplugindefs.h`

## 4.690 nsPluginRect Struct Reference

### Data Fields

- `PRUint16 top`
- `PRUint16 left`
- `PRUint16 bottom`
- `PRUint16 right`



### 4.690.1 Detailed Description

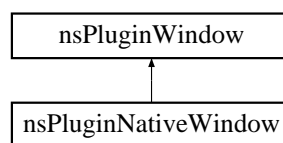
Definition at line 131 of file nsplugindefs.h.

The documentation for this struct was generated from the following file:

- src/plugin\_win32/include/nsplugindefs.h

## 4.691 nsPluginWindow Struct Reference

Inheritance diagram for nsPluginWindow:



### Data Fields

- nsPluginPort \* **window**
- PRInt32 **x**
- PRInt32 **y**
- PRUint32 **width**
- PRUint32 **height**
- **nsPluginRect clipRect**
- nsPluginWindowType **type**

### 4.691.1 Detailed Description

Definition at line 288 of file nsplugindefs.h.

The documentation for this struct was generated from the following file:

- src/plugin\_win32/include/nsplugindefs.h

## 4.692 NurbsTessellator Class Reference

Inheritance diagram for NurbsTessellator:



## Public Member Functions

- **NurbsTessellator** ( **BasicCurveEvaluator** &c, **BasicSurfaceEvaluator** &e)
- void **getnurbsproperty** (long, INREAL \*)
- void **getnurbsproperty** (long, long, INREAL \*)
- void **setnurbsproperty** (long, INREAL)
- void **setnurbsproperty** (long, long, INREAL)
- void **setnurbsproperty** (long, long, INREAL \*)
- void **setnurbsproperty** (long, long, INREAL \*, long, long)
- virtual void **bgnrender** (void)
- virtual void **endrender** (void)
- virtual void **makeobj** (int n)
- virtual void **closeobj** (void)
- virtual void **errorHandler** (int)
- void **bgnsurface** (long)
- void **endsurface** (void)
- void **bgntrim** (void)
- void **endtrim** (void)
- void **bgncurve** (long)
- void **endcurve** (void)
- void **pwlcurve** (long, INREAL[], long, long)
- void **nurbscurve** (long, INREAL[], long, INREAL[], long, long)
- void **nurbssurface** (long, INREAL[], long, INREAL[], long, long, INREAL[], long, long, long)
- void **defineMap** (long, long, long)
- void **redefineMaps** (void)
- void **discardRecording** (void \*)
- void \* **beginRecording** (void)
- void **endRecording** (void)
- void **playRecording** (void \*)
- void **set\_domain\_distance\_u\_rate** (REAL u\_rate)
- void **set\_domain\_distance\_v\_rate** (REAL v\_rate)
- void **set\_is\_domain\_distance\_sampling** (int flag)

## Data Fields

- **Pool** quiltPool

## Protected Attributes

- **Renderhints** renderhints
- **Maplist** maplist
- **Backend** backend

### 4.692.1 Detailed Description

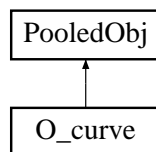
Definition at line 53 of file nurbstess.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/nurbstess.h
- src/libnurbs/internals/nurbsinterfac.cc
- src/libnurbs/internals/nurbstess.cc

## 4.693 O\_curve Struct Reference

Inheritance diagram for O\_curve:



### Data Fields

- - union {
    - O\_nurbcurve \* o\_nurbcurve
    - O\_pwlcurve \* o\_pwlcurve
  - } curve
- Curvetype **curvetype**
- O\_curve \* **next**
- O\_surface \* **owner**
- int **used**
- int **save**
- long **nuid**

### Additional Inherited Members

#### 4.693.1 Detailed Description

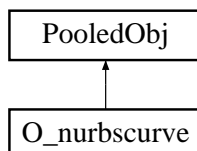
Definition at line 55 of file reader.h.

The documentation for this struct was generated from the following file:

- src/libnurbs/internals/reader.h

## 4.694 O\_nurbcurve Struct Reference

Inheritance diagram for O\_nurbcurve:



### Public Member Functions

- O\_nurbcurve (long \_type)

## Data Fields

- **Quilt \* bezier\_curves**
- long **type**
- REAL **tesselation**
- int **method**
- **O\_nurbcurve \* next**
- int **used**
- int **save**
- **O\_curve \* owner**

### 4.694.1 Detailed Description

Definition at line 70 of file reader.h.

The documentation for this struct was generated from the following file:

- src/libnurbs/internals/reader.h

## 4.695 O\_nurbssurface Struct Reference

Inheritance diagram for O\_nurbssurface:



## Public Member Functions

- **O\_nurbssurface** (long \_type)

## Data Fields

- **Quilt \* bezier\_patches**
- long **type**
- **O\_surface \* owner**
- **O\_nurbssurface \* next**
- int **save**
- int **used**

### 4.695.1 Detailed Description

Definition at line 101 of file reader.h.

The documentation for this struct was generated from the following file:

- src/libnurbs/internals/reader.h

## 4.696 O\_pwlcurve Class Reference

Inheritance diagram for O\_pwlcurve:



### Public Member Functions

- **O\_pwlcurve** (long, long, INREAL \*, long, **TrimVertex** \*)

### Data Fields

- **TrimVertex** \* pts
- int npts
- **O\_pwlcurve** \* next
- int used
- int save
- **O\_curve** \* owner

### 4.696.1 Detailed Description

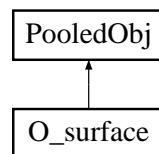
Definition at line 83 of file reader.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/reader.h
- src/libnurbs/internals/reader.cc

## 4.697 O\_surface Struct Reference

Inheritance diagram for O\_surface:



### Data Fields

- **O\_nurbssurface** \* o\_nurbssurface
- **O\_trim** \* o\_trim
- int save
- long nuid

## Additional Inherited Members

### 4.697.1 Detailed Description

Definition at line 112 of file reader.h.

The documentation for this struct was generated from the following file:

- src/libnurbs/internals/reader.h

## 4.698 O\_trim Struct Reference

Inheritance diagram for O\_trim:



### Data Fields

- **O\_curve \* o\_curve**
- **O\_trim \* next**
- **int save**

## Additional Inherited Members

### 4.698.1 Detailed Description

Definition at line 94 of file reader.h.

The documentation for this struct was generated from the following file:

- src/libnurbs/internals/reader.h

## 4.699 ObjectType Struct Reference

### Data Fields

- unsigned char **entityKind**  
*Kind of entity.*
- unsigned char **domain**  
*Domain of entity (air, surface, subsurface, space, etc)*
- unsigned short **country**  
*country to which the design of the entity is attributed*
- unsigned char **category**  
*category of entity*
- unsigned char **subcategory**  
*subcategory of entity*

### 4.699.1 Detailed Description

Definition at line 240 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.700 OneByteChunk Struct Reference

### Data Fields

- char **otherParameters** [1]  
*one byte of arbitrary data*

### 4.700.1 Detailed Description

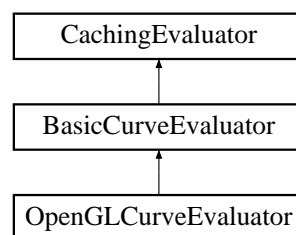
Definition at line 216 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.701 OpenGLCurveEvaluator Class Reference

Inheritance diagram for OpenGLCurveEvaluator:



## Public Member Functions

- void **range1f** (long, REAL \*, REAL \*)
- void **domain1f** (REAL, REAL)
- void **addMap** (CurveMap \*)
- void **enable** (long)
- void **disable** (long)
- void **bgnmap1f** (long)
- void **map1f** (long, REAL, REAL, long, long, REAL \*)
- void **mapgrid1f** (long, REAL, REAL)
- void **mapmesh1f** (long, long, long)
- void **evalpoint1i** (long)
- void **evalcoord1f** (long, REAL)
- void **endmap1f** (void)
- void **bgnline** (void)
- void **endline** (void)
- void **put\_vertices\_call\_back** (int flag)
- void **putCallBack** (GLenum which, \_GLUfuncptr fn)
- void **set\_callback\_userdata** (void \*data)
- void **inMap1f** (int which, int dimension, REAL ulower, REAL uupper, int ustride, int uorder, REAL \*ctlpoints)
- void **inPreEvaluate** (int order, REAL vprime, REAL \*coeff)
- void **inDoDomain1** ( **curveEvalMachine** \*em, REAL u, REAL \*retPoint)
- void **inDoEvalCoord1** (REAL u)
- void **inMapMesh1f** (int umin, int umax)
- void (GLAPIENTRY \*beginCallBackN)(GLenum type)
- void (GLAPIENTRY \*endCallBackN)(void)
- void (GLAPIENTRY \*vertexCallBackN)(const GLfloat \*vert)
- void (GLAPIENTRY \*normalCallBackN)(const GLfloat \*normal)
- void (GLAPIENTRY \*colorCallBackN)(const GLfloat \*color)
- void (GLAPIENTRY \*texcoordCallBackN)(const GLfloat \*texcoord)
- void (GLAPIENTRY \*beginCallBackData)(GLenum type)
- void (GLAPIENTRY \*endCallBackData)(void \*data)
- void (GLAPIENTRY \*vertexCallBackData)(const GLfloat \*vert)
- void (GLAPIENTRY \*normalCallBackData)(const GLfloat \*normal)
- void (GLAPIENTRY \*colorCallBackData)(const GLfloat \*color)
- void (GLAPIENTRY \*texcoordCallBackData)(const GLfloat \*texcoord)
- void **beginCallBack** (GLenum type, void \*data)
- void **endCallBack** (void \*data)
- void **vertexCallBack** (const GLfloat \*vert, void \*data)
- void **normalCallBack** (const GLfloat \*normal, void \*data)
- void **colorCallBack** (const GLfloat \*color, void \*data)
- void **texcoordCallBack** (const GLfloat \*texcoord, void \*data)

## Data Fields

- **curveEvalMachine** em\_vertex
- **curveEvalMachine** em\_normal
- **curveEvalMachine** em\_color
- **curveEvalMachine** em\_texcoord
- int vertex\_flag
- int normal\_flag
- int color\_flag
- int texcoord\_flag
- REAL global\_grid\_u0
- REAL global\_grid\_u1
- int global\_grid\_nu
- void \* data
- void \* userData



## Additional Inherited Members

### 4.701.1 Detailed Description

Definition at line 67 of file glcurveval.h.

The documentation for this class was generated from the following files:

- src/libnurbs/interface/glcurveval.h
- src/libnurbs/interface/glcurveval.cc
- src/libnurbs/interface/incurveeval.cc

## 4.702 OpenGLSurfaceEvaluator Class Reference

Inheritance diagram for OpenGLSurfaceEvaluator:



## Public Member Functions

- void **polymode** (long style)
- void **range2f** (long, REAL \*, REAL \*)
- void **domain2f** (REAL, REAL, REAL, REAL)
- void **addMap** (SurfaceMap \*)
- void **enable** (long)
- void **disable** (long)
- void **bgnmap2f** (long)
- void **map2f** (long, REAL, REAL, long, long, REAL, REAL, long, long, REAL \*)
- void **mapgrid2f** (long, REAL, REAL, long, REAL, REAL)
- void **mapmesh2f** (long, long, long, long, long)
- void **evalcoord2f** (long, REAL, REAL)
- void **evalpoint2i** (long, long)
- void **endmap2f** (void)
- void **bgnline** (void)
- void **endline** (void)
- void **bgnclosedline** (void)
- void **endclosedline** (void)
- void **bgntmesh** (void)
- void **swaptmesh** (void)
- void **endtmesh** (void)
- void **bgnqstrip** (void)
- void **endqstrip** (void)
- void **bgntfan** (void)
- void **endtfan** (void)

- void **evalUStrip** (int n\_upper, REAL v\_upper, REAL \*upper\_val, int n\_lower, REAL v\_lower, REAL \*lower\_val)
- void **evalVStrip** (int n\_left, REAL u\_left, REAL \*left\_val, int n\_right, REAL u\_right, REAL \*right\_val)
- void **coord2f** (REAL, REAL)
- void **point2i** (long, long)
- void **newtmeshvert** (REAL, REAL)
- void **newtmeshvert** (long, long)
- void **putCallback** (GLenum which, \_GLUfuncptr fn)
- int **get\_vertices\_call\_back** ()
- void **put\_vertices\_call\_back** (int flag)
- void **put\_callback\_auto\_normal** (int flag)
- int **get\_callback\_auto\_normal** ()
- void **set\_callback\_userData** (void \*data)
- void **LOD\_eval\_list** (int level)

## Additional Inherited Members

### 4.702.1 Detailed Description

Definition at line 101 of file glsurfeval.h.

The documentation for this class was generated from the following files:

- src/libnurbs/interface/glsurfeval.h
- src/libnurbs/interface/glsurfeval.cc
- src/libnurbs/interface/insurfeval.cc

## 4.703 opened\_file Struct Reference

### Data Fields

- const char \* **fileFileName**
- int **fileDescriptor**
- int **fileDataSize**
- char \* **fileData**
- int **imageHeight**
- int **imageWidth**
- bool **imageAlpha**
- int **imageChannels**

### 4.703.1 Detailed Description

Definition at line 46 of file io\_files.h.

The documentation for this struct was generated from the following file:

- src/lib/io\_files.h

## 4.704 orient\_XYZA Struct Reference

### Data Fields

- GLDOUBLE **x**
- GLDOUBLE **y**
- GLDOUBLE **z**
- GLDOUBLE **a**

### 4.704.1 Detailed Description

Definition at line 35 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.705 Orientation Struct Reference

### Data Fields

- float **psi**
- float **theta**
- float **phi**

### 4.705.1 Detailed Description

Definition at line 209 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.706 particle Struct Reference

### Data Fields

- float **age**
- float **lifespan**
- float **size** [2]
- float **position** [3]
- float **velocity** [3]
- float **origin** [3]
- float **mass**
- float **surfaceArea**

### 4.706.1 Detailed Description

Definition at line 335 of file Component\_ParticleSystems.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_ParticleSystems.c

## 4.707 Patch Class Reference

### Public Member Functions

- **Patch** ( **Quilt** \*, REAL \*, REAL \*, **Patch** \*)
- **Patch** ( **Patch** &, int, REAL, **Patch** \*)
- void **bbox** (void)
- void **clamp** (void)
- void **getstepsize** (void)
- int **cullCheck** (void)
- int **needsSubdivision** (int)
- int **needsSamplingSubdivision** (void)
- int **needsNonSamplingSubdivision** (void)
- int **get\_uorder** ()
- int **get\_vorder** ()

### Friends

- class **Subdivider**
- class **Quilt**
- class **Patchlist**

### 4.707.1 Detailed Description

Definition at line 62 of file patch.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/patch.h
- src/libnurbs/internals/patch.cc

## 4.708 Patchlist Class Reference

### Public Member Functions

- **Patchlist** ( **Quilt** \*, REAL \*, REAL \*)
- **Patchlist** ( **Patchlist** &, int, REAL)
- void **bbox** ()
- int **cullCheck** (void)
- void **getstepsize** (void)
- int **needsNonSamplingSubdivision** (void)
- int **needsSamplingSubdivision** (void)
- int **needsSubdivision** (int)
- REAL **getStepsize** (int)
- void **getRanges** (REAL ranges[4])
- int **get\_uorder** ()
- int **get\_vorder** ()

## Friends

- class **Subdivider**

### 4.708.1 Detailed Description

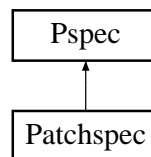
Definition at line 45 of file patchlist.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/patchlist.h
- src/libnurbs/internals/patchlist.cc

## 4.709 Patchspec Struct Reference

Inheritance diagram for Patchspec:



## Public Member Functions

- void **clamp** (REAL)
- void **getstepsize** (REAL)
- void **singleStep** (void)

## Data Fields

- int **order**
- int **stride**

### 4.709.1 Detailed Description

Definition at line 54 of file patch.h.

The documentation for this struct was generated from the following files:

- src/libnurbs/internals/patch.h
- src/libnurbs/internals/patch.cc

## 4.710 pBindable Struct Reference

### Data Fields

- struct **sNavInfo** naviinfo
- **bindablestack** bstack

### 4.710.1 Detailed Description

Definition at line 93 of file Bindable.c.

The documentation for this struct was generated from the following file:

- src/lib/x3d\_parser/Bindable.c

## 4.711 pcollision Struct Reference

### Data Fields

- float \* **prd\_newc\_floats**
- unsigned int **prd\_newc\_floats\_size**
- struct **point\_XYZ** \* **prd\_normals**
- int **prd\_normals\_size**
- struct **point\_XYZ** \* **clippedPoly1**
- int **clippedPoly1Size**
- struct **point\_XYZ** \* **clippedPoly2**
- int **clippedPoly2Size**
- struct **point\_XYZ** \* **clippedPoly3**
- int **clippedPoly3Size**
- struct **point\_XYZ** \* **clippedPoly4**
- int **clippedPoly4Size**
- struct **point\_XYZ** \* **clippedPoly5**
- int **clippedPoly5Size**
- struct **point\_XYZ** **res**
- double **get\_poly\_mindisp**
- struct **sCollisionInfo** **CollisionInfo**
- struct **sFallInfo** **FallInfo**
- bool **OpenCL\_Collision\_Program\_initialized**

### 4.711.1 Detailed Description

Definition at line 80 of file Collision.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Collision.c

## 4.712 pcommon Struct Reference

### Data Fields

- int **itrap**
- float **myFps**
- int **target\_frames\_per\_second**
- char **myMenuStatus** [MAXSTAT]
- char **messagebar** [MAXSTAT]
- char **fpsbar** [16]
- char **distbar** [16]
- char **window\_title** [MAXTITLE]
- int **cursorStyle**
- int **promptForURL**
- int **promptForFile**
- int **sb\_hasString**
- char **buffer** [200]
- int **showConsoleText**
- void \* **colorScheme**
- int **colorSchemeChanged**
- int **pin\_statusbar**
- int **pin\_menubar**
- int **want\_menubar**
- int **want\_statusbar**
- struct **Vector** \* **keyvals**
- float **density\_factor**
- int **pedal**
- int **hover**
- int **jsengine**
- int **jsengine\_variant**
- int **draw\_bounding\_boxes**

### 4.712.1 Detailed Description

Definition at line 58 of file common.c.

The documentation for this struct was generated from the following file:

- src/lib/ui/common.c

## 4.713 pComponent\_CubeMapTexturing Struct Reference

### Data Fields

- **Stack** \* **gencube\_stack**

### 4.713.1 Detailed Description

Definition at line 1152 of file Component\_CubeMapTexturing.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_CubeMapTexturing.c

## 4.714 pComponent\_EnvironSensor Struct Reference

### Data Fields

- int **candoVisibility**

### 4.714.1 Detailed Description

- can we do a VisibiltySensor? Only if we have OpenGL support for OcclusionCulling \*/

Definition at line 50 of file Component\_EnvironSensor.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_EnvironSensor.c

## 4.715 pComponent\_Followers Struct Reference

### Data Fields

- int **something**

### 4.715.1 Detailed Description

Definition at line 55 of file Component\_Followers.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_Followers.c

## 4.716 pComponent\_Geometry3D Struct Reference

### Data Fields

- int **junk**
- struct **sCollisionGeometry** collisionSphere
- struct **sCollisionGeometry** collisionCylinder
- struct **sCollisionGeometry** collisionCone



### 4.716.1 Detailed Description

Definition at line 78 of file Component\_Geometry3D.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_Geometry3D.c

## 4.717 pComponent\_Geospatial Struct Reference

### Data Fields

- int **geoLodLevel**
- void \* **gcgdpars** [50]
- **Stack** \* **planet\_stack**
- **Stack** \* **current\_planet\_stack**

### 4.717.1 Detailed Description

Definition at line 485 of file Component\_Geospatial.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_Geospatial.c

## 4.718 pComponent\_HAnim Struct Reference

### Data Fields

- struct **X3D\_HAnimHumanoid** \* **HH**
- double **HHMatrix** [16]

### 4.718.1 Detailed Description

Definition at line 243 of file Component\_HAnim.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_HAnim.c

## 4.719 pComponent\_KeyDevice Struct Reference

### Data Fields

- struct **Vector** \* **keySink**

### 4.719.1 Detailed Description

Definition at line 213 of file Component\_KeyDevice.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_KeyDevice.c

## 4.720 pComponent\_Layering Struct Reference

### Data Fields

- int **layerId**
- int **saveActive**
- int **binding\_stack\_set**
- struct **X3D\_Node** \* **layersetnode**

### 4.720.1 Detailed Description

Definition at line 66 of file Component\_Layering.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_Layering.c

## 4.721 pComponent\_Layout Struct Reference

### Data Fields

- **Stack** \* **layout\_scale\_stack**

### 4.721.1 Detailed Description

Definition at line 76 of file Component\_Layout.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_Layout.c

## 4.722 pComponent\_NURBS Struct Reference

### Data Fields

- void \* **nada**

### 4.722.1 Detailed Description

Definition at line 56 of file Component\_NURBS.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_NURBS.c

## 4.723 pComponent\_ParticleSystems Struct Reference

### Data Fields

- int **something**

### 4.723.1 Detailed Description

Definition at line 57 of file Component\_ParticleSystems.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_ParticleSystems.c

## 4.724 pComponent\_Picking Struct Reference

### Data Fields

- **Stack \* stack\_nodesdistance**
- **Stack \* stack\_intersections**
- **Stack \* stack\_pointsinside**

### 4.724.1 Detailed Description

Definition at line 60 of file Component\_Picking.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_Picking.c

## 4.725 pComponent\_ProgrammableShaders Struct Reference

### Data Fields

- **Stack \* effect\_stack**
- int **effectCount**

### 4.725.1 Detailed Description

Definition at line 108 of file Component\_ProgrammableShaders.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_ProgrammableShaders.c

## 4.726 pComponent\_PTM Struct Reference

### Data Fields

- struct **Vector** \* **projector\_stack**
- int **currentlyWorkingOn**
- int **textureInProcess**
- struct **projective\_Texdata** **data** [4]

### 4.726.1 Detailed Description

Definition at line 89 of file Component\_PTM.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_PTM.c

## 4.727 pComponent\_Rendering Struct Reference

### Data Fields

- **Stack** \* **clipplane\_stack**
- float **clipplanes** [4 \*FW\_MAXCLIPPLANES]

### 4.727.1 Detailed Description

Definition at line 48 of file Component\_Rendering.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_Rendering.c

## 4.728 pComponent\_RigidBodyPhysics Struct Reference

### Data Fields

- int **something**

### 4.728.1 Detailed Description

Definition at line 64 of file Component\_RigidBodyPhysics.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_RigidBodyPhysics.c

## 4.729 pComponent\_Shape Struct Reference

### Data Fields

- struct **matpropstruct** **appearanceProperties**
- struct **X3D\_Node** \* **this\_textureTransform**
- struct **X3D\_TwoSidedMaterial** \* **material\_twoSided**
- struct **X3D\_Material** \* **material\_oneSided**
- struct **X3D\_Node** \* **userShaderNode**
- int **modulation**

### 4.729.1 Detailed Description

Definition at line 49 of file Component\_Shape.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_Shape.c

## 4.730 pComponent\_Sound Struct Reference

### Data Fields

- int **soundWarned**
- int **SoundSourceNumber**
- void \* **alContext**
- float **AC\_LastDuration** [50]

### 4.730.1 Detailed Description

Definition at line 97 of file Component\_Sound.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_Sound.c

## 4.731 pComponent\_Text Struct Reference

### Data Fields

- FT\_Library **library**
- FT\_Face **font\_face** [num\_fonts]
- int **font\_state** [num\_fonts]
- FT\_Glyph **glyphs** [MAX\_GLYPHS]
- int **cur\_glyph**
- int **TextVerbose**
- int **rowvec\_allocn**
- **row32** \* **rowvec**
- FT\_Outline\_Funcs **FW\_outline\_interface**
- char \* **font\_directory**
- char **thisfontname** [fp\_name\_len]
- double **pen\_x**
- double **pen\_y**
- double **shrink\_x**
- double **shrink\_y**
- float **TextZdist**
- double **size**
- double **pointsize**
- int **myff**
- int **FW\_RIA** [500]
- int **FW\_RIA\_indx**
- struct **X3D\_PolyRep** \* **FW\_rep\_**
- int **FW\_pointctr**
- int **indx\_count**
- int **coordmaxsize**
- int **cindexmaxsize**
- int **contour\_started**
- FT\_Vector **last\_point**
- int **FW\_Vertex**
- int **started**
- GLfloat \* **textpanel\_vert**
- GLfloat \* **textpanel\_tex**
- GLushort \* **textpanel\_ind**
- int **textpanel\_size**
- int **textpanel\_vert\_size**
- int **textpanel\_tex\_size**
- int **textpanel\_ind\_size**
- struct **Vector** \* **font\_table**
- struct **Vector** \* **atlas\_table**
- GLuint **positionLoc**
- GLuint **texCoordLoc**
- GLuint **textureLoc**
- GLuint **color4fLoc**
- GLuint **textureID**
- GLuint **blendLoc**
- GLuint **modelviewLoc**
- GLuint **projectionLoc**
- GLuint **programObject**

### 4.731.1 Detailed Description

Definition at line 233 of file Component\_Text.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_Text.c

## 4.732 pComponent\_VolumeRendering Struct Reference

### Data Fields

- GLuint **front\_texture**
- GLuint **back\_texture**
- GLint **ifbobo**
- GLint **idepthbo**
- int **width**
- int **height**
- GLfloat \* **quad**

### 4.732.1 Detailed Description

Definition at line 184 of file Component\_VolumeRendering.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_VolumeRendering.c

## 4.733 pConsoleMessage Struct Reference

### Data Fields

- int **androidFreeSlot**
- char \*\* **androidMessageSlot**
- int **androidHaveUnreadMessages**
- char **FWbuffer** [STRING\_LENGTH]
- int **maxLineLength**
- int **maxLines**
- int **tabSpaces**
- void(\* **callback** [2])(char \*)
- void(\* **callbackB** [4])(void \*, char \*)
- void \* **dataB** [4]
- int **nbackB**

#### 4.733.1 Detailed Description

Definition at line 55 of file ConsoleMessage.c.

The documentation for this struct was generated from the following file:

- src/lib/main/ConsoleMessage.c

### 4.734 pCParse Struct Reference

#### Data Fields

- int **ijunk**

#### 4.734.1 Detailed Description

Definition at line 50 of file CParse.c.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/CParse.c

### 4.735 pCParserParser Struct Reference

#### Data Fields

- char **fw\_outline** [2000]
- int **foundInputErrors**
- int **latest\_protoDefNumber**

#### 4.735.1 Detailed Description

Definition at line 66 of file CParserParser.c.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/CParserParser.c



## 4.736 pCRoutes Struct Reference

### Data Fields

- struct **FirstStruct** \* **ClockEvents**
- int **num\_ClockEvents**
- int **size\_ClockEvents**
- int **CRoutes\_Initiated**
- int **CRoutes\_Count**
- int **CRoutes\_MAX**
- int **initialEventBeforeRoutesCount**
- int **preRouteTableSize**
- struct **initialRouteStruct** \* **preEvents**
- pthread\_mutex\_t **preRouteLock**
- struct **Vector** \* **routesToRegister**
- pthread\_mutex\_t **insertRouteLock**
- int **thisIntTimeStamp**
- struct **CRStruct** \* **CRoutes**
- struct **Vector** \* **ScriptControl**
- int **JSMMaxScript**
- struct **CRjsnameStruct** \* **JSparamnames**

### 4.736.1 Detailed Description

Definition at line 217 of file CRoutes.c.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/CRoutes.c

## 4.737 pCScripts Struct Reference

### Data Fields

- int **handleCnt**

### 4.737.1 Detailed Description

Definition at line 72 of file CScripts.c.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/CScripts.c

## 4.738 pCursorDraw Struct Reference

### Data Fields

- GLuint **textureID**
- int **done**

### 4.738.1 Detailed Description

Definition at line 192 of file CursorDraw.c.

The documentation for this struct was generated from the following file:

- src/lib/ui/CursorDraw.c

## 4.739 pdisplay Struct Reference

### Data Fields

- freewrl\_params\_t **params**
- s\_renderer\_capabilities\_t **rdr\_caps**
- char **myMenuStatus** [MAXSTAT]
- int **multi\_window\_capable**

### 4.739.1 Detailed Description

Definition at line 80 of file display.c.

The documentation for this struct was generated from the following file:

- src/lib/display.c

## 4.740 Pdu Struct Reference

### Data Fields

- unsigned char **protocolVersion**  
*The version of the protocol.*
- unsigned char **exercisID**  
*Exercise ID.*
- unsigned char **pduType**  
*Type of pdu, unique for each PDU class.*
- unsigned char **protocolFamily**  
*value that refers to the protocol family, eg SimulationManagement, et*
- unsigned int **timestamp**  
*Timestamp value.*
- unsigned short **length**  
*Length, in bytes, of the PDU.*
- short **padding**  
*zero-filled array of padding*

### 4.740.1 Detailed Description

Definition at line 597 of file DIS.h.

### 4.740.2 Field Documentation

#### 4.740.2.1 protocolVersion

```
unsigned char Pdu::protocolVersion
```

The version of the protocol.

5=DIS-1995, 6=DIS-1998.

Definition at line 599 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.741 PduContainer Struct Reference

### Data Fields

- int **numberOfPdus**  
*Number of PDUs in the container list.*
- void \* **pdus**  
*record sets*

### 4.741.1 Detailed Description

Definition at line 668 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.742 pEAI\_C\_CommonFunctions Struct Reference

### Data Fields

- struct **VRMLParser** \* **parser**

### 4.742.1 Detailed Description

Definition at line 53 of file EAI\_C\_CommonFunctions.c.

The documentation for this struct was generated from the following file:

- src/lib/input/EAI\_C\_CommonFunctions.c

## 4.743 pEAICore Struct Reference

### Data Fields

- pthread\_mutex\_t **eaibufferlock**

### 4.743.1 Detailed Description

Definition at line 160 of file EAIEventsIn.c.

The documentation for this struct was generated from the following file:

- src/lib/input/EAIEventsIn.c

## 4.744 pEAIEventsIn Struct Reference

### Data Fields

- int **oldCount**
- int **waiting\_for\_anchor**
- struct X3D\_Anchor **EAI\_AnchorNode**

### 4.744.1 Detailed Description

Definition at line 129 of file EAIEventsIn.c.

The documentation for this struct was generated from the following file:

- src/lib/input/EAIEventsIn.c

## 4.745 pEAHelpers Struct Reference

### Data Fields

- struct Vector \* **EAINodeIndex**

### 4.745.1 Detailed Description

Definition at line 97 of file `EAIHelpers.c`.

The documentation for this struct was generated from the following file:

- `src/lib/input/EAIHelpers.c`

## 4.746 `pedal_state` Struct Reference

### Data Fields

- `int x`
- `int y`
- `int rx`
- `int ry`
- `int isDown`
- `int initialized`

### 4.746.1 Detailed Description

Definition at line 2990 of file `MainLoop.c`.

The documentation for this struct was generated from the following file:

- `src/lib/main/MainLoop.c`

## 4.747 `pFrustum` Struct Reference

### Data Fields

- `GLuint * OccQueries`
- `GLuint potentialOccluderCount`
- `void ** occluderNodePointer`
- `GLuint OccQuerySize`
- `GLuint OccResultsAvailable`

### 4.747.1 Detailed Description

Definition at line 88 of file `Frustum.c`.

The documentation for this struct was generated from the following file:

- `src/lib/opengl/Frustum.c`

## 4.748 pict Struct Reference

### Data Fields

- unsigned int **temp\_ref**
- unsigned int **code\_type**
- unsigned int **vbv\_delay**
- int **full\_pel\_forw\_vector**
- unsigned int **forw\_r\_size**
- unsigned int **forw\_f**
- int **full\_pel\_back\_vector**
- unsigned int **back\_r\_size**
- unsigned int **back\_f**
- char \* **extra\_info**
- char \* **ext\_data**
- char \* **user\_data**

### 4.748.1 Detailed Description

Definition at line 131 of file mpeg\_berkley.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/mpeg\_berkley.h

## 4.749 pict\_image Struct Reference

### Data Fields

- unsigned char \* **luminance**
- unsigned char \* **Cr**
- unsigned char \* **Cb**
- unsigned char \* **display**
- int **locked**
- TimeStamp **show\_time**

### 4.749.1 Detailed Description

Definition at line 105 of file mpeg\_berkley.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/mpeg\_berkley.h

## 4.750 Planet Struct Reference

### Data Fields

- int **ID**
- **Stack** \* **gegs**
- struct **SFVec4d** **autoOrient**
- struct **SFVec3d** **autoOrigin**
- int **autoOriginSet**

### 4.750.1 Detailed Description

Definition at line 465 of file `Component_Geospatial.c`.

The documentation for this struct was generated from the following file:

- `src/lib/scenegraph/Component_Geospatial.c`

## 4.751 pLoadTextures Struct Reference

### Data Fields

- **s\_list\_t** \* **texture\_request\_list**
- bool **loader\_waiting**
- **s\_list\_t** \* **texture\_list**
- int **TextureParsing**

### 4.751.1 Detailed Description

- is the texture thread up and running yet? \*/

Definition at line 100 of file `LoadTextures.c`.

The documentation for this struct was generated from the following file:

- `src/lib/OpenGL/LoadTextures.c`

## 4.752 pMainloop Struct Reference

### Data Fields

- int **onScreen**
- int **doEvents**
- char \* **PluginFullPath**
- struct **Vector** \* **SensorEvents**
- GLint **viewPort2** [10]
- GLint **viewpointScreenX** [2]
- GLint **viewpointScreenY** [2]
- int **maxbuffers**
- int **bufferarray** [2]
- double **BrowserStartTime**
- double **BrowserInitTime**
- int **keypress\_wait\_for\_settle**
- char \* **keypress\_string**
- unsigned int **loop\_count**
- unsigned int **once**
- unsigned int **slowloop\_count**
- unsigned int **total\_loop\_count**
- int **lastDeltax**
- int **lastDeltay**
- int **lastxx**
- int **lastyy**
- int **ntouch**
- unsigned int **currentTouch**
- struct **Touch** **touchlist** [20]
- int **EMULATE\_MULTITOUCH**
- FILE \* **logfile**
- FILE \* **logerr**
- char \* **logfname**
- int **logging**
- int **keySensorMode**
- int **draw\_initialized**
- int **keywait**
- char **keywaitstring** [25]
- int **fps\_sleep\_remainder**
- double **screenorientationmatrix** [16]
- double **viewtransformmatrix** [16]
- double **posorimatrix** [16]
- double **stereooffsetmatrix** [2][16]
- int **targets\_initialized**
- **targetwindow** **cwindows** [4]
- void \* **hyper\_switch** [4]
- int **hyper\_case** [4]
- int **nwindow**
- int **windex**
- **Stack** \* **\_vportstack**
- **Stack** \* **\_stagesstack**
- **Stack** \* **\_framebufferstack**
- struct **Vector** \* **contenttype\_registry**
- int **mouseDown**
- int **mouseOver**
- struct **pedal\_state** **pedalstate**



### 4.752.1 Detailed Description

Definition at line 2997 of file MainLoop.c.

The documentation for this struct was generated from the following file:

- src/lib/main/MainLoop.c

## 4.753 Point Struct Reference

### Data Fields

- float **x**  
x
- float **y**  
y
- double **x**
- double **y**

### 4.753.1 Detailed Description

Definition at line 642 of file DIS.h.

The documentation for this struct was generated from the following files:

- src/lib/DIS/DIS.h
- src/SSR/point\_in\_poly.c
- src/SSR/SSRServer.c

## 4.754 point\_XYZ Struct Reference

### Data Fields

- GLDOUBLE **x**
- GLDOUBLE **y**
- GLDOUBLE **z**

### 4.754.1 Detailed Description

Definition at line 34 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.755 point\_XYZ3 Struct Reference

### Data Fields

- struct **point\_XYZ** p1
- struct **point\_XYZ** p2
- struct **point\_XYZ** p3

### 4.755.1 Detailed Description

Definition at line 65 of file RenderFuncs.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/RenderFuncs.c

## 4.756 pointer2pointer Struct Reference

### Data Fields

- struct **X3D\_Node** \* pp
- struct **X3D\_Node** \* pn

### 4.756.1 Detailed Description

Definition at line 4428 of file CParseParser.c.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/CParseParser.c

## 4.757 PointObjectStatePdu Struct Reference

### Data Fields

- struct **SyntheticEnvironmentFamilyPdu** mySyntheticEnvironmentFamilyPdu
- struct **EntityID** objectID  
*Object in synthetic environment.*
- struct **EntityID** referencedObjectID  
*Object with which this point object is associated.*
- unsigned short **updateNumber**  
*unique update number of each state transition of an object*
- unsigned char **forceID**  
*force ID*
- unsigned char **modifications**

- modifications*
- struct **ObjectType** **objectType**  
*Object type.*
- struct **Vector3Double** **objectLocation**  
*Object location.*
- struct **Orientation** **objectOrientation**  
*Object orientation.*
- double **objectAppearance**  
*Object apperance.*
- struct **SimulationAddress** **requesterID**  
*requesterID*
- struct **SimulationAddress** **receivingID**  
*receiver ID*
- unsigned int **pad2**  
*padding*

#### 4.757.1 Detailed Description

Definition at line 1359 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.758 polygon Struct Reference

### Data Fields

- int **n**
- double \* **pts**

#### 4.758.1 Detailed Description

Definition at line 767 of file SSRServer.c.

The documentation for this struct was generated from the following file:

- src/SSR/SSRServer.c

## 4.759 polyrep\_combiner\_data Struct Reference

### Data Fields

- float \* **coords**
- int \* **counter**
- int \* **ria**
- int \* **riaindex**

### 4.759.1 Detailed Description

Definition at line 971 of file headers.h.

The documentation for this struct was generated from the following file:

- src/lib/main/headers.h

## 4.760 Pool Class Reference

### Public Member Functions

- **Pool** (int, int, const char \*)
- void \* **new\_buffer** (void)
- void **free\_buffer** (void \*)
- void **clear** (void)

### Protected Types

- enum **Magic** { **is\_allocated** = 0xf3a1 , **is\_free** = 0xf1a2 }

### Protected Attributes

- **Buffer** \* **freelist**
- char \* **blocklist** [NBLOCKS]
- int **nextblock**
- char \* **curblock**
- int **buffersize**
- int **nextsize**
- int **nextfree**
- int **initsize**
- const char \* **name**
- Magic **magic**

### 4.760.1 Detailed Description

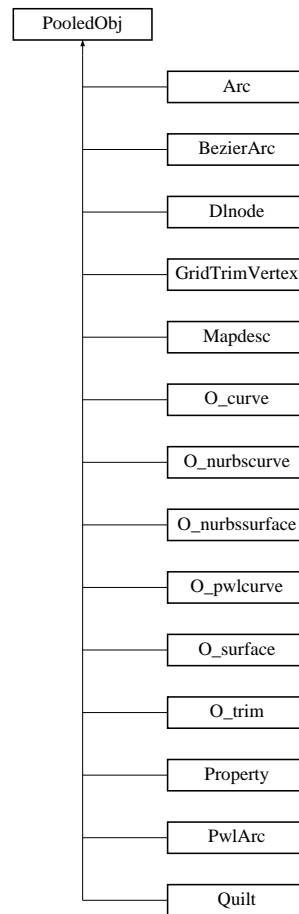
Definition at line 50 of file bufpool.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/bufpool.h
- src/libnurbs/internals/bufpool.cc

## 4.761 PooledObj Class Reference

Inheritance diagram for PooledObj:



### Public Member Functions

- void \* **operator new** (size\_t, **Pool** &)
- void \* **operator new** (size\_t, void \*)
- void \* **operator new** (size\_t s)
- void **operator delete** (void \*)
- void **operator delete** (void \*, **Pool** &)
- void **deleteMe** ( **Pool** &)

### 4.761.1 Detailed Description

Definition at line 118 of file bufpool.h.

The documentation for this class was generated from the following file:

- src/libnurbs/internals/bufpool.h

## 4.762 pOpenGL\_Utils Struct Reference

### Data Fields

- struct **Vector** \* **linearNodeTable**
- int **potentialHoleCount**
- float **cc\_red**
- float **cc\_green**
- float **cc\_blue**
- float **cc\_alpha**
- pthread\_mutex\_t **memtablelock**
- MATRIX4 **FW\_ModelView** [MAX\_LARGE\_MATRIX\_STACK]
- MATRIX4 **FW\_ProjectionView** [MAX\_SMALL\_MATRIX\_STACK]
- MATRIX4 **FW\_TextureView** [MAX\_SMALL\_MATRIX\_STACK]
- int **modelviewTOS**
- int **projectionviewTOS**
- int **textureviewTOS**
- int **whichMode**
- GLDOUBLE \* **currentMatrix**
- struct **Vector** \* **myShaderTable**
- int **userDefinedShaderCount**
- char \* **userDefinedFragmentShader** [MAX\_USER\_DEFINED\_SHADERS]
- char \* **userDefinedVertexShader** [MAX\_USER\_DEFINED\_SHADERS]
- int **shadingStyle**
- int **maxStackUsed**

### 4.762.1 Detailed Description

Definition at line 124 of file OpenGL\_Utils.c.

The documentation for this struct was generated from the following file:

- src/lib/opengl/OpenGL\_Utils.c

## 4.763 pPluginSocket Struct Reference

### Data Fields

- pthread\_mutex\_t **mylocker**
- fd\_set **rfds**
- struct timeval **tv**
- char **return\_url** [FILENAME\_MAX]

### 4.763.1 Detailed Description

Definition at line 62 of file PluginSocket.c.

The documentation for this struct was generated from the following file:

- src/lib/plugin/PluginSocket.c

## 4.764 ppluginUtils Struct Reference

### Data Fields

- int **waitingForURLtoLoad**
- resource\_item\_t \* **plugin\_res**

### 4.764.1 Detailed Description

Definition at line 70 of file pluginUtils.c.

The documentation for this struct was generated from the following file:

- src/lib/plugin/pluginUtils.c

## 4.765 pProdCon Struct Reference

### Data Fields

- struct **Vector** \* **viewpointNodes**
- struct **Vector** \* **fogNodes**
- struct **Vector** \* **backgroundNodes**
- struct **Vector** \* **navigationNodes**
- int **\_P\_LOCK\_VAR**
- s\_list\_t \* **resource\_list\_to\_parse**
- s\_list\_t \* **frontend\_list\_to\_get**
- int **frontend\_gets\_files**
- struct **PSstruct** **psp**
- int **inputThreadParsing**
- int **haveParsedCParsed**
- int **frontend\_res\_count**

### 4.765.1 Detailed Description

Definition at line 121 of file ProdCon.c.

The documentation for this struct was generated from the following file:

- src/lib/main/ProdCon.c

## 4.766 PQhandleElem Struct Reference

### Data Fields

- PQkey **key**
- PQhandle **node**

### 4.766.1 Detailed Description

Definition at line 84 of file priorityq-heap.h.

The documentation for this struct was generated from the following file:

- src/libtess/priorityq-heap.h

## 4.767 PQnode Struct Reference

### Data Fields

- PQhandle **handle**

### 4.767.1 Detailed Description

Definition at line 83 of file priorityq-heap.h.

The documentation for this struct was generated from the following file:

- src/libtess/priorityq-heap.h

## 4.768 pRasterFont Struct Reference

### Data Fields

- struct **X3D\_Text** myText
- struct **X3D\_FontStyle** myFont
- bool **rf\_initialized**
- int **xf\_color**
- vec4f\_t **xf\_colors** [3]

### 4.768.1 Detailed Description

Definition at line 57 of file RasterFont.c.

The documentation for this struct was generated from the following file:

- src/lib/opengl/RasterFont.c



## 4.769 pRenderFuncs Struct Reference

### Data Fields

- int **profile\_entry\_count**
- struct **profile\_entry** **profile\_entries** [100]
- int **profiling\_on**
- float **light\_linAtten** [MAX\_LIGHT\_STACK]
- float **light\_constAtten** [MAX\_LIGHT\_STACK]
- float **light\_quadAtten** [MAX\_LIGHT\_STACK]
- float **light\_spotCutoffAngle** [MAX\_LIGHT\_STACK]
- float **light\_spotBeamWidth** [MAX\_LIGHT\_STACK]
- shaderVec4 **light\_amb** [MAX\_LIGHT\_STACK]
- shaderVec4 **light\_dif** [MAX\_LIGHT\_STACK]
- shaderVec4 **light\_pos** [MAX\_LIGHT\_STACK]
- shaderVec4 **light\_spec** [MAX\_LIGHT\_STACK]
- shaderVec4 **light\_spotDir** [MAX\_LIGHT\_STACK]
- float **light\_radius** [MAX\_LIGHT\_STACK]
- GLint **lightType** [MAX\_LIGHT\_STACK]
- int **nextFreeLight**
- int **refreshLightUniforms**
- unsigned int **currentLoop**
- unsigned int **lastLoop**
- unsigned int **sendCount**
- GLint **lightOnOff** [MAX\_LIGHT\_STACK]
- GLint **lightChanged** [MAX\_LIGHT\_STACK]
- GLint **lastShader**
- void \* **empty\_group**
- struct **point\_XYZ** **hyper\_r1** **hyper\_r2**
- struct **currayhit** **rayph**
- struct **X3D\_Node** \* **rootNode**
- struct **Vector** \* **libraries**
- struct **X3D\_Anchor** \* **AnchorsAnchor**
- struct **currayhit** **rayHit**
- struct **trenderstate** **renderstate**
- int **renderLevel**
- GLint **currentShader**
- **Stack** \* **render\_geom\_stack**
- **Stack** \* **sensor\_stack**
- **Stack** \* **ray\_stack**
- **Stack** \* **shaderflags\_stack**
- **Stack** \* **fog\_stack**
- **Stack** \* **localLight\_stack**
- struct **point\_XYZ3** **t\_r123**
- struct **point\_XYZ** **hp**
- **Stack** \* **usehits\_stack**
- **Stack** \* **usehitsB\_stack**
- **Stack** \* **pickablegroupdata\_stack**
- **Stack** \* **draw\_call\_params\_stack**

### 4.769.1 Detailed Description

Definition at line 88 of file RenderFuncs.c.

The documentation for this struct was generated from the following file:

- `src/lib/scenegraph/RenderFuncs.c`

## 4.770 pRenderTextures Struct Reference

### Data Fields

- struct **multiTexParams textureParameterStack** [MAX\_MULTITEXTURE]

### 4.770.1 Detailed Description

Definition at line 55 of file RenderTextures.c.

The documentation for this struct was generated from the following file:

- `src/lib/opengl/RenderTextures.c`

## 4.771 presources Struct Reference

### Data Fields

- struct **Vector \* resStack**
- **resource\_item\_t \* lastBaseResource**

### 4.771.1 Detailed Description

Definition at line 57 of file resources.c.

The documentation for this struct was generated from the following file:

- `src/lib/resources.c`

## 4.772 primStream Class Reference

### Public Member Functions

- **primStream** (Int sizeLengths, Int sizeVertices)
- Int **get\_n\_prims** ()
- Int **get\_type** (Int i)
- Int **get\_length** (Int i)
- Real \* **get\_vertices** ()
- void **begin** ()
- void **insert** (Real u, Real v)
- void **insert** (Real v[2])
- void **end** (Int type)
- Int **num\_triangles** ()
- void **triangle** (Real A[2], Real B[2], Real C[2])
- void **print** ()
- void **draw** ()

### 4.772.1 Detailed Description

Definition at line 44 of file primitiveStream.h.

The documentation for this class was generated from the following files:

- src/libnurbs/nurbtess/primitiveStream.h
- src/libnurbs/nurbtess/primitiveStream.cc

## 4.773 PriorityQ Struct Reference

### Data Fields

- **PQnode** \* **nodes**
- **PQhandleElem** \* **handles**
- long **size**
- long **max**
- **PQhandle** **freeList**
- int **initialized**
- int(\* **leq** )(PQkey key1, PQkey key2)
- **PriorityQHeap** \* **heap**
- **PQkey** \* **keys**
- **PQkey** \*\* **order**
- **PQhandle** **size**
- **PQhandle** **max**

### 4.773.1 Detailed Description

Definition at line 86 of file priorityq-heap.h.

The documentation for this struct was generated from the following files:

- src/libtess/priorityq-heap.h
- src/libtess/priorityq-sort.h
- src/libtess/priorityq.h

## 4.774 profile\_entry Struct Reference

### Data Fields

- char \* **name**
- double **start**
- double **accum**
- int **hits**

### 4.774.1 Detailed Description

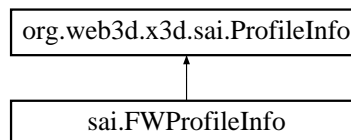
Definition at line 58 of file RenderFuncs.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/RenderFuncs.c

## 4.775 org.web3d.x3d.sai.ProfileInfo Interface Reference

Inheritance diagram for org.web3d.x3d.sai.ProfileInfo:



### Public Member Functions

- String **getName** ()
- String **getTitle** ()
- **ComponentInfo[]** **getComponents** ()
- String **toX3DString** ()

### 4.775.1 Detailed Description

Definition at line 3 of file ProfileInfo.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/ProfileInfo.java

## 4.776 proftablestruct Struct Reference

### Data Fields

- int **profileName**
- const int \* **profileTable**
- int **level**

### 4.776.1 Detailed Description

Definition at line 237 of file capabilitiesHandler.c.

The documentation for this struct was generated from the following file:

- src/lib/x3d\_parser/capabilitiesHandler.c

## 4.777 projective\_Texdata Struct Reference

### Data Fields

- struct **Uni\_String** \* **des**
- GLDOUBLE **TenLinearGexMat** [16]

### 4.777.1 Detailed Description

Definition at line 74 of file Component\_PTM.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_PTM.c

## 4.778 projector\_tuple Struct Reference

### Data Fields

- struct **Uni\_String** \* **des**
- GLDOUBLE **TenLinearGexMat** [16]
- int **backCull**
- int **global**
- int **type**
- GLuint **texture**
- struct **X3D\_Node** \* **textureNode**

### 4.778.1 Detailed Description

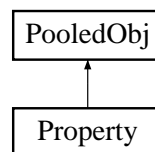
Definition at line 79 of file Component\_PTM.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_PTM.c

## 4.779 Property Struct Reference

Inheritance diagram for Property:



### Public Member Functions

- **Property** (long \_type, long \_tag, INREAL \_value)
- **Property** (long \_tag, INREAL \_value)

### Data Fields

- long **type**
- long **tag**
- REAL **value**
- int **save**

### 4.779.1 Detailed Description

Definition at line 120 of file reader.h.

The documentation for this struct was generated from the following file:

- src/libnurbs/internals/reader.h

## 4.780 PropulsionSystemData Struct Reference

### Data Fields

- float **powerSetting**  
*powerSetting*
- float **engineRpm**  
*engine RPMs*

### 4.780.1 Detailed Description

Definition at line 650 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.781 ProtoDefinition Struct Reference

### Data Fields

- indexT **protoDefNumber**
- struct **Vector** \* **iface**
- struct **Vector** \* **deconstructedProtoBody**
- int **estimatedBodyLen**
- char \* **protoName**
- int **isCopy**
- int **isExtern**

### 4.781.1 Detailed Description

Definition at line 92 of file CParseParser.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/CParseParser.h

## 4.782 ProtoFieldDecl Struct Reference

### Data Fields

- indexT **mode**
- indexT **type**
- indexT **name**
- char \* **cname**
- char \* **fieldString**
- BOOL **alreadySet**
- union **anyVrml** **defaultVal**
- struct **Vector** \* **scriptDests**

### 4.782.1 Detailed Description

Definition at line 38 of file CParseParser.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/CParseParser.h

## 4.783 pSensInterps Struct Reference

### Data Fields

- int **stub**

### 4.783.1 Detailed Description

Definition at line 64 of file SensInterps.c.

The documentation for this struct was generated from the following file:

- src/lib/input/SensInterps.c

## 4.784 pSnapshot Struct Reference

### Data Fields

- int **snapRawCount**
- int **snapGoodCount**
- int **snapGif**
- char \* **snapsnapB**
- const char \* **default\_seqtmp**
- char \* **seqtmp**
- int **doSnapshot**
- int **doPrintshot**
- int **savedSnapshot**
- int **modeTesting**

### 4.784.1 Detailed Description

Definition at line 58 of file Snapshot.c.

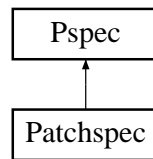
The documentation for this struct was generated from the following file:

- src/lib/main/Snapshot.c



## 4.785 Pspec Struct Reference

Inheritance diagram for Pspec:



### Data Fields

- REAL **range** [3]
- REAL **sidestep** [2]
- REAL **stepsize**
- REAL **minstepsize**
- int **needsSubdivision**

#### 4.785.1 Detailed Description

Definition at line 46 of file patch.h.

The documentation for this struct was generated from the following file:

- src/libnurbs/internals/patch.h

## 4.786 PSStruct Struct Reference

### Data Fields

- unsigned **type**
- char \* **inp**
- void \* **ptr**
- unsigned **ofs**
- int **zeroBind**
- int **bind**
- char \* **path**
- int \* **comp**
- char \* **fieldname**
- int **jparamcount**
- struct **Uni\_String** \* **sv**

#### 4.786.1 Detailed Description

Definition at line 103 of file ProdCon.c.

The documentation for this struct was generated from the following file:

- src/lib/main/ProdCon.c

## 4.787 pstatusbar Struct Reference

### Data Fields

- int **initDone**
- int **screenWidth**
- int **screenHeight**
- double **screenRatio**

### 4.787.1 Detailed Description

Definition at line 65 of file `statusbar.c`.

The documentation for this struct was generated from the following file:

- `src/lib/ui/statusbar.c`

## 4.788 pStreamPoly Struct Reference

### Data Fields

- int **Sindex**
- int **Tindex**
- GLfloat **minVals** [3]
- GLfloat **Ssize**

### 4.788.1 Detailed Description

Definition at line 83 of file `StreamPoly.c`.

The documentation for this struct was generated from the following file:

- `src/lib/scenegraph/StreamPoly.c`

## 4.789 pTess Struct Reference

### Data Fields

- int **global\_IFS\_Coords** [TESS\_MAX\_COORDS]

### 4.789.1 Detailed Description

Definition at line 68 of file `Tess.c`.

The documentation for this struct was generated from the following file:

- `src/lib/scenegraph/Tess.c`

## 4.790 pTextures Struct Reference

### Data Fields

- struct **Vector** \* **activeTextureTable**
- **textureTableIndexStruct\_s** \* **loadThisTexture**
- int **currentlyWorkingOn**
- int **textureInProcess**

### 4.790.1 Detailed Description

Definition at line 96 of file Textures.c.

The documentation for this struct was generated from the following file:

- src/lib/OpenGL/Textures.c

## 4.791 pViewer Struct Reference

### Data Fields

- int **examineCounter**
- int **viewer\_initialized**
- **X3D\_Viewer\_Walk** viewer\_walk
- **X3D\_Viewer\_Examine** viewer\_examine
- **X3D\_Viewer\_Fly** viewer\_fly
- **X3D\_Viewer\_Spherical** viewer\_ypz
- FILE \* **exfly\_in\_file**
- struct **point\_XYZ** viewer\_lastP
- int **exflyMethod**
- int **StereoInitializedOnce**
- GLboolean **acMask** [3][3]
- double **old2new** [16]
- double **identity** [16]
- double **tickFrac**
- **Quaternion** sq
- double **sp** [3]
- int **keychord**
- int **dragchord**

### 4.791.1 Detailed Description

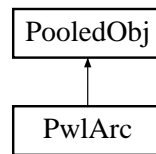
Definition at line 80 of file Viewer.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Viewer.c

## 4.792 PwIArc Class Reference

Inheritance diagram for PwIArc:



### Public Member Functions

- **PwIArc** (int, **TrimVertex** \*)
- **PwIArc** (int, **TrimVertex** \*, long)

### Data Fields

- **TrimVertex** \* **pts**
- int **npts**
- long **type**

### 4.792.1 Detailed Description

Definition at line 44 of file pwIarc.h.

The documentation for this class was generated from the following file:

- src/libnurbs/internals/pwIarc.h

## 4.793 pX3DParser Struct Reference

### Data Fields

- struct **VRMLLexer** \* **myLexer**
- **Stack** \* **DEFedNodes**
- int **CDATA\_TextMallocSize**
- int **in3\_3\_fieldValue**
- int **in3\_3\_fieldIndex**
- int **X3DParserRecurseLevel**
- XML\_Parser **x3dparser** [PROTOINSTANCE\_MAX\_LEVELS]
- XML\_Parser **currentX3DParser**
- int **currentParserMode** [PROTOINSTANCE\_MAX\_LEVELS]
- int **currentParserModelIndex**
- struct **xml\_user\_data** \* **user\_data**

### 4.793.1 Detailed Description

Definition at line 259 of file X3DParser.c.

The documentation for this struct was generated from the following file:

- src/lib/x3d\_parser/X3DParser.c

## 4.794 quaternion Struct Reference

### Data Fields

- double **w**
- double **x**
- double **y**
- double **z**

### 4.794.1 Detailed Description

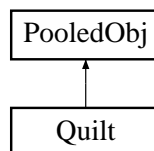
Definition at line 70 of file quaternion.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/quaternion.h

## 4.795 Quilt Class Reference

Inheritance diagram for Quilt:



### Public Member Functions

- **Quilt** ( **Mapdesc** \*)
- void **deleteMe** ( **Pool** &)
- void **toBezier** ( **Knotvector** &, INREAL \*, long)
- void **toBezier** ( **Knotvector** &, **Knotvector** &, INREAL \*, long)
- void **select** (REAL \*, REAL \*)
- int **getDimension** (void)
- void **download** ( **Backend** &)
- void **downloadAll** (REAL \*, REAL \*, **Backend** &)
- int **isCulled** (void)
- void **getRange** (REAL \*, REAL \*, **Flist** &, **Flist** &)
- void **getRange** (REAL \*, REAL \*, int, **Flist** &)
- void **getRange** (REAL \*, REAL \*, **Flist** &)
- void **findRates** ( **Flist** &slist, **Flist** &tlist, REAL[2])
- void **findSampleRates** ( **Flist** &slist, **Flist** &tlist)
- void **show** ()

## Data Fields

- **Mapdesc** \* **mapdesc**
- REAL \* **cpts**
- **Quiltspec** **qspec** [MAXDIM]
- **Quiltspec\_ptr** **eqspec**
- **Quilt** \* **next**

### 4.795.1 Detailed Description

Definition at line 64 of file quilt.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/quilt.h
- src/libnurbs/internals/quilt.cc
- src/libnurbs/internals/tobezier.cc

## 4.796 Quiltspec Struct Reference

### Data Fields

- int **stride**
- int **width**
- int **offset**
- int **order**
- int **index**
- int **bdry** [2]
- REAL **step\_size**
- Knot \* **breakpoints**

### 4.796.1 Detailed Description

Definition at line 51 of file quilt.h.

The documentation for this struct was generated from the following file:

- src/libnurbs/internals/quilt.h

## 4.797 RadioCommunicationsFamilyPdu Struct Reference

### Data Fields

- struct **Pdu** **myPdu**
- struct **EntityID** **entityId**  
*ID of the entity that is the source of the communication.*
- unsigned short **radioId**  
*particular radio within an entity*

### 4.797.1 Detailed Description

Definition at line 876 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.798 RadioEntityType Struct Reference

### Data Fields

- unsigned char **entityKind**  
*Kind of entity.*
- unsigned char **domain**  
*Domain of entity (air, surface, subsurface, space, etc)*
- unsigned short **country**  
*country to which the design of the entity is attributed*
- unsigned char **category**  
*category of entity*
- unsigned char **nomenclatureVersion**  
*specific info based on subcategory field*
- unsigned short **nomenclature**

### 4.798.1 Detailed Description

Definition at line 168 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.799 rb1 Struct Reference

### Data Fields

- int **head**
- int **tail**
- int **noOfElements**
- void \* **data**

### 4.799.1 Detailed Description

Definition at line 8 of file ringbuf.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/ringbuf.h

## 4.800 ReceiverPdu Struct Reference

### Data Fields

- struct **RadioCommunicationsFamilyPdu** **myRadioCommunicationsFamilyPdu**
- unsigned short **receiverState**  
*encoding scheme used, and enumeration*
- unsigned short **padding1**  
*padding*
- float **receivedPoser**  
*received power*
- struct **EntityID** **transmitterEntityId**  
*ID of transmitter.*
- unsigned short **transmitterRadioid**  
*ID of transmitting radio.*

### 4.800.1 Detailed Description

Definition at line 1854 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.801 RecordQueryReliablePdu Struct Reference

### Data Fields

- struct **SimulationManagementWithReliabilityFamilyPdu** **mySimulationManagementWithReliability**↔  
**FamilyPdu**
- unsigned int **requestID**  
*request ID*
- unsigned char **requiredReliabilityService**  
*level of reliability service used for this transaction*
- unsigned short **pad1**  
*padding.*
- unsigned char **pad2**  
*padding*
- unsigned short **eventType**  
*event type*
- unsigned int **time**  
*time*
- unsigned int **numberOfRecords**  
*numberOfRecords*
- void \* **recordIDs**  
*record IDs*



### 4.801.1 Detailed Description

Definition at line 1777 of file DIS.h.

### 4.801.2 Field Documentation

#### 4.801.2.1 pad1

```
unsigned short RecordQueryReliablePdu::pad1
```

padding.

The spec is unclear and contradictory here.

Definition at line 1784 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.802 RecordSet Struct Reference

### Data Fields

- unsigned int **recordID**  
*record ID*
- unsigned int **recordSetSerialNumber**  
*record set serial number*
- unsigned short **recordLength**  
*record length*
- unsigned short **recordCount**  
*record count*
- unsigned short **recordValues**  
^^^ *This is wrong—variable sized data records*
- unsigned char **pad4**  
^^^ *This is wrong—variable sized padding*

### 4.802.1 Detailed Description

Definition at line 421 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.803 rectBlock Class Reference

### Public Member Functions

- **rectBlock** ( **gridBoundaryChain** \*left, **gridBoundaryChain** \*right, Int beginVline, Int endVline)
- Int **get\_upGridLineIndex** ()
- Int **get\_lowGridLineIndex** ()
- Int \* **get\_leftIndices** ()
- Int \* **get\_rightIndices** ()
- Int **num\_quads** ()
- void **print** ()
- void **draw** (Real \*u\_values, Real \*v\_values)

### 4.803.1 Detailed Description

Definition at line 39 of file rectBlock.h.

The documentation for this class was generated from the following files:

- src/libnurbs/nurbtess/rectBlock.h
- src/libnurbs/nurbtess/rectBlock.cc

## 4.804 rectBlockArray Class Reference

### Public Member Functions

- **rectBlockArray** (Int s)
- Int **get\_n\_elements** ()
- **rectBlock** \* **get\_element** (Int i)
- void **insert** ( **rectBlock** \*newBlock)
- Int **num\_quads** ()
- void **print** ()
- void **draw** (Real \*u\_values, Real \*v\_values)

### 4.804.1 Detailed Description

Definition at line 61 of file rectBlock.h.

The documentation for this class was generated from the following files:

- src/libnurbs/nurbtess/rectBlock.h
- src/libnurbs/nurbtess/rectBlock.cc

## 4.805 reflexChain Class Reference

### Public Member Functions

- **reflexChain** (Int size, Int isIncreasing)
- void **insert** (Real u, Real v)
- void **insert** (Real v[2])
- void **processNewVertex** (Real v[2], **primStream** \*pStream)
- void **outputFan** (Real v[2], **primStream** \*pStream)
- void **processNewVertex** (Real v[2], **Backend** \*backend)
- void **outputFan** (Real v[2], **Backend** \*backend)
- void **print** ()

### 4.805.1 Detailed Description

Definition at line 43 of file monoTriangulation.h.

The documentation for this class was generated from the following files:

- src/libnurbs/nurbtess/monoTriangulation.h
- src/libnurbs/internals/monoTriangulationBackend.cc
- src/libnurbs/nurbtess/monoTriangulation.cc

## 4.806 Relationship Struct Reference

### Data Fields

- unsigned short **nature**  
*Nature of join.*
- unsigned short **position**  
*position of join*

### 4.806.1 Detailed Description

Definition at line 320 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.807 RemoveEntityPdu Struct Reference

### Data Fields

- struct **SimulationManagementFamilyPdu** mySimulationManagementFamilyPdu
- unsigned int **requestID**  
*Identifier for the request.*

### 4.807.1 Detailed Description

Definition at line 971 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.808 RemoveEntityReliablePdu Struct Reference

### Data Fields

- struct **SimulationManagementWithReliabilityFamilyPdu** **mySimulationManagementWithReliabilityFamilyPdu**↔
- unsigned char **requiredReliabilityService**  
*level of reliability service used for this transaction*
- unsigned short **pad1**  
*padding*
- unsigned char **pad2**  
*padding*
- unsigned int **requestID**  
*Request ID.*

### 4.808.1 Detailed Description

Definition at line 1943 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.809 Renderhints Class Reference

### Public Member Functions

- void **init** (void)
- int **isProperty** (long)
- REAL **getProperty** (long)
- void **setProperty** (long, REAL)

### Data Fields

- REAL **display\_method**
- REAL **errorchecking**
- REAL **subdivisions**
- REAL **tmp1**
- int **displaydomain**
- int **maxsubdivisions**
- int **wiretris**
- int **wirequads**

### 4.809.1 Detailed Description

Definition at line 41 of file renderhints.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/renderhints.h
- src/libnurbs/internals/renderhints.cc

## 4.810 RepairCompletePdu Struct Reference

### Data Fields

- struct **LogisticsFamilyPdu** **myLogisticsFamilyPdu**
- struct **EntityID** **receivingEntityID**  
*Entity that is receiving service.*
- struct **EntityID** **repairingEntityID**  
*Entity that is supplying.*
- unsigned short **repair**  
*Enumeration for type of repair.*
- short **padding2**  
*padding, number prevents conflict with superclass ivar name*

### 4.810.1 Detailed Description

Definition at line 721 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.811 RepairResponsePdu Struct Reference

### Data Fields

- struct **LogisticsFamilyPdu** **myLogisticsFamilyPdu**
- struct **EntityID** **receivingEntityID**  
*Entity that is receiving service.*
- struct **EntityID** **repairingEntityID**  
*Entity that is supplying.*
- unsigned char **repairResult**  
*Result of repair operation.*
- short **padding1**  
*padding*
- char **padding2**  
*padding*

### 4.811.1 Detailed Description

Definition at line 783 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.812 resource\_item Struct Reference

### Data Fields

- struct **resource\_item** \* **parent**
- **s\_list\_t** \* **children**
- bool **network**
- bool **new\_root**
- resource\_type\_t **type**
- resource\_status\_t **status**
- resource\_actions\_t **actions**
- bool **complete**
- void \* **ectx**
- void \* **whereToPlaceData**
- int **offsetFromWhereToPlaceData**
- int **textureNumber**
- **s\_list\_t** \* **m\_request**
- char \* **URLrequest**
- char \* **URLbase**
- char \* **temp\_dir**
- char \* **afterPoundCharacters**
- char \* **parsed\_request**
- char \* **actual\_file**
- void \* **cached\_files**
- void \* **openned\_files**
- char **four\_first\_bytes**[4]
- resource\_media\_type\_t **media\_type**
- int **treat\_as\_root**
- pthread\_t \* **\_loadThread**
- void \* **tg**
- int(\* **\_loadFunc**)(void \*)

### 4.812.1 Detailed Description

Definition at line 99 of file resources.h.

The documentation for this struct was generated from the following file:

- src/lib/resources.h

## 4.813 ResupplyCancelPdu Struct Reference

### Data Fields

- struct **LogisticsFamilyPdu** **myLogisticsFamilyPdu**
- struct **EntityID** **receivingEntityID**  
*Entity that is receiving service.*
- struct **EntityID** **supplyingEntityID**  
*Entity that is supplying.*

### 4.813.1 Detailed Description

Definition at line 1205 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.814 ResupplyOfferPdu Struct Reference

### Data Fields

- struct **LogisticsFamilyPdu** **myLogisticsFamilyPdu**
- struct **EntityID** **receivingEntityID**  
*Entity that is receiving service.*
- struct **EntityID** **supplyingEntityID**  
*Entity that is supplying.*
- unsigned char **numberOfSupplyTypes**  
*how many supplies are being offered*
- short **padding1**  
*padding*
- char **padding2**  
*padding*
- void \* **supplies**

### 4.814.1 Detailed Description

Definition at line 1300 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.815 ResupplyReceivedPdu Struct Reference

### Data Fields

- struct **LogisticsFamilyPdu** **myLogisticsFamilyPdu**
- struct **EntityID** **receivingEntityID**  
*Entity that is receiving service.*
- struct **EntityID** **supplyingEntityID**  
*Entity that is supplying.*
- unsigned char **numberOfSupplyTypes**  
*how many supplies are being offered*
- short **padding1**  
*padding*
- char **padding2**  
*padding*
- void \* **supplies**

### 4.815.1 Detailed Description

Definition at line 978 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.816 row32 Struct Reference

### Data Fields

- int **allocn**
- int **len32**
- unsigned int \* **str32**
- int **iglyphstartindex**
- double **hrowsize**
- double **vcolsize**
- double **widestchar**
- **chardata** \* **chr**

### 4.816.1 Detailed Description

Definition at line 211 of file Component\_Text.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_Text.c



## 4.817 `s_renderer_capabilities_t` Struct Reference

### Data Fields

- `const char *` **renderer**
- `const char *` **version**
- `const char *` **vendor**
- `const char *` **extensions**
- `float` **versionf**
- `bool` **have\_GL\_VERSION\_1\_1**
- `bool` **have\_GL\_VERSION\_1\_2**
- `bool` **have\_GL\_VERSION\_1\_3**
- `bool` **have\_GL\_VERSION\_1\_4**
- `bool` **have\_GL\_VERSION\_1\_5**
- `bool` **have\_GL\_VERSION\_2\_0**
- `bool` **have\_GL\_VERSION\_2\_1**
- `bool` **have\_GL\_VERSION\_3\_0**
- `bool` **av\_multitexture**
- `bool` **av\_npot\_texture**
- `bool` **av\_texture\_rect**
- `bool` **av\_occlusion\_q**
- `int` **texture\_units**
- `int` **runtime\_max\_texture\_size**
- `int` **system\_max\_texture\_size**
- `float` **anisotropicDegree**
- `GLboolean` **quadBuffer**

### 4.817.1 Detailed Description

Definition at line 454 of file `display.h`.

The documentation for this struct was generated from the following file:

- `src/lib/display.h`

## 4.818 `s_shader_capabilities` Struct Reference

### Data Fields

- `GLint` **compiledOK**
- `GLuint` **myShaderProgram**
- `GLint` **myMaterialAmbient**
- `GLint` **myMaterialDiffuse**
- `GLint` **myMaterialSpecular**
- `GLint` **myMaterialShininess**
- `GLint` **myMaterialEmission**
- `GLint` **myMaterialBackAmbient**
- `GLint` **myMaterialBackDiffuse**
- `GLint` **myMaterialBackSpecular**
- `GLint` **myMaterialBackShininess**

- GLint **myMaterialBackEmission**
- GLint **myPointSize**
- bool **haveLightInShader**
- GLint **lightcount**
- GLint **lightType** [MAX\_LIGHTS]
- GLint **lightAmbient** [MAX\_LIGHTS]
- GLint **lightDiffuse** [MAX\_LIGHTS]
- GLint **lightSpecular** [MAX\_LIGHTS]
- GLint **lightPosition** [MAX\_LIGHTS]
- GLint **lightSpotDir** [MAX\_LIGHTS]
- GLint **lightAtten** [MAX\_LIGHTS]
- GLint **lightSpotCutoffAngle** [MAX\_LIGHTS]
- GLint **lightSpotBeamWidth** [MAX\_LIGHTS]
- GLint **lightRadius** [MAX\_LIGHTS]
- GLint **ModelViewMatrix**
- GLint **ProjectionMatrix**
- GLint **NormalMatrix**
- GLint **ModelViewInverseMatrix**
- GLint **TextureMatrix** [MAX\_MULTITEXTURE]
- GLint **Vertices**
- GLint **Normals**
- GLint **Colours**
- GLint **TexCoords** [MAX\_MULTITEXTURE]
- GLint **FogCoords**
- GLint **textureUnit** [4]
- GLint **projTexGenMatCam** [16]
- GLint **pbackCull** [16]
- GLint **ntdesc** [16]
- GLint **pCount**
- GLint **tunits** [16]
- GLint **modes** [16]
- GLint **sources** [16]
- GLint **funcs** [16]
- GLint **TextureUnit** [MAX\_MULTITEXTURE]
- GLint **TextureMode** [MAX\_MULTITEXTURE]
- GLint **TextureSource** [MAX\_MULTITEXTURE]
- GLint **TextureFunction** [MAX\_MULTITEXTURE]
- GLint **textureCount**
- GLint **multitextureColor**
- GLint **tex3dTiles**
- GLint **tex3dUseVertex**
- GLint **repeatSTR**
- GLint **magFilter**
- GLint **hatchColour**
- GLint **hatchPercent**
- GLint **hatchScale**
- GLint **filledBool**
- GLint **hatchedBool**
- GLint **algorithm**
- GLint **texCoordGenType**
- GLint **fogColor**
- GLint **fogvisibilityRange**
- GLint **fogScale**
- GLint **fogType**
- GLint **fogHaveCoords**
- GLint **clipplanes**
- GLint **nclipplanes**

### 4.818.1 Detailed Description

Definition at line 345 of file display.h.

The documentation for this struct was generated from the following file:

- src/lib/display.h

## 4.819 freeWRLSAI\_cpp::saiBrowser Class Reference

### Public Member Functions

- virtual **saiBrowser** \* **getBrowser** (const SAIParameter \*pParams)=0
- virtual **saiBrowser** \* **createBrowser** (const SAIParameter \*pParams, std::map< std::string, std::string > \*pProperties)=0
- virtual const char \* **getName** ()=0
- virtual const char \* **getVersion** ()=0
- virtual float **getCurrentSpeed** ()=0
- virtual float **getCurrentFrameRate** ()=0
- virtual void **replaceWorld** (const char \*sceneURI)=0
- virtual void **loadURL** (const char \*sceneURL)=0
- virtual void **setDescription** (const char \*strDescription)=0
- virtual **saiScene** \* **createX3DFromString** (const char \*strX3DSource)=0
- virtual void **updateControl** (unsigned int nAction)=0
- virtual void **registerBrowserInterest** (unsigned int nAction, **saiBrowser** \*pRequester)=0
- virtual std::map< std::string, std::string > \* **getRenderingProperties** ()=0
- virtual std::map< std::string, std::string > \* **getBrowserProperties** ()=0
- virtual void **changeViewpoint** (unsigned int nAction)=0
- virtual void **print** ()=0
- virtual void **dispose** ()=0
- virtual bool **setBrowserOption** (const char \*strOptionName, void \*pOptionValue)=0
- virtual const std::vector< **saiProfileDeclaration** \* > \* **getSupportedProfiles** ()=0
- virtual const **saiProfileDeclaration** \* **getProfile** (const char \*strProfileName)=0
- virtual const std::map< std::string, **saiComponent** \* > \* **getSupportedComponents** ()=0
- virtual const **saiComponent** \* **getComponent** (const char \*strComponentName)=0
- virtual const **saiExecutionContext** \* **getExecutionContext** ()=0
- virtual **saiExecutionContext** \* **createScene** ()=0
- virtual **saiExecutionContext** \* **importDocument** (const char \*DOMdocURI)=0
- virtual **saiExecutionContext** \* **createX3DFromStream** (void \*pStreambuf)=0
- virtual **saiExecutionContext** \* **createX3DFromUrl** (const char \*srcURL)=0

### 4.819.1 Detailed Description

Definition at line 32 of file SAIBrowser.h.

The documentation for this class was generated from the following file:

- src/SAI\_Cpp/SAIBrowser.h

## 4.820 freeWRLSAI\_cpp::saiComponent Class Reference

### Public Member Functions

- virtual const char \* **getComponentName** ()=0

### 4.820.1 Detailed Description

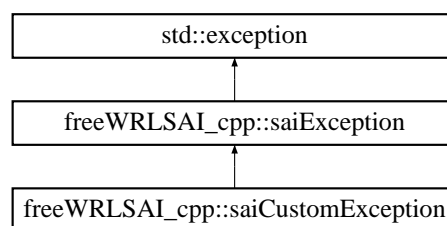
Definition at line 47 of file SAIGlobals.h.

The documentation for this class was generated from the following file:

- src/SAI\_Cpp/SAIGlobals.h

## 4.821 freeWRLSAI\_cpp::saiCustomException Class Reference

Inheritance diagram for freeWRLSAI\_cpp::saiCustomException:



### Public Member Functions

- **saiCustomException** (const char \*strWhat, const char \*strFile, int strLine, const char \*strFunc)
- virtual const char \* **what** ()

### Data Fields

- std::string **m\_strWhat**

### Additional Inherited Members

### 4.821.1 Detailed Description

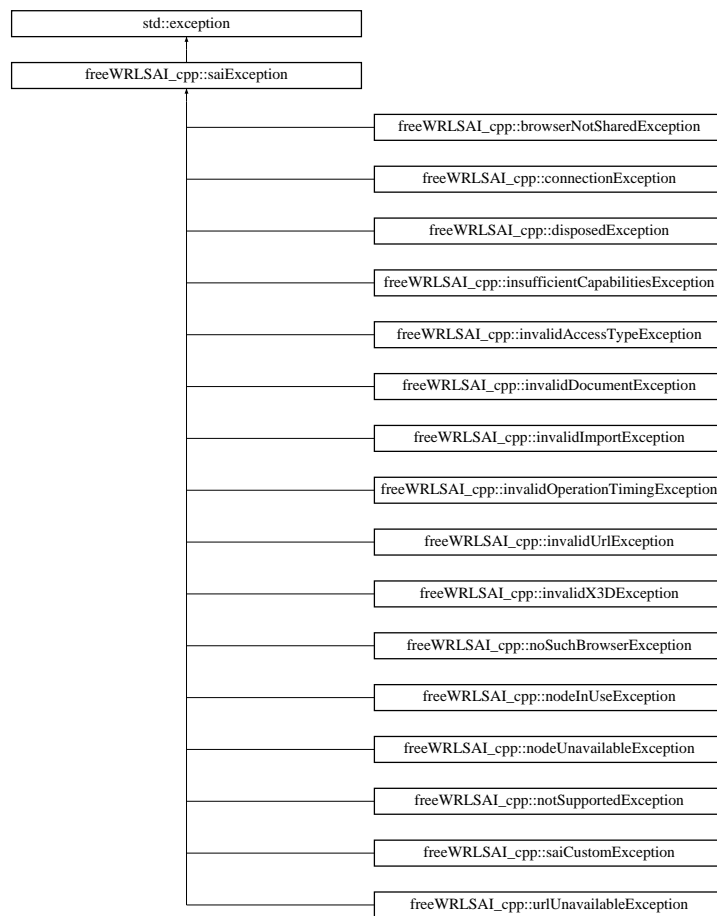
Definition at line 310 of file SAlexception.h.

The documentation for this class was generated from the following file:

- src/SAI\_Cpp/SAlexception.h

## 4.822 freeWRLSAI\_cpp::saiException Class Reference

Inheritance diagram for freeWRLSAI\_cpp::saiException:



### Public Member Functions

- virtual const char \* **what** ()
- virtual int **GetError** ()

### Protected Attributes

- int **m\_nErrorCode**

#### 4.822.1 Detailed Description

Definition at line 56 of file SAexception.h.

The documentation for this class was generated from the following file:

- src/SAI\_Cpp/SAexception.h

## 4.823 freeWRLSAI\_cpp::saiExecutionContext Class Reference

### Public Types

- enum **saiContextType** { **saiGenericContext** = 0 , **saiSceneContext** , **saiUndefinedContext** }

### Public Member Functions

- virtual saiContextType **getContextType** ()=0
- virtual const char \* **getSpecificationVersion** ()=0
- virtual int **getEncoding** ()=0
- virtual const char \* **getWorldURL** ()=0
- virtual **saiNode** \* **getNode** (const char \*strNodeName, int nAction)=0
- virtual **saiNode** \* **createNode** (const char \*strNodeType)=0
- virtual **saiNode** \* **createProto** (const char \*strProtoName)=0
- virtual saiProtoDeclaration \* **getProtoDeclaration** (const char \*strProtoName)=0
- virtual void **protoDeclarationHandling** (const char \*strProtoName, **saiNode** \*pNode, int nAction)=0
- virtual saiProtoDeclaration \* **getExternProtoDeclaration** (const char \*strProtoName)=0
- virtual void **externProtoDeclarationHandling** (const char \*strProtoName, **saiNode** \*pNode, int nAction)=0
- virtual std::vector< **saiNode** \* > \* **getRootNodes** ()=0
- virtual std::vector< **saiRoute** \* > \* **getRoutes** ()=0
- virtual void **dispose** ()=0
- virtual **saiProfileDeclaration** \* **getProfile** ()=0
- virtual std::map< std::string, **saiComponent** \* > \* **getComponents** ()=0

### 4.823.1 Detailed Description

Definition at line 45 of file SAExecutionContext.h.

The documentation for this class was generated from the following file:

- src/SAI\_Cpp/SAExecutionContext.h

## 4.824 freeWRLSAI\_cpp::saiField Class Reference

### Public Types

- enum **saiFieldAccess** { **initializeOnly** = 0 , **inputOnly** , **outputOnly** , **inputOutput** }

### Public Member Functions

- virtual saiFieldAccess **getAccessType** ()=0
- virtual int **getType** ()=0
- virtual const char \* **getName** ()=0
- virtual void **dispose** ()=0
- virtual const saiFieldValuePtr **getValue** ()=0
- virtual void **setValue** (const saiFieldValuePtr pValue)=0

### 4.824.1 Detailed Description

Definition at line 35 of file SAIField.h.

The documentation for this class was generated from the following file:

- src/SAI\_Cpp/SAIField.h

## 4.825 freeWRLSAI\_cpp::saiNode Class Reference

### Public Member Functions

- virtual const char \* **getTypeName** ()=0
- virtual const char \* **getType** ()=0
- virtual **saiField** \* **getField** (const char \*strFieldName)=0
- virtual std::vector< **saiField** \* > \* **getFieldDefinitions** (const char \*strNodeType)=0
- virtual void **dispose** ()=0

### 4.825.1 Detailed Description

Definition at line 31 of file SAINode.h.

The documentation for this class was generated from the following file:

- src/SAI\_Cpp/SAINode.h

## 4.826 freeWRLSAI\_cpp::saiProfileDeclaration Class Reference

### Public Member Functions

- virtual const char \* **getProfileName** ()=0
- virtual std::map< std::string, **saiComponent** \* > **getComponentDeclaration** ()=0

### 4.826.1 Detailed Description

Definition at line 55 of file SAIGlobals.h.

The documentation for this class was generated from the following file:

- src/SAI\_Cpp/SAIGlobals.h

## 4.827 freeWRLSAI\_cpp::saiProto Class Reference

### Public Types

- enum **saiLoadState** { **NOT\_STARTED** = 0 , **IN\_PROGRESS** , **COMPLETE** , **FAILED** }

## Public Member Functions

- virtual bool **isExternproto** ()=0
- virtual **saiNode** \* **createInstance** (const char \*strProtoDeclaration)=0
- virtual std::vector< **saiField** \* > \* **getFieldDefinitions** ()=0
- virtual saiLoadState **checkLoadState** ()=0
- virtual void **requestImmediateLoad** ()=0

### 4.827.1 Detailed Description

Definition at line 32 of file SAIproto.h.

The documentation for this class was generated from the following file:

- src/SAI\_Cpp/SAIproto.h

## 4.828 freeWRLSAI\_cpp::saiRoute Class Reference

### Public Member Functions

- virtual const **saiNode** \* **getSourceNode** ()=0
- virtual const **saiField** \* **getSourceField** ()=0
- virtual const **saiNode** \* **getDestinationNode** ()=0
- virtual const **saiField** \* **getDestinationField** ()=0
- virtual void **dispose** ()=0

### 4.828.1 Detailed Description

Definition at line 32 of file SAIroute.h.

The documentation for this class was generated from the following file:

- src/SAI\_Cpp/SAIroute.h

## 4.829 freeWRLSAI\_cpp::saiScene Class Reference

### Public Member Functions

- virtual const char \* **getMetaData** (const char \*strKey)=0
- virtual void **setMetaData** (const char \*strKey, const char \*strMetadata)=0
- virtual void **rootNodeHandling** (const **saiNode** \*pTargetNode, int nAction)=0
- virtual void **AddRootNode** (const **saiNode** \*pNodeToAdd)=0
- virtual void **RemoveRootNode** (const **saiNode** \*pNodeToRemove)=0



### 4.829.1 Detailed Description

Definition at line 34 of file SAIScene.h.

The documentation for this class was generated from the following file:

- src/SAI\_Cpp/SAIScene.h

## 4.830 sampledLine Class Reference

### Public Member Functions

- **sampledLine** (Int n\_points)
- **sampledLine** (Int n\_points, Real pts[ ][2])
- **sampledLine** (Real pt1[2], Real pt2[2])
- void **init** (Int n\_points, Real2 \*pts)
- void **setPoint** (Int i, Real p[2])
- **sampledLine** \* **insert** ( **sampledLine** \*nline)
- void **deleteList** ()
- Int **get\_npoints** ()
- Real2 \* **get\_points** ()
- void **tessellate** (Real u\_reso, Real v\_reso)
- void **tessellateAll** (Real u\_reso, Real v\_reso)
- void **print** ()

### Data Fields

- **sampledLine** \* **next**

### 4.830.1 Detailed Description

Definition at line 38 of file sampledLine.h.

The documentation for this class was generated from the following files:

- src/libnurbs/nurbtess/sampledLine.h
- src/libnurbs/nurbtess/sampledLine.cc

## 4.831 sCollisionGeometry Struct Reference

### Data Fields

- struct **point\_XYZ** \* **pts**
- struct **point\_XYZ** \* **tpts**
- ctri \* **tris**
- int **ntris**
- cquad \* **quads**
- int **nquads**
- int **npts**
- double **smin** [3]
- double **smax** [3]

### 4.831.1 Detailed Description

Definition at line 64 of file Component\_Geometry3D.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_Geometry3D.c

## 4.832 sCollisionInfo Struct Reference

### Data Fields

- struct **point\_XYZ** **Offset**
- int **Count**
- double **Maximum2**

### 4.832.1 Detailed Description

Definition at line 50 of file Collision.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Collision.h

## 4.833 screentextdata Struct Reference

### Data Fields

- int **nalloc**
- int **nrow**
- **row32** \* **rowvec**
- void \* **atlasfont**
- float **size**
- float **faceheight**
- float **emsize**

### 4.833.1 Detailed Description

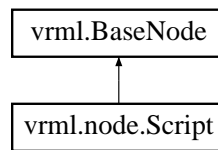
Definition at line 223 of file Component\_Text.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_Text.c

## 4.834 vrml.node.Script Class Reference

Inheritance diagram for vrml.node.Script:



### Public Member Functions

- void **initialize** ()
- final **Field** **getEventOut** (String eventOutName)
- void **processEvents** (final int count, final **Event** events[])
- void **processEvent** ( **Event** event)
- void **eventsProcessed** ()
- void **shutdown** ()

### Protected Member Functions

- final **Field** **getField** (String fieldName)
- final **Field** **getEventIn** (String eventInName)

### 4.834.1 Detailed Description

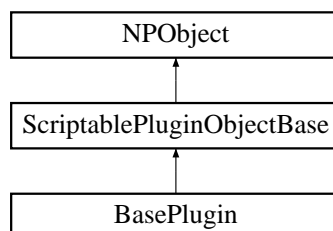
Definition at line 10 of file Script.java.

The documentation for this class was generated from the following file:

- src/java/vrml/node/Script.java

## 4.835 ScriptableObjectBase Class Reference

Inheritance diagram for ScriptableObjectBase:



## Public Member Functions

- **ScriptableObjectBase** ( **NPP** npp)
- virtual void **Invalidate** ()
- virtual bool **HasMethod** (NPIdentifier name)
- virtual bool **Invoke** (NPIdentifier name, const **NPVariant** \*args, uint32\_t argCount, **NPVariant** \*result)
- virtual bool **InvokeDefault** (const **NPVariant** \*args, uint32\_t argCount, **NPVariant** \*result)
- virtual bool **HasProperty** (NPIdentifier name)
- virtual bool **GetProperty** (NPIdentifier name, **NPVariant** \*result)
- virtual bool **SetProperty** (NPIdentifier name, const **NPVariant** \*value)
- virtual bool **RemoveProperty** (NPIdentifier name)
- virtual bool **Enumerate** (NPIdentifier \*\*identifier, uint32\_t \*count)
- virtual bool **Construct** (const **NPVariant** \*args, uint32\_t argCount, **NPVariant** \*result)

## Static Public Member Functions

- static void **\_Deallocate** ( **NPObj** \*npobj)
- static void **\_Invalidate** ( **NPObj** \*npobj)
- static bool **\_HasMethod** ( **NPObj** \*npobj, NPIdentifier name)
- static bool **\_Invoke** ( **NPObj** \*npobj, NPIdentifier name, const **NPVariant** \*args, uint32\_t argCount, **NPVariant** \*result)
- static bool **\_InvokeDefault** ( **NPObj** \*npobj, const **NPVariant** \*args, uint32\_t argCount, **NPVariant** \*result)
- static bool **\_HasProperty** ( **NPObj** \*npobj, NPIdentifier name)
- static bool **\_GetProperty** ( **NPObj** \*npobj, NPIdentifier name, **NPVariant** \*result)
- static bool **\_SetProperty** ( **NPObj** \*npobj, NPIdentifier name, const **NPVariant** \*value)
- static bool **\_RemoveProperty** ( **NPObj** \*npobj, NPIdentifier name)
- static bool **\_Enumerate** ( **NPObj** \*npobj, NPIdentifier \*\*identifier, uint32\_t \*count)
- static bool **\_Construct** ( **NPObj** \*npobj, const **NPVariant** \*args, uint32\_t argCount, **NPVariant** \*result)

## Protected Attributes

- **NPP** mNpp

## Additional Inherited Members

### 4.835.1 Detailed Description

Definition at line 68 of file ScriptableObjectBase.h.

The documentation for this class was generated from the following files:

- src/plugin\_win32/ScriptableObjectBase.h
- src/plugin\_win32/ScriptableObjectBase.cpp

## 4.836 ScriptFieldDecl Struct Reference

### Data Fields

- struct **FieldDecl** \* **fieldDecl**
- char \* **ASCIIvalue**
- int **valueChanged**
- union **anyVrml** **value**
- BOOL **valueSet**
- int **eventInSet**
- struct **Shader\_Script** \* **script**

### 4.836.1 Detailed Description

Definition at line 55 of file CScripts.h.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/CScripts.h

## 4.837 ScriptFieldInstanceInfo Struct Reference

### Data Fields

- struct **ScriptFieldDecl** \* **decl**
- struct **Shader\_Script** \* **script**

### 4.837.1 Detailed Description

Definition at line 79 of file CScripts.h.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/CScripts.h

## 4.838 ScriptParamList Struct Reference

### Data Fields

- struct **ScriptParamList** \* **next**
- indexT **kind**
- indexT **type**
- char \* **field**
- union **anyVrml** **value**

### 4.838.1 Detailed Description

Definition at line 146 of file CScripts.h.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/CScripts.h

## 4.839 SeesPdu Struct Reference

### Data Fields

- struct **DistributedEmissionsFamilyPdu** myDistributedEmissionsFamilyPdu
- struct **EntityID** originatingEntityID  
*Originating entity ID.*
- unsigned short **infraredSignatureRepresentationIndex**  
*IR Signature representation index.*
- unsigned short **acousticSignatureRepresentationIndex**  
*acoustic Signature representation index*
- unsigned short **radarCrossSectionSignatureRepresentationIndex**  
*radar cross section representation index*
- unsigned short **numberOfPropulsionSystems**  
*how many propulsion systems*
- unsigned short **numberOfVectoringNozzleSystems**  
*how many vectoring nozzle systems*
- void \* **propulsionSystemData**  
*variable length list of propulsion system data*
- void \* **vectoringSystemData**  
*variable length list of vectoring system data*

### 4.839.1 Detailed Description

Definition at line 1956 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.840 SensStruct Struct Reference

### Data Fields

- struct **X3D\_Node** \* fromnode
- struct **X3D\_Node** \* datanode
- void(\* **interpptr** )(void \*, int, int, int)

### 4.840.1 Detailed Description

Definition at line 130 of file MainLoop.c.

The documentation for this struct was generated from the following file:

- src/lib/main/MainLoop.c

## 4.841 ServiceRequestPdu Struct Reference

### Data Fields

- struct **LogisticsFamilyPdu** **myLogisticsFamilyPdu**
- struct **EntityID** **requestingEntityID**  
*Entity that is requesting service.*
- struct **EntityID** **servicingEntityID**  
*Entity that is providing the service.*
- unsigned char **serviceTypeRequested**  
*type of service requested*
- unsigned char **numberOfSupplyTypes**  
*How many requested.*
- short **serviceRequestPadding**  
*padding*
- void \* **supplies**

### 4.841.1 Detailed Description

Definition at line 705 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.842 SetDataPdu Struct Reference

### Data Fields

- struct **SimulationManagementFamilyPdu** **mySimulationManagementFamilyPdu**
- unsigned int **requestID**  
*ID of request.*
- unsigned int **padding1**  
*padding*
- unsigned int **numberOfFixedDatumRecords**  
*Number of fixed datum records.*
- unsigned int **numberOfVariableDatumRecords**  
*Number of variable datum records.*
- void \* **fixedDatums**  
*variable length list of fixed datums*
- void \* **variableDatums**  
*variable length list of variable length datums*

### 4.842.1 Detailed Description

Definition at line 1760 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.843 SetDataReliablePdu Struct Reference

### Data Fields

- struct **SimulationManagementWithReliabilityFamilyPdu** mySimulationManagementWithReliability↔  
**FamilyPdu**
- unsigned char **requiredReliabilityService**  
*level of reliability service used for this transaction*
- unsigned short **pad1**  
*padding*
- unsigned char **pad2**  
*padding*
- unsigned int **requestID**  
*Request ID.*
- unsigned int **numberOfFixedDatumRecords**  
*Fixed datum record count.*
- unsigned int **numberOfVariableDatumRecords**  
*variable datum record count*
- void \* **fixedDatumRecords**  
*Fixed datum records.*
- void \* **variableDatumRecords**  
*Variable datum records.*

### 4.843.1 Detailed Description

Definition at line 1321 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h



## 4.844 SetRecordReliablePdu Struct Reference

### Data Fields

- struct **SimulationManagementWithReliabilityFamilyPdu** **mySimulationManagementWithReliabilityFamilyPdu**↔
- unsigned int **requestID**  
*request ID*
- unsigned char **requiredReliabilityService**  
*level of reliability service used for this transaction*
- unsigned short **pad1**  
*padding.*
- unsigned char **pad2**  
*padding*
- unsigned int **numberOfRecordSets**  
*Number of record sets in list.*
- void \* **recordSets**  
*record sets*

### 4.844.1 Detailed Description

Definition at line 1173 of file DIS.h.

### 4.844.2 Field Documentation

#### 4.844.2.1 pad1

```
unsigned short SetRecordReliablePdu::pad1
```

padding.

The spec is unclear and contradictory here.

Definition at line 1180 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.845 sFallInfo Struct Reference

### Data Fields

- double **fallHeight**
- double **climbHeight**
- double **fallStep**
- double **hfall**
- double **hclimb**
- int **isFall**
- int **canFall**
- int **isClimb**
- int **hits**
- int **walking**
- int **smoothStep**
- int **allowClimbing**
- GLDOUBLE **collision2avatar** [16]
- GLDOUBLE **avatar2collision** [16]
- int **checkFall**
- int **checkCylinder**
- int **checkPenetration**
- int **canPenetrate**
- int **isPenetrate**
- GLDOUBLE **penMin** [3]
- GLDOUBLE **penMax** [3]
- struct **point\_XYZ** **penvec**
- double **penRadius**
- struct **point\_XYZ** **pen correction**
- double **pendisp**

### 4.845.1 Detailed Description

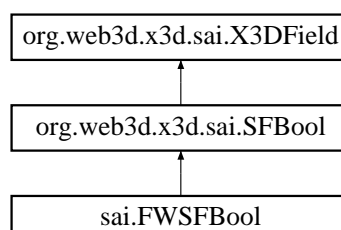
Definition at line 137 of file Collision.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Collision.h

## 4.846 org.web3d.x3d.sai.SFBool Interface Reference

Inheritance diagram for org.web3d.x3d.sai.SFBool:



## Public Member Functions

- boolean **getValue** ()
- void **setValue** (boolean value)

### 4.846.1 Detailed Description

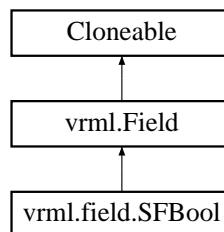
Definition at line 3 of file SFBool.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/SFBool.java

## 4.847 vrml.field.SFBool Class Reference

Inheritance diagram for vrml.field.SFBool:



## Public Member Functions

- **SFBool** (boolean value)
- boolean **getValue** ()
- void **setValue** (boolean value)
- void **setValue** ( **ConstSFBool** sfBool)
- void **setValue** ( **SFBool** sfBool)
- String **toString** ()
- void **\_\_fromPerl** (BufferedReader in) throws IOException
- void **\_\_toPerl** (PrintWriter out) throws IOException

## Additional Inherited Members

### 4.847.1 Detailed Description

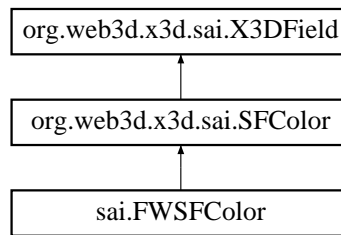
Definition at line 10 of file SFBool.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/SFBool.java

## 4.848 org.web3d.x3d.sai.SFColor Interface Reference

Inheritance diagram for org.web3d.x3d.sai.SFColor:



### Public Member Functions

- void **getValue** (float[] value)
- void **setValue** (float[] value)

#### 4.848.1 Detailed Description

Definition at line 3 of file SFColor.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/SFColor.java

## 4.849 SFColor Struct Reference

### Data Fields

- float **c** [3]

#### 4.849.1 Detailed Description

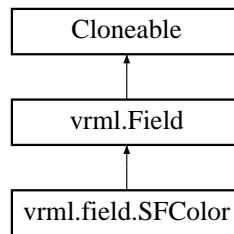
Definition at line 2548 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.850 vrml.field.SFColor Class Reference

Inheritance diagram for vrml.field.SFColor:



### Public Member Functions

- **SFColor** (float red, float green, float blue)
- void **getValue** (float[] values)
- float **getRed** ()
- float **getGreen** ()
- float **getBlue** ()
- void **setValue** (float red, float green, float blue)
- void **setValue** (float[] values)
- void **setValue** ( **ConstSFColor** sfColor)
- void **setValue** ( **SFColor** sfColor)
- String **toString** ()
- void **\_\_fromPerl** (BufferedReader in) throws IOException
- void **\_\_toPerl** (PrintWriter out) throws IOException

### Additional Inherited Members

#### 4.850.1 Detailed Description

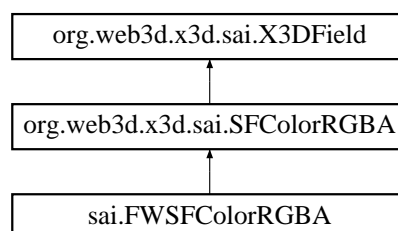
Definition at line 10 of file SFColor.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/SFColor.java

## 4.851 org.web3d.x3d.sai.SFColorRGBA Interface Reference

Inheritance diagram for org.web3d.x3d.sai.SFColorRGBA:



## Public Member Functions

- void **getValue** (float[] value)
- void **setValue** (float[] value)

### 4.851.1 Detailed Description

Definition at line 3 of file SFColorRGBA.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/SFColorRGBA.java

## 4.852 SFColorRGBA Struct Reference

### Data Fields

- float **c** [4]
- float **r** [4]

### 4.852.1 Detailed Description

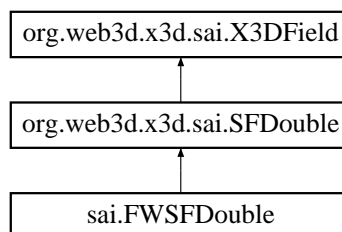
Definition at line 2550 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.853 org.web3d.x3d.sai.SFDouble Interface Reference

Inheritance diagram for org.web3d.x3d.sai.SFDouble:



## Public Member Functions

- double **getValue** ()
- void **setValue** (double value)

### 4.853.1 Detailed Description

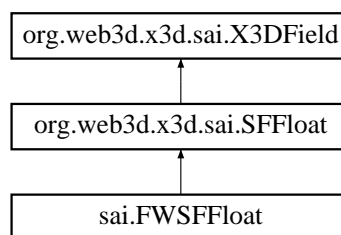
Definition at line 3 of file SFDouble.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/SFDouble.java

## 4.854 org.web3d.x3d.sai.SFFloat Interface Reference

Inheritance diagram for org.web3d.x3d.sai.SFFloat:



### Public Member Functions

- float **getValue** ()
- void **setValue** (float value)

### 4.854.1 Detailed Description

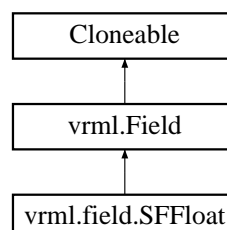
Definition at line 3 of file SFFloat.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/SFFloat.java

## 4.855 vrml.field.SFFloat Class Reference

Inheritance diagram for vrml.field.SFFloat:



## Public Member Functions

- **SFFloat** (float f)
- float **getValue** ()
- void **setValue** (float f)
- void **setValue** ( **ConstSFFloat** sfFloat)
- void **setValue** ( **SFFloat** sfFloat)
- String **toString** ()
- void **\_\_fromPerl** (BufferedReader in) throws IOException
- void **\_\_toPerl** (PrintWriter out) throws IOException

## Additional Inherited Members

### 4.855.1 Detailed Description

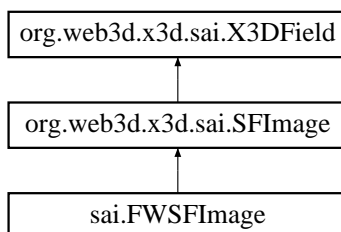
Definition at line 10 of file SFFloat.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/SFFloat.java

## 4.856 org.web3d.x3d.sai.SFImage Interface Reference

Inheritance diagram for org.web3d.x3d.sai.SFImage:



## Public Member Functions

- int **getWidth** ()
- int **getHeight** ()
- int **getComponents** ()
- void **getPixels** (int[] pixels)
- java.awt.image.WritableRenderedImage **getImage** ()
- void **setValue** (int width, int height, int components, int[] pixels)
- void **setImage** (java.awt.image.RenderedImage image)
- void **setSubImage** (java.awt.image.RenderedImage image, int srcWidth, int srcHeight, int srcXOffset, int srcYOffset, int destXOffset, int destYOffset)



### 4.856.1 Detailed Description

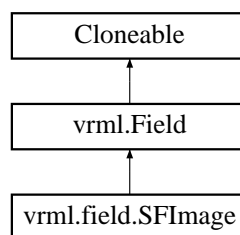
Definition at line 3 of file SFImage.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/SFImage.java

## 4.857 vrml.field.SFImage Class Reference

Inheritance diagram for vrml.field.SFImage:



### Public Member Functions

- **SFImage** (int width, int height, int components, byte[] pixels)
- int **getWidth** ()
- int **getHeight** ()
- int **getComponents** ()
- byte[] **getPixels** ()
- void **setValue** (int width, int height, int components, byte[] pixels)
- void **setValue** ( **ConstSFImage** sflImage)
- void **setValue** ( **SFImage** sflImage)
- String **toString** ()
- void **\_\_fromPerl** (BufferedReader in) throws IOException
- void **\_\_toPerl** (PrintWriter out) throws IOException

### Additional Inherited Members

### 4.857.1 Detailed Description

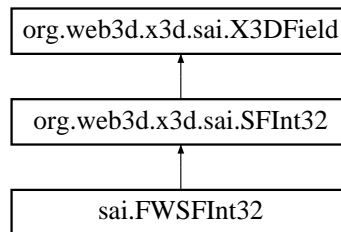
Definition at line 10 of file SFImage.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/SFImage.java

## 4.858 org.web3d.x3d.sai.SFInt32 Interface Reference

Inheritance diagram for org.web3d.x3d.sai.SFInt32:



### Public Member Functions

- int **getValue** ()
- void **setValue** (int value)

### 4.858.1 Detailed Description

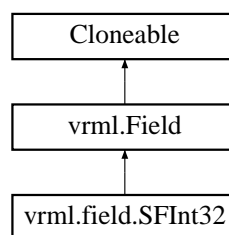
Definition at line 3 of file SFInt32.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/SFInt32.java

## 4.859 vrml.field.SFInt32 Class Reference

Inheritance diagram for vrml.field.SFInt32:



### Public Member Functions

- **SFInt32** (int value)
- int **getValue** ()
- void **setValue** (int value)
- void **setValue** ( **ConstSFInt32** sflnt32)
- void **setValue** ( **SFInt32** sflnt32)
- String **toString** ()
- void **\_\_fromPerl** (BufferedReader in) throws IOException
- void **\_\_toPerl** (PrintWriter out) throws IOException

## Additional Inherited Members

### 4.859.1 Detailed Description

Definition at line 10 of file SFInt32.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/SFInt32.java

## 4.860 SFMatrix3d Struct Reference

### Data Fields

- double **c** [9]

### 4.860.1 Detailed Description

Definition at line 2566 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.861 SFMatrix3f Struct Reference

### Data Fields

- float **c** [9]

### 4.861.1 Detailed Description

Definition at line 2564 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.862 SFMatrix4d Struct Reference

### Data Fields

- double **c** [16]

### 4.862.1 Detailed Description

Definition at line 2570 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.863 SFMatrix4f Struct Reference

### Data Fields

- float **c** [16]

### 4.863.1 Detailed Description

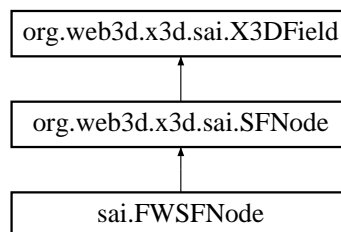
Definition at line 2568 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.864 org.web3d.x3d.sai.SFNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.SFNode:



### Public Member Functions

- **X3DNode** **getValue** ()
- void **setValue** ( **X3DNode** value) throws InvalidNodeException

### 4.864.1 Detailed Description

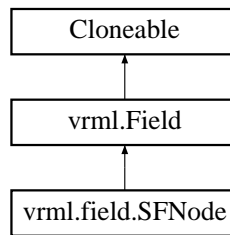
Definition at line 3 of file SFNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/SFNode.java

## 4.865 vrml.field.SFNode Class Reference

Inheritance diagram for vrml.field.SFNode:



### Public Member Functions

- **SFNode** ( **BaseNode** node)
- **BaseNode** **getValue** ()
- void **setValue** ( **BaseNode** node)
- void **setValue** ( **ConstSFNode** sfNode)
- void **setValue** ( **SFNode** sfNode)
- String **toString** ()
- void **\_\_fromPerl** (BufferedReader in) throws IOException
- void **\_\_toPerl** (PrintWriter out) throws IOException

### Additional Inherited Members

#### 4.865.1 Detailed Description

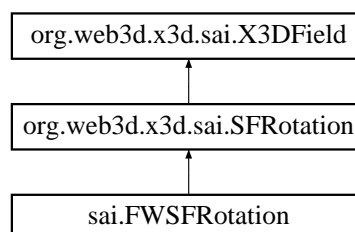
Definition at line 10 of file SFNode.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/SFNode.java

## 4.866 org.web3d.x3d.sai.SFRotation Interface Reference

Inheritance diagram for org.web3d.x3d.sai.SFRotation:



## Public Member Functions

- void **getValue** (float[] value)
- void **setValue** (float[] value)

### 4.866.1 Detailed Description

Definition at line 3 of file SFRotation.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/SFRotation.java

## 4.867 SFRotation Struct Reference

### Data Fields

- float **c** [4]
- float **r** [4]

### 4.867.1 Detailed Description

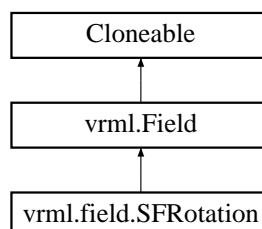
Definition at line 2538 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.868 vrml.field.SFRotation Class Reference

Inheritance diagram for vrml.field.SFRotation:



## Public Member Functions

- **SFRotation** (float axisX, float axisY, float axisZ, float angle)
- void **getValue** (float[] values)
- void **setValue** (float axisX, float axisY, float axisZ, float angle)
- void **setValue** (float[] values)
- void **setValue** ( **ConstSFRotation** sfRotation)
- void **setValue** ( **SFRotation** sfRotation)
- String **toString** ()
- void **\_\_fromPerl** (BufferedReader in) throws IOException
- void **\_\_toPerl** (PrintWriter out) throws IOException

## Additional Inherited Members

### 4.868.1 Detailed Description

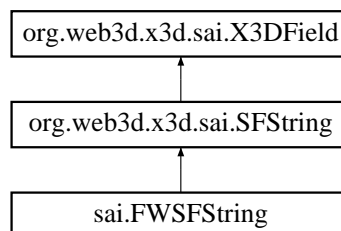
Definition at line 10 of file SFRotation.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/SFRotation.java

## 4.869 org.web3d.x3d.sai.SFString Interface Reference

Inheritance diagram for org.web3d.x3d.sai.SFString:



## Public Member Functions

- String **getValue** ()
- void **setValue** (String value)

### 4.869.1 Detailed Description

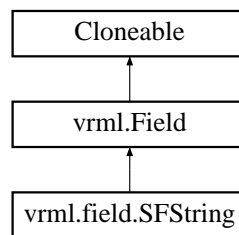
Definition at line 3 of file SFString.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/SFString.java

## 4.870 vrml.field.SFString Class Reference

Inheritance diagram for vrml.field.SFString:



### Public Member Functions

- **SFString** (String s)
- String **getValue** ()
- void **setValue** (String s)
- void **setValue** ( **ConstSFString** sfString)
- void **setValue** ( **SFString** sfString)
- String **toString** ()
- void **\_\_fromPerl** (BufferedReader in) throws IOException
- void **\_\_toPerl** (PrintWriter out) throws IOException

### Additional Inherited Members

#### 4.870.1 Detailed Description

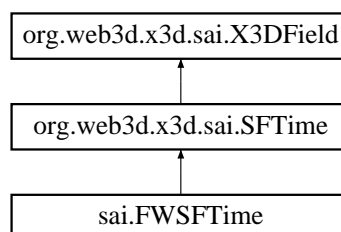
Definition at line 10 of file SFString.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/SFString.java

## 4.871 org.web3d.x3d.sai.SFTime Interface Reference

Inheritance diagram for org.web3d.x3d.sai.SFTime:





## Public Member Functions

- double **getValue** ()
- long **getJavaValue** ()
- void **setValue** (double value)
- void **setValue** (long value)

### 4.871.1 Detailed Description

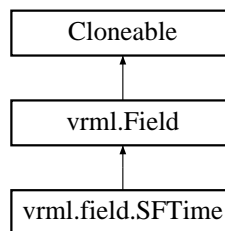
Definition at line 3 of file SFTime.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/SFTime.java

## 4.872 vrml.field.SFTime Class Reference

Inheritance diagram for vrml.field.SFTime:



## Public Member Functions

- **SFTime** (double value)
- double **getValue** ()
- void **setValue** (double value)
- void **setValue** ( **ConstSFTime** sfTime)
- void **setValue** ( **SFTime** sfTime)
- String **toString** ()
- void **\_\_fromPerl** (BufferedReader in) throws IOException
- void **\_\_toPerl** (PrintWriter out) throws IOException

## Additional Inherited Members

### 4.872.1 Detailed Description

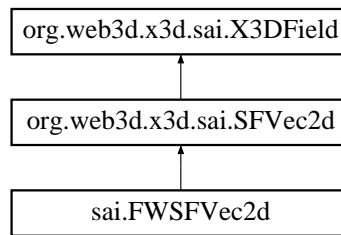
Definition at line 10 of file SFTime.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/SFTime.java

## 4.873 org.web3d.x3d.sai.SFVec2d Interface Reference

Inheritance diagram for org.web3d.x3d.sai.SFVec2d:



### Public Member Functions

- void **getValue** (double[] value)
- void **setValue** (double[] value)

#### 4.873.1 Detailed Description

Definition at line 3 of file SFVec2d.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/SFVec2d.java

## 4.874 SFVec2d Struct Reference

### Data Fields

- double **c** [2]

#### 4.874.1 Detailed Description

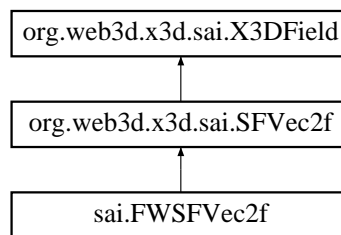
Definition at line 2572 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.875 org.web3d.x3d.sai.SFVec2f Interface Reference

Inheritance diagram for org.web3d.x3d.sai.SFVec2f:



### Public Member Functions

- void **getValue** (float[] value)
- void **setValue** (float[] value)

#### 4.875.1 Detailed Description

Definition at line 3 of file SFVec2f.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/SFVec2f.java

## 4.876 SFVec2f Struct Reference

### Data Fields

- float **c** [2]

#### 4.876.1 Detailed Description

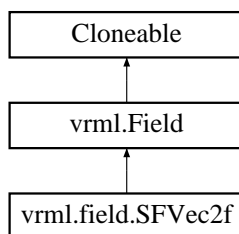
Definition at line 2556 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.877 vrml.field.SFVec2f Class Reference

Inheritance diagram for vrml.field.SFVec2f:



### Public Member Functions

- **SFVec2f** (float x, float y)
- void **getValue** (float[] values)
- float **getX** ()
- float **getY** ()
- void **setValue** (float x, float y)
- void **setValue** (float[] values)
- void **setValue** ( **ConstSFVec2f** sfVec2f)
- void **setValue** ( **SFVec2f** sfVec2f)
- String **toString** ()
- void **\_\_fromPerl** (BufferedReader in) throws IOException
- void **\_\_toPerl** (PrintWriter out) throws IOException

### Additional Inherited Members

#### 4.877.1 Detailed Description

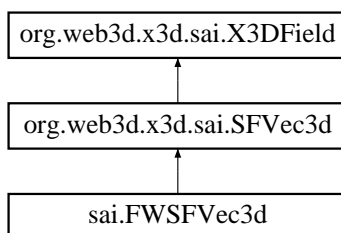
Definition at line 10 of file SFVec2f.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/SFVec2f.java

## 4.878 org.web3d.x3d.sai.SFVec3d Interface Reference

Inheritance diagram for org.web3d.x3d.sai.SFVec3d:



## Public Member Functions

- void **getValue** (double[] value)
- void **setValue** (double[] value)

### 4.878.1 Detailed Description

Definition at line 3 of file SFVec3d.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/SFVec3d.java

## 4.879 SFVec3d Struct Reference

### Data Fields

- double **c** [3]

### 4.879.1 Detailed Description

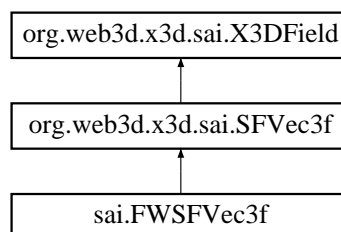
Definition at line 2560 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.880 org.web3d.x3d.sai.SFVec3f Interface Reference

Inheritance diagram for org.web3d.x3d.sai.SFVec3f:



## Public Member Functions

- void **getValue** (float[] value)
- void **setValue** (float[] value)

### 4.880.1 Detailed Description

Definition at line 3 of file SFVec3f.java.

The documentation for this interface was generated from the following file:

- `src/java/org/web3d/x3d/sai/SFVec3f.java`

## 4.881 SFVec3f Struct Reference

### Data Fields

- `float c [3]`

### 4.881.1 Detailed Description

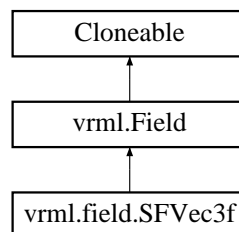
Definition at line 2540 of file Structs.h.

The documentation for this struct was generated from the following file:

- `src/lib/vrml_parser/Structs.h`

## 4.882 vrml.field.SFVec3f Class Reference

Inheritance diagram for `vrml.field.SFVec3f`:



### Public Member Functions

- **SFVec3f** (float x, float y, float z)
- void **getValue** (float[] values)
- float **getX** ()
- float **getY** ()
- float **getZ** ()
- void **setValue** (float x, float y, float z)
- void **setValue** (float[] values)
- void **setValue** ( **ConstSFVec3f** sfVec3f)
- void **setValue** ( **SFVec3f** sfVec3f)
- String **toString** ()
- void **\_\_fromPerl** (BufferedReader in) throws IOException
- void **\_\_toPerl** (PrintWriter out) throws IOException

## Additional Inherited Members

### 4.882.1 Detailed Description

Definition at line 10 of file SFVec3f.java.

The documentation for this class was generated from the following file:

- src/java/vrml/field/SFVec3f.java

## 4.883 SFVec4d Struct Reference

### Data Fields

- double **c** [4]

### 4.883.1 Detailed Description

Definition at line 2576 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.884 SFVec4f Struct Reference

### Data Fields

- float **c** [4]

### 4.884.1 Detailed Description

Definition at line 2574 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.885 Shader\_Script Struct Reference

### Data Fields

- struct **X3D\_Node** \* **ShaderScriptNode**
- int **num**
- BOOL **loaded**
- struct **Vector** \* **fields**

### 4.885.1 Detailed Description

Definition at line 112 of file CScripts.h.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/CScripts.h

## 4.886 shaderflagsstruct Struct Reference

### Data Fields

- int **base**
- int **effects**
- int **usershaders**
- int **volume**

### 4.886.1 Detailed Description

Definition at line 62 of file Component\_Shape.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_Shape.h

## 4.887 shaderTableEntry Struct Reference

### Data Fields

- **shaderflagsstruct** **whichOne**
- **s\_shader\_capabilities\_t** \* **myCapabilities**



### 4.887.1 Detailed Description

Definition at line 89 of file OpenGL\_Utils.c.

The documentation for this struct was generated from the following file:

- src/lib/opengl/OpenGL\_Utils.c

## 4.888 ShaftRPMs Struct Reference

### Data Fields

- short **currentShaftRPMs**  
*Current shaft RPMs.*
- short **orderedShaftRPMs**  
*ordered shaft rpms*
- float **shaftRPMRateOfChange**  
*rate of change of shaft RPMs*

### 4.888.1 Detailed Description

Definition at line 442 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.889 SignalPdu Struct Reference

### Data Fields

- struct **RadioCommunicationsFamilyPdu** myRadioCommunicationsFamilyPdu
- unsigned short **encodingScheme**  
*encoding scheme used, and enumeration*
- unsigned short **tdlType**  
*tdl type*
- unsigned int **sampleRate**  
*sample rate*
- short **dataLength**  
*length od data*
- short **samples**  
*number of samples*
- void \* **data**  
*list of eight bit values*

### 4.889.1 Detailed Description

Definition at line 1926 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.890 SimulationAddress Struct Reference

### Data Fields

- unsigned short **site**  
*The site ID.*
- unsigned short **application**  
*The application ID.*

### 4.890.1 Detailed Description

Definition at line 350 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.891 SimulationManagementFamilyPdu Struct Reference

### Data Fields

- struct **Pdu myPdu**
- struct **EntityID originatingEntityID**  
*Entity that is sending message.*
- struct **EntityID receivingEntityID**  
*Entity that is intended to receive message.*

### 4.891.1 Detailed Description

Definition at line 798 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.892 SimulationManagementWithReliabilityFamilyPdu Struct Reference

### Data Fields

- struct **Pdu** **myPdu**
- struct **EntityID** **originatingEntityID**  
*Object originatig the request.*
- struct **EntityID** **receivingEntityID**  
*Object with which this point object is associated.*

### 4.892.1 Detailed Description

Definition at line 1077 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.893 SixByteChunk Struct Reference

### Data Fields

- char **otherParameters** [6]  
*six bytes of arbitrary data*

### 4.893.1 Detailed Description

Definition at line 581 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.894 slice Struct Reference

### Data Fields

- unsigned int **vert\_pos**
- unsigned int **quant\_scale**
- char \* **extra\_info**

### 4.894.1 Detailed Description

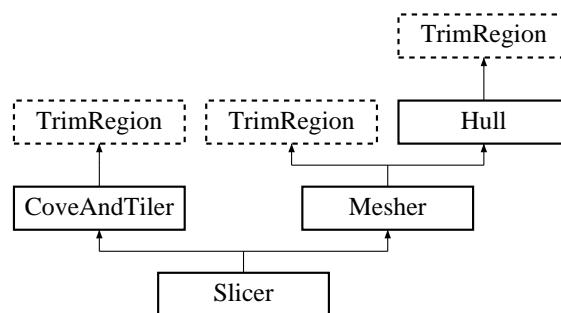
Definition at line 150 of file mpeg\_berkley.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/mpeg\_berkley.h

## 4.895 Slicer Class Reference

Inheritance diagram for Slicer:



### Public Member Functions

- **Slicer** ( **Backend** & )
- void **slice** (Arc\_ptr)
- void **slice\_old** (Arc\_ptr)
- void **slice\_new** (Arc\_ptr)
- void **evalStream** ( **primStream** \*)
- void **evalRBAArray** ( **rectBlockArray** \*rbArray, **gridWrap** \*grid)
- void **outline** (Arc\_ptr)
- void **setstriptessellation** (REAL, REAL)
- void **setisolines** (int)
- void **set\_ulinear** (int ulinear\_flag)
- void **set\_vlinear** (int vlinear\_flag)

### Additional Inherited Members

### 4.895.1 Detailed Description

Definition at line 49 of file slicer.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/slicer.h
- src/libnurbs/internals/slicer.cc

## 4.896 sNavilInfo Struct Reference

### Data Fields

- double **width**
- double **height**
- double **step**

### 4.896.1 Detailed Description

Definition at line 57 of file Bindable.h.

The documentation for this struct was generated from the following file:

- src/lib/x3d\_parser/Bindable.h

## 4.897 SNDFILE Struct Reference

### Data Fields

- int **type**
- FILE \* **fd**
- char **data** [MAXBUFSIZE]
- int **dataptr**
- int **wavdataoffset**
- float **pitch**
- int **bytes\_remaining**
- int **ampl**
- int **balance**
- **fmtChnk** FormatChunk
- **datChnk** DataChunk

### 4.897.1 Detailed Description

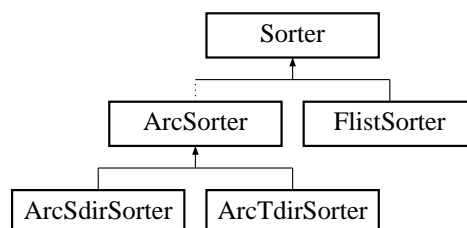
Definition at line 75 of file soundheader.h.

The documentation for this struct was generated from the following file:

- src/sound/soundheader.h

## 4.898 Sorter Class Reference

Inheritance diagram for Sorter:



## Public Member Functions

- **Sorter** (int es)
- void **qsort** (void \*a, int n)

## Protected Member Functions

- virtual int **qscmp** (char \*, char \*)
- virtual void **qsexc** (char \*i, char \*j)
- virtual void **qstexc** (char \*i, char \*j, char \*k)

### 4.898.1 Detailed Description

Definition at line 36 of file sorter.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/sorter.h
- src/libnurbs/internals/sorter.cc

## 4.899 SphericalHarmonicAntennaPattern Struct Reference

### Data Fields

- char **order**

### 4.899.1 Detailed Description

Definition at line 437 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.900 Splinespec Struct Reference

### Public Member Functions

- **Splinespec** (int)
- void **kspecinit** ( **Knotvector** &)
- void **kspecinit** ( **Knotvector** &, **Knotvector** &)
- void **select** (void)
- void **layout** (long)
- void **setupquilt** (Quilt\_ptr)
- void **copy** (INREAL \*)
- void **transform** (void)

## Data Fields

- **Knotspec** \* **kspec**
- int **dim**
- REAL \* **outcpts**

### 4.900.1 Detailed Description

Definition at line 95 of file tobezier.cc.

The documentation for this struct was generated from the following file:

- src/libnurbs/internals/tobezier.cc

## 4.901 ssr Struct Reference

## Data Fields

- char \* **name**
- char \* **ip**
- char \* **port**
- void \* **next**
- double **extent** [6]
- int **levels\_available**

### 4.901.1 Detailed Description

Definition at line 552 of file SSRServer.c.

The documentation for this struct was generated from the following file:

- src/SSR/SSRServer.c

## 4.902 SSR\_request Struct Reference

## Data Fields

- int **type**
- pthread\_mutex\_t **requester\_mutex**
- pthread\_cond\_t **requester\_condition**
- double **quat4** [4]
- double **vec3** [3]
- char \* **blob**
- int **len**
- int **answered**
- int **LOD**
- int **levels\_available**
- int **status**
- double **extent** [6]
- int **isInside**
- double **avatarHeight**
- double **fov**

### 4.902.1 Detailed Description

Definition at line 7 of file SSRhelper.h.

The documentation for this struct was generated from the following file:

- src/lib/SSRhelper.h

## 4.903 stage Struct Reference

### Data Fields

- **tcontenttype t1**
- **int type**
- **unsigned int ibuffer**
- **unsigned int itexturebuffer**
- **unsigned int idepthbuffer**
- **ivec4 ivport**
- **BOOL clear\_zbuffer**
- **int even\_odd\_frame**

### 4.903.1 Detailed Description

Definition at line 2132 of file MainLoop.c.

The documentation for this struct was generated from the following file:

- src/lib/main/MainLoop.c

## 4.904 StartResumePdu Struct Reference

### Data Fields

- **struct SimulationManagementFamilyPdu mySimulationManagementFamilyPdu**
- **struct ClockTime realWorldTime**  
*UTC time at which the simulation shall start or resume.*
- **struct ClockTime simulationTime**  
*Simulation clock time at which the simulation shall start or resume.*
- **unsigned int requestID**  
*Identifier for the request.*

### 4.904.1 Detailed Description

Definition at line 1219 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h



## 4.905 StartResumeReliablePdu Struct Reference

### Data Fields

- struct **SimulationManagementWithReliabilityFamilyPdu** mySimulationManagementWithReliability↔  
**FamilyPdu**
- struct **ClockTime** realWorldTime  
*time in real world for this operation to happen*
- struct **ClockTime** simulationTime  
*time in simulation for the simulation to resume*
- unsigned char **requiredReliabilityService**  
*level of reliability service used for this transaction*
- unsigned short **pad1**  
*padding*
- unsigned char **pad2**  
*padding*
- unsigned int **requestID**  
*Request ID.*

### 4.905.1 Detailed Description

Definition at line 1513 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.906 StopFreezePdu Struct Reference

### Data Fields

- struct **SimulationManagementFamilyPdu** mySimulationManagementFamilyPdu
- struct **ClockTime** realWorldTime  
*UTC time at which the simulation shall stop or freeze.*
- unsigned char **reason**  
*Reason the simulation was stopped or frozen.*
- unsigned char **frozenBehavior**  
*Internal behavior of the simulation and its appearance while frozen to the other participants.*
- short **padding1**  
*padding*
- unsigned int **requestID**  
*Request ID that is unique.*

### 4.906.1 Detailed Description

Definition at line 1190 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.907 StopFreezeReliablePdu Struct Reference

### Data Fields

- struct **SimulationManagementWithReliabilityFamilyPdu** **mySimulationManagementWithReliabilityFamilyPdu**  
**FamilyPdu**
- struct **ClockTime** **realWorldTime**  
*time in real world for this operation to happen*
- unsigned char **reason**  
*Reason for stopping/freezing simulation.*
- unsigned char **frozenBehavior**  
*internal behavior of the simulation while frozen*
- unsigned char **requiredReliabilityService**  
*reliability level*
- unsigned char **pad1**  
*padding*
- unsigned int **requestID**  
*Request ID.*

### 4.907.1 Detailed Description

Definition at line 1990 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.908 StoredVertex Class Reference

### Public Member Functions

- void **saveEvalCoord** (REAL x, REAL y)
- void **saveEvalPoint** (long x, long y)
- void **invoke** ( **OpenGLSurfaceEvaluator** \*eval)

### 4.908.1 Detailed Description

Definition at line 85 of file glsurfeval.h.

The documentation for this class was generated from the following file:

- src/libnurbs/interface/glsurfeval.h

## 4.909 stringint Struct Reference

### Data Fields

- char \* **c**
- int **i**

### 4.909.1 Detailed Description

Definition at line 1854 of file Component\_Geospatial.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_Geospatial.c

## 4.910 Subdivider Class Reference

### Public Member Functions

- **Subdivider** ( **Renderhints** &, **Backend** &)
- void **clear** (void)
- void **beginTrims** (void)
- void **beginLoop** (void)
- void **addArc** (REAL \*, **Quilt** \*, long)
- void **addArc** (int, **TrimVertex** \*, long)
- void **endLoop** (void)
- void **endTrims** (void)
- void **beginQuilts** (void)
- void **addQuilt** ( **Quilt** \*)
- void **endQuilts** (void)
- void **drawCurves** (void)
- void **drawSurfaces** (long)
- int **ccwTurn\_sl** (Arc\_ptr, Arc\_ptr)
- int **ccwTurn\_sr** (Arc\_ptr, Arc\_ptr)
- int **ccwTurn\_tl** (Arc\_ptr, Arc\_ptr)
- int **ccwTurn\_tr** (Arc\_ptr, Arc\_ptr)
- void **setJumpbuffer** (JumpBuffer \*)
- void **set\_domain\_distance\_u\_rate** (REAL u\_rate)
- void **set\_domain\_distance\_v\_rate** (REAL v\_rate)
- void **set\_is\_domain\_distance\_sampling** (int flag)

### 4.910.1 Detailed Description

Definition at line 55 of file subdivider.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/subdivider.h
- src/libnurbs/internals/ccw.cc
- src/libnurbs/internals/curvesub.cc
- src/libnurbs/internals/intersect.cc
- src/libnurbs/internals/monotonizer.cc
- src/libnurbs/internals/splitarcs.cc
- src/libnurbs/internals/subdivider.cc

## 4.911 SupplyQuantity Struct Reference

### Data Fields

- struct **EntityType** **supplyType**  
*Type of supply.*
- unsigned char **quantity**  
*quantity to be supplied*

### 4.911.1 Detailed Description

Definition at line 1036 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.912 surfEvalMachine Struct Reference

### Data Fields

- REAL **uprime**
- REAL **vprime**
- int **k**
- REAL **u1**
- REAL **u2**
- int **ustride**
- int **uorder**
- REAL **v1**
- REAL **v2**
- int **vstride**
- int **vorder**
- REAL **ctlPoints** [IN\_MAX\_BEZIER\_ORDER \* IN\_MAX\_BEZIER\_ORDER \* IN\_MAX\_DIMENSION]
- REAL **ucoeff** [IN\_MAX\_BEZIER\_ORDER]
- REAL **vcoeff** [IN\_MAX\_BEZIER\_ORDER]
- REAL **ucoeffDeriv** [IN\_MAX\_BEZIER\_ORDER]
- REAL **vcoeffDeriv** [IN\_MAX\_BEZIER\_ORDER]

### 4.912.1 Detailed Description

Definition at line 64 of file glsurfeval.h.

The documentation for this struct was generated from the following file:

- src/libnurbs/interface/glsurfeval.h

## 4.913 sweepRange Struct Reference

### Data Fields

- **directedLine** \* **left**
- **Int** **leftType**
- **directedLine** \* **right**
- **Int** **rightType**

### 4.913.1 Detailed Description

Definition at line 70 of file partitionY.h.

The documentation for this struct was generated from the following file:

- src/libnurbs/nurbtess/partitionY.h

## 4.914 SyntheticEnvironmentFamilyPdu Struct Reference

### Data Fields

- struct **Pdu** **myPdu**

### 4.914.1 Detailed Description

Definition at line 762 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.915 SystemID Struct Reference

### Data Fields

- unsigned short **systemType**  
*System Type.*
- unsigned short **systemName**  
*System name, an enumeration.*
- unsigned char **systemMode**  
*System mode.*
- unsigned char **changeOptions**  
*Change Options.*

### 4.915.1 Detailed Description

Definition at line 156 of file DIS.h.

The documentation for this struct was generated from the following file:

- `src/lib/DIS/DIS.h`

## 4.916 targetwindow Struct Reference

### Data Fields

- `contenttype * stage`
- `void * hwnd`
- `BOOL swapbuf`
- `ivec4 ivport`
- `freewrl_params_t params`
- `struct targetwindow * next`

### 4.916.1 Detailed Description

Definition at line 2965 of file MainLoop.c.

The documentation for this struct was generated from the following file:

- `src/lib/main/MainLoop.c`

## 4.917 iiglobal::tBindable Struct Reference

### Data Fields

- `void * naviinfo`
- `int activeLayer`
- `void * bstacks`
- `void * prv`

### 4.917.1 Detailed Description

Definition at line 438 of file iglobal.h.

The documentation for this struct was generated from the following file:

- `src/lib/iglobal.h`

## 4.918 iiglobal::tcollision Struct Reference

### Data Fields

- void \* **prv**

### 4.918.1 Detailed Description

Definition at line 258 of file iiglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iiglobal.h

## 4.919 iiglobal::tcommon Struct Reference

### Data Fields

- void \* **prv**

### 4.919.1 Detailed Description

Definition at line 460 of file iiglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iiglobal.h

## 4.920 iiglobal::tComponent\_CubeMapTexturing Struct Reference

### Data Fields

- void \* **prv**

### 4.920.1 Detailed Description

Definition at line 261 of file iiglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iiglobal.h

## 4.921 `iglobal::tComponent_EnvironSensor` Struct Reference

### Data Fields

- `void * prv`

### 4.921.1 Detailed Description

Definition at line 264 of file `iglobal.h`.

The documentation for this struct was generated from the following file:

- `src/lib/iglobal.h`

## 4.922 `iglobal::tComponent_Followers` Struct Reference

### Data Fields

- `void * prv`

### 4.922.1 Detailed Description

Definition at line 294 of file `iglobal.h`.

The documentation for this struct was generated from the following file:

- `src/lib/iglobal.h`

## 4.923 `iglobal::tComponent_Geometry3D` Struct Reference

### Data Fields

- `void * prv`

### 4.923.1 Detailed Description

Definition at line 267 of file `iglobal.h`.

The documentation for this struct was generated from the following file:

- `src/lib/iglobal.h`



## 4.924 iiglobal::tComponent\_Geospatial Struct Reference

### Data Fields

- void \* **prv**

### 4.924.1 Detailed Description

Definition at line 270 of file iglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iglobal.h

## 4.925 iiglobal::tComponent\_HAnim Struct Reference

### Data Fields

- void \* **prv**

### 4.925.1 Detailed Description

Definition at line 273 of file iglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iglobal.h

## 4.926 iiglobal::tComponent\_KeyDevice Struct Reference

### Data Fields

- void \* **prv**

### 4.926.1 Detailed Description

Definition at line 297 of file iglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iglobal.h

## 4.927 `iglobal::tComponent_Layering` Struct Reference

### Data Fields

- `void * prv`

### 4.927.1 Detailed Description

Definition at line 276 of file `iglobal.h`.

The documentation for this struct was generated from the following file:

- `src/lib/iglobal.h`

## 4.928 `iglobal::tComponent_Layout` Struct Reference

### Data Fields

- `void * prv`

### 4.928.1 Detailed Description

Definition at line 279 of file `iglobal.h`.

The documentation for this struct was generated from the following file:

- `src/lib/iglobal.h`

## 4.929 `iglobal::tComponent_NURBS` Struct Reference

### Data Fields

- `void * prv`

### 4.929.1 Detailed Description

Definition at line 282 of file `iglobal.h`.

The documentation for this struct was generated from the following file:

- `src/lib/iglobal.h`

## 4.930 iiglobal::tComponent\_ParticleSystems Struct Reference

### Data Fields

- void \* **prv**

### 4.930.1 Detailed Description

Definition at line 285 of file iiglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iiglobal.h

## 4.931 iiglobal::tComponent\_Picking Struct Reference

### Data Fields

- void \* **prv**

### 4.931.1 Detailed Description

Definition at line 311 of file iiglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iiglobal.h

## 4.932 iiglobal::tComponent\_ProgrammableShaders Struct Reference

### Data Fields

- void \* **prv**

### 4.932.1 Detailed Description

Definition at line 288 of file iiglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iiglobal.h

## 4.933 `iiglobal::tComponent_PTM` Struct Reference

### Data Fields

- `int globalProjector`
- `void * prv`

### 4.933.1 Detailed Description

Definition at line 238 of file `iglobal.h`.

The documentation for this struct was generated from the following file:

- `src/lib/iglobal.h`

## 4.934 `iiglobal::tComponent_Rendering` Struct Reference

### Data Fields

- `void * prv`

### 4.934.1 Detailed Description

Definition at line 314 of file `iglobal.h`.

The documentation for this struct was generated from the following file:

- `src/lib/iglobal.h`

## 4.935 `iiglobal::tComponent_RigidBodyPhysics` Struct Reference

### Data Fields

- `void * prv`

### 4.935.1 Detailed Description

Definition at line 291 of file `iglobal.h`.

The documentation for this struct was generated from the following file:

- `src/lib/iglobal.h`

## 4.936 iiglobal::tComponent\_Shape Struct Reference

### Data Fields

- void \* **prv**

### 4.936.1 Detailed Description

Definition at line 317 of file iiglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iiglobal.h

## 4.937 iiglobal::tComponent\_Sound Struct Reference

### Data Fields

- int **sound\_from\_audioclip**
- int **SoundEngineStarted**
- void \* **prv**

### 4.937.1 Detailed Description

Definition at line 320 of file iiglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iiglobal.h

## 4.938 iiglobal::tComponent\_Text Struct Reference

### Data Fields

- void \* **prv**

### 4.938.1 Detailed Description

Definition at line 326 of file iiglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iiglobal.h

## 4.939 **iglobal::tComponent\_VolumeRendering** Struct Reference

### Data Fields

- void \* **prv**

### 4.939.1 Detailed Description

Definition at line 332 of file `iglobal.h`.

The documentation for this struct was generated from the following file:

- `src/lib/iglobal.h`

## 4.940 **iglobal::tComponent\_VRML1** Struct Reference

### Data Fields

- void \* **prv**

### 4.940.1 Detailed Description

Definition at line 329 of file `iglobal.h`.

The documentation for this struct was generated from the following file:

- `src/lib/iglobal.h`

## 4.941 **iglobal::tConsoleMessage** Struct Reference

### Data Fields

- int **consMsgCount**
- int **Console\_writeToHud**
- void \* **prv**

### 4.941.1 Detailed Description

Definition at line 131 of file `iglobal.h`.

The documentation for this struct was generated from the following file:

- `src/lib/iglobal.h`

## 4.942 tcontenttype Struct Reference

### Data Fields

- int **itype**
- **contenttype** \* **contents**
- **contenttype** \* **next**
- **contenttype** \* **pnext**
- float **viewport** [4]
- void(\* **render** )(void \*self)
- int(\* **pick** )(void \*self, int mev, int butnum, int mouseX, int mouseY, unsigned int ID, int windex)

### 4.942.1 Detailed Description

Definition at line 447 of file MainLoop.c.

The documentation for this struct was generated from the following file:

- src/lib/main/MainLoop.c

## 4.943 iiglobal::tCParse Struct Reference

### Data Fields

- void \* **globalParser**
- void \* **prv**

### 4.943.1 Detailed Description

Definition at line 392 of file iglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iglobal.h

## 4.944 iiglobal::tCParseParser Struct Reference

### Data Fields

- void \* **prv**

#### 4.944.1 Detailed Description

Definition at line 396 of file iglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iglobal.h

### 4.945 iiglobal::tCRoutes Struct Reference

#### Data Fields

- void \* **CRoutesExtra**
- void \* **JSSFpointer**
- int **max\_script\_found**
- int **max\_script\_found\_and\_initialized**
- int **jsnameindex**
- int **MAXJSparamNames**
- void \* **prv**

#### 4.945.1 Detailed Description

Definition at line 399 of file iglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iglobal.h

### 4.946 iiglobal::tCScripts Struct Reference

#### Data Fields

- void \* **prv**

#### 4.946.1 Detailed Description

Definition at line 411 of file iglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iglobal.h



## 4.947 iiglobal::tCursorDraw Struct Reference

### Data Fields

- void \* **prv**

### 4.947.1 Detailed Description

Definition at line 463 of file iiglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iiglobal.h

## 4.948 iiglobal::tdisplay Struct Reference

### Data Fields

- void \* **params**
- int **\_global\_gl\_err**
- IBOOL **display\_initialized**
- int **screenWidth**
- int **screenHeight**
- char \* **window\_title**
- int **shutterGlasses**
- void \* **rdr\_caps**
- void \* **prv**

### 4.948.1 Detailed Description

Definition at line 46 of file iiglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iiglobal.h

## 4.949 iiglobal::tEAI\_C\_CommonFunctions Struct Reference

### Data Fields

- int **eaiverbose**
- void \* **prv**

### 4.949.1 Detailed Description

Definition at line 108 of file iglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iglobal.h

## 4.950 iiglobal::tEALCore Struct Reference

### Data Fields

- char \* **EALbuffer**
- int **EALbufcount**
- int **EALbufpos**
- int **EALbufsize**
- void \* **prv**

### 4.950.1 Detailed Description

Definition at line 120 of file iglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iglobal.h

## 4.951 iiglobal::tEAEventsIn Struct Reference

### Data Fields

- void \* **prv**

### 4.951.1 Detailed Description

Definition at line 112 of file iglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iglobal.h

## 4.952 iiglobal::tEAHelpers Struct Reference

### Data Fields

- char \* **outBuffer**
- int **outBufferLen**
- void \* **prv**

### 4.952.1 Detailed Description

Definition at line 115 of file `iglobal.h`.

The documentation for this struct was generated from the following file:

- `src/lib/iglobal.h`

## 4.953 `text_combiner_data` Struct Reference

### Data Fields

- `float * coords`
- `int * counter`
- `int * ria`
- `int * riaindex`

### 4.953.1 Detailed Description

Definition at line 964 of file `headers.h`.

The documentation for this struct was generated from the following file:

- `src/lib/main/headers.h`

## 4.954 `textureTableIndexStruct` Struct Reference

### Data Fields

- `struct X3D_Node * scenegraphNode`
- `int nodeType`
- `int status`
- `int hasAlpha`
- `GLuint OpenGLTexture`
- `GLuint ifbobuffer`
- `GLuint idepthbuffer`
- `int frames`
- `char * filename`
- `int x`
- `int y`
- `int z`
- `int tiles [3]`
- `unsigned char * texdata`
- `GLint repeatSTR [3]`
- `GLint magFilter`
- `int textureNumber`
- `int channels`

#### 4.954.1 Detailed Description

Definition at line 37 of file Textures.h.

The documentation for this struct was generated from the following file:

- src/lib/opengl/Textures.h

### 4.955 textureVertexInfo Struct Reference

#### Data Fields

- GLfloat \* **pre\_canned\_textureCoords**
- GLint **TC\_size**
- GLenum **TC\_type**
- GLsizei **TC\_stride**
- GLvoid \* **TC\_pointer**
- void \* **next**
- GLint **VBO**

#### 4.955.1 Detailed Description

Definition at line 67 of file Textures.h.

The documentation for this struct was generated from the following file:

- src/lib/opengl/Textures.h

### 4.956 iiglobal::tFrustum Struct Reference

#### Data Fields

- int **OccFailed**
- void \* **prv**

#### 4.956.1 Detailed Description

Definition at line 193 of file iglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iglobal.h

## 4.957 iiglobal::tinternalc Struct Reference

### Data Fields

- IBOOL **global\_strictParsing**
- IBOOL **global\_plugin\_print**
- IBOOL **global\_occlusion\_disable**
- unsigned **user\_request\_texture\_size**
- IBOOL **global\_print\_opengl\_errors**
- IBOOL **global\_trace\_threads**
- void \* **prv**

### 4.957.1 Detailed Description

Definition at line 57 of file iglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iglobal.h

## 4.958 iiglobal::tLoadTextures Struct Reference

### Data Fields

- void \* **prv**

### 4.958.1 Detailed Description

Definition at line 197 of file iglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iglobal.h

## 4.959 tm\_unz\_s Struct Reference

### Data Fields

- ulnt **tm\_sec**
- ulnt **tm\_min**
- ulnt **tm\_hour**
- ulnt **tm\_mday**
- ulnt **tm\_mon**
- ulnt **tm\_year**

### 4.959.1 Detailed Description

Definition at line 84 of file unzip.h.

The documentation for this struct was generated from the following file:

- src/libminizip/unzip.h

## 4.960 tm\_zip\_s Struct Reference

### Data Fields

- `uint tm_sec`
- `uint tm_min`
- `uint tm_hour`
- `uint tm_mday`
- `uint tm_mon`
- `uint tm_year`

### 4.960.1 Detailed Description

Definition at line 89 of file zip.h.

The documentation for this struct was generated from the following file:

- src/libminizip/zip.h

## 4.961 iiglobal::tMainloop Struct Reference

### Data Fields

- `float gl_linewidth`
- `int currentFileVersion`
- `double TickTime`
- `double lastTime`
- `double BrowserFPS`
- `double BrowserSpeed`
- `const char * BrowserDescription`
- `int HaveSensitive`
- `int AllowNavDrag`
- `int trisThisLoop`
- `int clipPlane`
- `int SHIFT`
- `int CTRL`
- `void * prv`
- `char * tmpFileLocation`
- `char * url`
- `char * scene_name`

- char \* **scene\_suff**
- int **scene\_profile**
- int \* **scene\_components**
- char \* **replaceWorldRequest**
- void \* **replaceWorldRequestMulti**
- void \* **\_vportstack**
- void \* **\_stagestack**
- void \* **\_framebufferstack**
- int **screenOrientation2**
- int **pickray\_x**
- int **pickray\_y**
- float **fieldOfView**

#### 4.961.1 Detailed Description

Definition at line 136 of file iiglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iiglobal.h

## 4.962 iiglobal::tOpenGL\_Utils Struct Reference

### Data Fields

- int **displayDepth**
- int **cc\_changed**
- void \* **prv**

#### 4.962.1 Detailed Description

Definition at line 202 of file iiglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iiglobal.h

## 4.963 Touch Struct Reference

### Data Fields

- int **buttonState**
- int **mev**
- unsigned int **ID**
- int **inUse**
- float **angle**
- int **x**
- int **y**
- float **fx**
- float **fy**
- int **dragStart**
- int **dragEnd**
- int **windex**
- void \* **stageld**
- int **rx**
- int **ry**
- int **claimant**
- int **passed**
- struct **X3D\_Node** \* **CursorOverSensitive**
- struct **X3D\_Node** \* **oldCOS**
- struct **X3D\_Node** \* **lastPressedOver**
- struct **X3D\_Node** \* **lastOver**
- int **lastOverButtonPressed**
- void \* **hypersensitive**
- int **hyperhit**
- double **justModel** [16]
- struct **point\_XYZ** **hp**

### 4.963.1 Detailed Description

Definition at line 153 of file MainLoop.c.

The documentation for this struct was generated from the following file:

- src/lib/main/MainLoop.c

## 4.964 iiGlobal::tPluginSocket Struct Reference

### Data Fields

- void \* **prv**



### 4.964.1 Detailed Description

Definition at line 252 of file iglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iglobal.h

## 4.965 iiglobal::tpluginUtils Struct Reference

### Data Fields

- void \* **prv**

### 4.965.1 Detailed Description

Definition at line 255 of file iglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iglobal.h

## 4.966 iiglobal::tProdCon Struct Reference

### Data Fields

- struct **Vector** \* **viewpointNodes**
- int **currboundvpno**
- struct **X3D\_Node** \* **setViewpointBindInRender**
- struct **X3D\_Node** \* **setFogBindInRender**
- struct **X3D\_Node** \* **setBackgroundBindInRender**
- struct **X3D\_Node** \* **setNavigationBindInRender**
- void \* **savedParser**
- void \* **prv**

### 4.966.1 Detailed Description

Definition at line 169 of file iglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iglobal.h

## 4.967 TrackJamTarget Struct Reference

### Data Fields

- struct **EntityID** **trackJam**  
*track/jam target*
- unsigned char **emitterID**  
*Emitter ID.*
- unsigned char **beamID**  
*beam ID*

### 4.967.1 Detailed Description

Definition at line 1273 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.968 TransferControlRequestPdu Struct Reference

### Data Fields

- struct **EntityManagementFamilyPdu** **myEntityManagementFamilyPdu**
- struct **EntityID** **originatingEntityID**  
*ID of entity originating request.*
- struct **EntityID** **receivingEntityID**  
*ID of entity receiving request.*
- unsigned int **requestID**  
*ID of request.*
- unsigned char **requiredReliabilityService**  
*required level of reliability service.*
- unsigned char **transferType**  
*type of transfer desired*
- struct **EntityID** **transferEntityID**  
*The entity for which control is being requested to transfer.*
- unsigned char **numberOfRecordSets**  
*number of record sets to transfer*
- void \* **recordSets**  
^^^ *This is wrong—the **RecordSet** (p. 549) class needs more work*

### 4.968.1 Detailed Description

Definition at line 1476 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.969 TransmitterPdu Struct Reference

### Data Fields

- struct **RadioCommunicationsFamilyPdu** myRadioCommunicationsFamilyPdu
- struct **RadioEntityType** radioEntityType  
*linear acceleration of entity*
- unsigned char **transmitState**  
*transmit state*
- unsigned char **inputSource**  
*input source*
- unsigned short **padding1**  
*padding*
- struct **Vector3Double** antennaLocation  
*Location of antenna.*
- struct **Vector3Float** relativeAntennaLocation  
*relative location of antenna*
- unsigned short **antennaPatternType**  
*antenna pattern type*
- unsigned short **antennaPatternCount**  
*atenna pattern length*
- unsigned long long **frequency**  
*frequency*
- float **transmitFrequencyBandwidth**  
*transmit frequency Bandwidth*
- float **power**  
*transmission power*
- struct **ModulationType** modulationType  
*modulation*
- unsigned short **cryptoSystem**  
*crypto system enumeration*
- unsigned short **cryptoKeyId**  
*crypto system key identifier*
- unsigned char **modulationParameterCount**  
*how many modulation parameters we have*
- unsigned short **padding2**  
*padding2*
- unsigned char **padding3**  
*padding3*
- void \* **modulationParametersList**  
*variable length list of modulation parameters*
- void \* **antennaPatternList**  
*variable length list of antenna pattern records*

### 4.969.1 Detailed Description

Definition at line 1230 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.970 treeNode Struct Reference

### Data Fields

- void \* **key**
- struct **treeNode** \* **parent**
- struct **treeNode** \* **left**
- struct **treeNode** \* **right**

### 4.970.1 Detailed Description

Definition at line 36 of file `searchTree.h`.

The documentation for this struct was generated from the following file:

- `src/libnurbs/nurbtess/searchTree.h`

## 4.971 iiglobal::tRenderFuncs Struct Reference

### Data Fields

- int **BrowserAction**
- double **hitPointDist**
- float **hyp\_save\_posn** [3]
- float **hyp\_save\_norm** [3]
- float **ray\_save\_posn** [3]
- float **camera\_axis** [3]
- void \* **hypersensitive**
- int **hyperhit**
- void \* **hp**
- void \* **rayHit**
- int **lightingOn**
- int **have\_transparency**
- int **last\_texture\_type**
- unsigned int **boundTextureStack** [10]
- int **textureStackTop**
- void \* **texturenode**
- void \* **shapenode**
- void \* **prv**

### 4.971.1 Detailed Description

Definition at line 335 of file `iglobal.h`.

The documentation for this struct was generated from the following file:

- `src/lib/iglobal.h`

## 4.972 **trenderstate** Struct Reference

### Data Fields

- int **render\_sensitive**
- int **render\_picking**
- int **render\_vp**
- int **render\_light**
- int **render\_proximity**
- int **render\_other**
- int **verbose**
- int **render\_blend**
- int **render\_geom**
- int **render\_collision**
- int **render\_cube**
- int **render\_background**
- int **render\_boxes**

### 4.972.1 Detailed Description

Definition at line 793 of file `headers.h`.

The documentation for this struct was generated from the following file:

- `src/lib/main/headers.h`

## 4.973 **iiglobal::tRenderTextures** Struct Reference

### Data Fields

- void \* **textureParameterStack**
- void \* **prv**

### 4.973.1 Detailed Description

Definition at line 223 of file `iglobal.h`.

The documentation for this struct was generated from the following file:

- `src/lib/iglobal.h`

## 4.974 **iiglobal::tresources** Struct Reference

### Data Fields

- void \* **root\_res**
- void \* **prv**

### 4.974.1 Detailed Description

Definition at line 69 of file iglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iglobal.h

## 4.975 Trimline Class Reference

### Public Member Functions

- void **init** ( TrimVertex \*)
- void **init** (long, Arc\_ptr, long)
- void **getNextPt** (void)
- void **getPrevPt** (void)
- void **getNextPts** (REAL, Backend &)
- void **getPrevPts** (REAL, Backend &)
- void **getNextPts** (Arc\_ptr)
- void **getPrevPts** (Arc\_ptr)
- TrimVertex \* **next** (void)
- TrimVertex \* **prev** (void)
- TrimVertex \* **first** (void)
- TrimVertex \* **last** (void)

### 4.975.1 Detailed Description

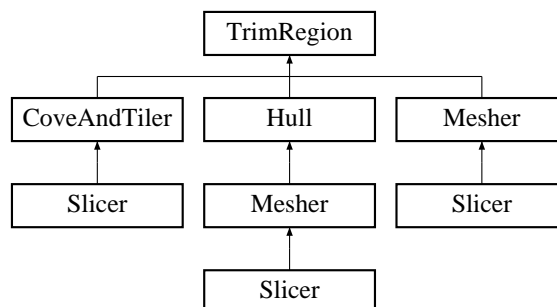
Definition at line 46 of file trimline.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/trimline.h
- src/libnurbs/internals/trimline.cc

## 4.976 TrimRegion Class Reference

Inheritance diagram for TrimRegion:



## Public Member Functions

- void **init** (REAL)
- void **advance** (REAL, REAL, REAL)
- void **setDu** (REAL)
- void **init** (long, Arc\_ptr)
- void **getPts** (Arc\_ptr)
- void **getPts** ( **Backend** &)
- void **getGridExtent** ( **TrimVertex** \*, **TrimVertex** \*)
- void **getGridExtent** (void)
- int **canTile** (void)

## Data Fields

- **Trimline left**
- **Trimline right**
- **Gridline top**
- **Gridline bot**
- **Uarray uarray**

### 4.976.1 Detailed Description

Definition at line 46 of file trimregion.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/trimregion.h
- src/libnurbs/internals/trimregion.cc

## 4.977 TrimVertex Class Reference

### Data Fields

- REAL **param** [2]
- long **nuid**

### 4.977.1 Detailed Description

Definition at line 43 of file trimvertex.h.

The documentation for this class was generated from the following file:

- src/libnurbs/internals/trimvertex.h

## 4.978 TrimVertexPool Class Reference

### Public Member Functions

- void **clear** (void)
- **TrimVertex** \* **get** (int)

### 4.978.1 Detailed Description

Definition at line 45 of file trimvertpool.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/trimvertpool.h
- src/libnurbs/internals/trimvertpool.cc

## 4.979 iiglobal::tSensInterps Struct Reference

### Data Fields

- void \* **prv**

### 4.979.1 Detailed Description

Definition at line 128 of file iiglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iiglobal.h

## 4.980 iiglobal::tSnapshot Struct Reference

### Data Fields

- IBOOL **doSnapshot**
- IBOOL **doPrintshot**
- int **snapGoodCount**
- void \* **prv**

### 4.980.1 Detailed Description

Definition at line 102 of file iiglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iiglobal.h



## 4.981 iiglobal::tstatusbar Struct Reference

### Data Fields

- void \* **prv**

#### 4.981.1 Detailed Description

Definition at line 389 of file iiglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iiglobal.h

## 4.982 iiglobal::tStreamPoly Struct Reference

### Data Fields

- void \* **prv**

#### 4.982.1 Detailed Description

Definition at line 371 of file iiglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iiglobal.h

## 4.983 iiglobal::tTess Struct Reference

### Data Fields

- int \* **global\_IFS\_Coords**
- int **global\_IFS\_Coord\_count**
- void \* **global\_tessobj**
- int \* **text\_IFS\_Coords**
- int **text\_IFS\_Coord\_count**
- void \* **text\_tessobj**
- void \* **prv**

#### 4.983.1 Detailed Description

Definition at line 374 of file iiglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iiglobal.h

## 4.984 **iglobal::tTextures** Struct Reference

### Data Fields

- unsigned int \* **global\_tcin**
- int **global\_tcin\_count**
- void \* **global\_tcin\_lastParent**
- unsigned int **defaultBlankTexture**
- void \* **prv**

### 4.984.1 Detailed Description

Definition at line 228 of file `iglobal.h`.

The documentation for this struct was generated from the following file:

- `src/lib/iglobal.h`

## 4.985 **iglobal::tthreads** Struct Reference

### Data Fields

- pthread\_t **disposeThread**
- pthread\_t **mainThread**
- pthread\_t **DispThrd**
- pthread\_t **PCthread**
- pthread\_t **loadThread**
- pthread\_mutex\_t **mutex\_resource\_tree**
- pthread\_mutex\_t **mutex\_resource\_list**
- pthread\_cond\_t **resource\_list\_condition**
- pthread\_mutex\_t **mutex\_frontend\_list**
- pthread\_mutex\_t **mutex\_texture\_list**
- pthread\_cond\_t **texture\_list\_condition**
- IBOOL **ResourceThreadRunning**
- IBOOL **TextureThreadRunning**
- IBOOL **ResourceThreadWaiting**
- IBOOL **TextureThreadWaiting**
- IBOOL **flushing**
- int **MainLoopQuit**
- void \* **prv**

### 4.985.1 Detailed Description

Definition at line 74 of file `iglobal.h`.

The documentation for this struct was generated from the following file:

- `src/lib/iglobal.h`

## 4.986 iiglobal::tViewer Struct Reference

### Data Fields

- int **stereotype**
- void \* **prv**

#### 4.986.1 Detailed Description

Definition at line 385 of file iiglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iiglobal.h

## 4.987 TwoByteChunk Struct Reference

### Data Fields

- char **otherParameters** [2]  
*two bytes of arbitrary data*

#### 4.987.1 Detailed Description

Definition at line 306 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.988 iiglobal::tX3DParser Struct Reference

### Data Fields

- int **parentIndex**
- char \* **CDATA\_Text**
- int **CDATA\_Text\_curlen**
- void \* **prv**

#### 4.988.1 Detailed Description

Definition at line 453 of file iiglobal.h.

The documentation for this struct was generated from the following file:

- src/lib/iiglobal.h

## 4.989 UaPdu Struct Reference

### Data Fields

- struct **DistributedEmissionsFamilyPdu** **myDistributedEmissionsFamilyPdu**
- struct **EntityID** **emittingEntityID**  
*ID of the entity that is the source of the emission.*
- struct **EventID** **eventID**  
*ID of event.*
- char **stateChangeIndicator**  
*This field shall be used to indicate whether the data in the UA PDU represent a state update or data that have changed since issuance of the last UA PDU.*
- char **pad**  
*padding*
- unsigned short **passiveParameterIndex**  
*This field indicates which database record (or file) shall be used in the definition of passive signature (unintentional) emissions of the entity.*
- unsigned char **propulsionPlantConfiguration**  
*This field shall specify the entity propulsion plant configuration.*
- unsigned char **numberOfShafts**  
*This field shall represent the number of shafts on a platform.*
- unsigned char **numberOfAPAs**  
*This field shall indicate the number of APAs described in the current UA PDU.*
- unsigned char **numberOfUAEmitterSystems**  
*This field shall specify the number of UA emitter systems being described in the current UA PDU.*
- void \* **shaftRPMs**  
*shaft RPM values*
- void \* **apaData**  
*apaData*
- void \* **emitterSystems**

### 4.989.1 Detailed Description

Definition at line 1869 of file DIS.h.

### 4.989.2 Field Documentation

#### 4.989.2.1 passiveParameterIndex

```
unsigned short UaPdu::passiveParameterIndex
```

This field indicates which database record (or file) shall be used in the definition of passive signature (unintentional) emissions of the entity.

The indicated database record (or file) shall define all noise generated as a function of propulsion plant configurations and associated auxiliaries.

Definition at line 1880 of file DIS.h.

### 4.989.2.2 propulsionPlantConfiguration

```
unsigned char UaPdu::propulsionPlantConfiguration
```

This field shall specify the entity propulsion plant configuration.

This field is used to determine the passive signature characteristics of an entity.

Definition at line 1882 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.990 Uarray Class Reference

### Public Member Functions

- long **init** (REAL, Arc\_ptr, Arc\_ptr)

### Data Fields

- REAL \* **uarray**

### 4.990.1 Detailed Description

Definition at line 44 of file uarray.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/uarray.h
- src/libnurbs/internals/uarray.cc

## 4.991 un1 Union Reference

### Data Fields

- int **i**
- float **f**
- void \* **p**

### 4.991.1 Detailed Description

Definition at line 2 of file ringbuf.h.

The documentation for this union was generated from the following file:

- src/lib/scenegraph/ringbuf.h

## 4.992 unca Struct Reference

### Data Fields

- char \* **catname**
- int **iunca**
- int **lengthpower**
- int **derived**
- int **ichanged**
- double **factor**
- char \* **uname**

### 4.992.1 Detailed Description

Definition at line 1719 of file CParseParser.c.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/CParseParser.c

## 4.993 Uni\_String Struct Reference

### Data Fields

- int **len**
- char \* **strptr**
- int **touched**
- size\_t **len**

### 4.993.1 Detailed Description

Definition at line 51 of file Structs.h.

The documentation for this struct was generated from the following files:

- src/lib/vrml\_parser/Structs.h
- src/libeai/EAI\_C.h

## 4.994 unitsB Struct Reference

### Data Fields

- char \* **catname**
- int **iunca**
- int **lengthpower**
- int **derived**
- int **ichanged**
- double **factor**
- char **uname** [40]

### 4.994.1 Detailed Description

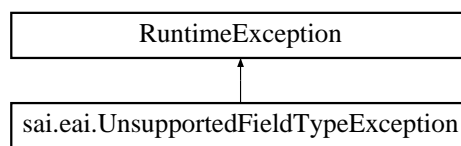
Definition at line 1774 of file CParseParser.c.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/CParseParser.c

## 4.995 sai.eai.UnsupportedFieldTypeException Class Reference

Inheritance diagram for sai.eai.UnsupportedFieldTypeException:



### Public Member Functions

- **UnsupportedFieldTypeException** (String str)

### 4.995.1 Detailed Description

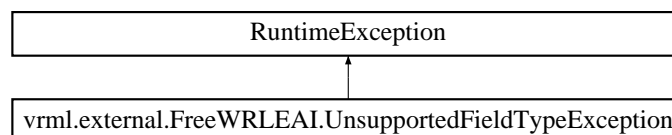
Definition at line 19 of file UnsupportedFieldTypeException.java.

The documentation for this class was generated from the following file:

- src/java/sai/eai/UnsupportedFieldTypeException.java

## 4.996 vrml.external.FreeWRLEAI.UnsupportedFieldTypeException Class Reference

Inheritance diagram for vrml.external.FreeWRLEAI.UnsupportedFieldTypeException:



### Public Member Functions

- **UnsupportedFieldTypeException** (String str)

### 4.996.1 Detailed Description

Definition at line 19 of file `UnsupportedFieldTypeException.java`.

The documentation for this class was generated from the following file:

- `src/java/vrml/external/FreeWRLEAI/UnsupportedFieldTypeException.java`

## 4.997 unz64\_file\_pos\_s Struct Reference

### Data Fields

- `ZPOS64_T pos_in_zip_directory`
- `ZPOS64_T num_of_file`

### 4.997.1 Detailed Description

Definition at line 272 of file `unzip.h`.

The documentation for this struct was generated from the following file:

- `src/libminizip/unzip.h`

## 4.998 unz64\_s Struct Reference

### Data Fields

- `zlib_filefunc64_32_def z_filefunc`
- `int is64bitOpenFunction`
- `voidpf filestream`
- `unz_global_info64 gi`
- `ZPOS64_T byte_before_the_zipfile`
- `ZPOS64_T num_file`
- `ZPOS64_T pos_in_central_dir`
- `ZPOS64_T current_file_ok`
- `ZPOS64_T central_pos`
- `ZPOS64_T size_central_dir`
- `ZPOS64_T offset_central_dir`
- `unz_file_info64 cur_file_info`
- `unz_file_info64_internal cur_file_info_internal`
- `file_in_zip64_read_info_s* pfile_in_zip_read`
- `int encrypted`
- `int isZip64`



### 4.998.1 Detailed Description

Definition at line 165 of file unzip.c.

The documentation for this struct was generated from the following file:

- src/libminizip/unzip.c

## 4.999 unz\_file\_info64\_internal\_s Struct Reference

### Data Fields

- ZPOS64\_T **offset\_curfile**

### 4.999.1 Detailed Description

Definition at line 126 of file unzip.c.

The documentation for this struct was generated from the following file:

- src/libminizip/unzip.c

## 4.1000 unz\_file\_info64\_s Struct Reference

### Data Fields

- uLong **version**
- uLong **version\_needed**
- uLong **flag**
- uLong **compression\_method**
- uLong **dosDate**
- uLong **crc**
- ZPOS64\_T **compressed\_size**
- ZPOS64\_T **uncompressed\_size**
- uLong **size\_filename**
- uLong **size\_file\_extra**
- uLong **size\_file\_comment**
- uLong **disk\_num\_start**
- uLong **internal\_fa**
- uLong **external\_fa**
- tm\_unz **tmu\_date**

### 4.1000.1 Detailed Description

Definition at line 111 of file unzip.h.

The documentation for this struct was generated from the following file:

- src/libminizip/unzip.h

## 4.1001 unz\_file\_info\_s Struct Reference

### Data Fields

- uLong **version**
- uLong **version\_needed**
- uLong **flag**
- uLong **compression\_method**
- uLong **dosDate**
- uLong **crc**
- uLong **compressed\_size**
- uLong **uncompressed\_size**
- uLong **size\_filename**
- uLong **size\_file\_extra**
- uLong **size\_file\_comment**
- uLong **disk\_num\_start**
- uLong **internal\_fa**
- uLong **external\_fa**
- **tm\_unz** **tmu\_date**

### 4.1001.1 Detailed Description

Definition at line 132 of file unzip.h.

The documentation for this struct was generated from the following file:

- src/libminizip/unzip.h

## 4.1002 unz\_file\_pos\_s Struct Reference

### Data Fields

- uLong **pos\_in\_zip\_directory**
- uLong **num\_of\_file**

### 4.1002.1 Detailed Description

Definition at line 258 of file unzip.h.

The documentation for this struct was generated from the following file:

- src/libminizip/unzip.h

## 4.1003 unz\_global\_info64\_s Struct Reference

### Data Fields

- ZPOS64\_T **number\_entry**
- uLong **size\_comment**

### 4.1003.1 Detailed Description

Definition at line 96 of file unzip.h.

The documentation for this struct was generated from the following file:

- src/libminizip/unzip.h

## 4.1004 unz\_global\_info\_s Struct Reference

### Data Fields

- uLong **number\_entry**
- uLong **size\_comment**

### 4.1004.1 Detailed Description

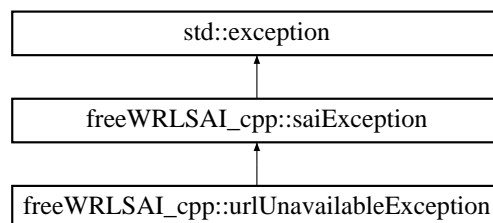
Definition at line 103 of file unzip.h.

The documentation for this struct was generated from the following file:

- src/libminizip/unzip.h

## 4.1005 freeWRLSAI\_cpp::urlUnavailableException Class Reference

Inheritance diagram for freeWRLSAI\_cpp::urlUnavailableException:



### Public Member Functions

- virtual const char \* **what** ()

### Additional Inherited Members

### 4.1005.1 Detailed Description

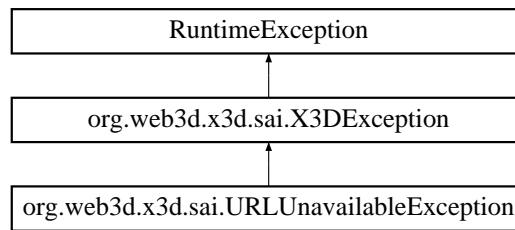
Definition at line 240 of file SAlexception.h.

The documentation for this class was generated from the following file:

- src/SAI\_Cpp/SAlexception.h

## 4.1006 org.web3d.x3d.sai.URLUnavailableException Class Reference

Inheritance diagram for org.web3d.x3d.sai.URLUnavailableException:



### Public Member Functions

- **URLUnavailableException** (String msg)

#### 4.1006.1 Detailed Description

Definition at line 3 of file URLUnavailableException.java.

The documentation for this class was generated from the following file:

- src/java/org/web3d/x3d/sai/URLUnavailableException.java

## 4.1007 usehit Struct Reference

### Data Fields

- struct **X3D\_Node** \* **node**
- double **mvm** [16]
- void \* **userdata**

#### 4.1007.1 Detailed Description

Definition at line 84 of file RenderFuncs.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/RenderFuncs.h

## 4.1008 VariableDatum Struct Reference

### Data Fields

- unsigned int **variableDatumID**  
*ID of the variable datum.*
- unsigned int **variableDatumLength**  
*length of the variable datums*
- void \* **variableDatums**  
*variable length list of 64-bit datums*

### 4.1008.1 Detailed Description

Definition at line 615 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.1009 Varray Class Reference

### Public Member Functions

- long **init** (REAL, **Arc** \*, **Arc** \*)

### Data Fields

- REAL \* **varray**
- REAL **vval** [1000]
- long **voffset** [1000]
- long **numquads**

### 4.1009.1 Detailed Description

Definition at line 43 of file varray.h.

The documentation for this class was generated from the following files:

- src/libnurbs/internals/varray.h
- src/libnurbs/internals/varray.cc

## 4.1010 vec2 Struct Reference

### Data Fields

- float **X**
- float **Y**

#### 4.1010.1 Detailed Description

Definition at line 2298 of file Component\_Text.c.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Component\_Text.c

### 4.1011 vec4 Struct Reference

#### Data Fields

- float **X**
- float **Y**
- float **Z**
- float **W**

#### 4.1011.1 Detailed Description

Definition at line 728 of file MainLoop.c.

The documentation for this struct was generated from the following files:

- src/lib/main/MainLoop.c
- src/lib/scenegraph/Component\_Text.c

### 4.1012 Vector Struct Reference

#### Data Fields

- int **n**
- int **allocn**
- void \* **data**

#### 4.1012.1 Detailed Description

Definition at line 36 of file Vector.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Vector.h

## 4.1013 Vector3Double Struct Reference

### Data Fields

- double **x**  
*X value.*
- double **y**  
*Y value.*
- double **z**  
*Z value.*

### 4.1013.1 Detailed Description

Definition at line 587 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.1014 Vector3Float Struct Reference

### Data Fields

- float **x**  
*X value.*
- float **y**  
*y Value*
- float **z**  
*Z value.*

### 4.1014.1 Detailed Description

Definition at line 328 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.1015 VectoringNozzleSystemData Struct Reference

### Data Fields

- float **horizontalDeflectionAngle**  
*horizontal deflection angle*
- float **verticalDeflectionAngle**  
*vertical deflection angle*

### 4.1015.1 Detailed Description

Definition at line 232 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.1016 vertexArray Class Reference

### Public Member Functions

- **vertexArray** (Int s)
- **vertexArray** (Real vertices[ ][2], Int nVertices)
- void **appendVertex** (Real \*ptr)
- Real \* **getVertex** (Int i)
- Real \*\* **getArray** ()
- Int **getNumElements** ()
- Int **findIndexAbove** (Real v)
- Int **findIndexAboveGen** (Real v, Int startIndex, Int EndIndex)
- Int **findIndexBelowGen** (Real v, Int startIndex, Int EndIndex)
- Int **findIndexStrictBelowGen** (Real v, Int startIndex, Int EndIndex)
- Int **findIndexFirstAboveEqualGen** (Real v, Int startIndex, Int endIndex)
- Int **skipEqualityFromStart** (Real v, Int start, Int end)
- Int **findDecreaseChainFromEnd** (Int begin, Int end)
- void **print** ()

### 4.1016.1 Detailed Description

Definition at line 77 of file monoTriangulation.h.

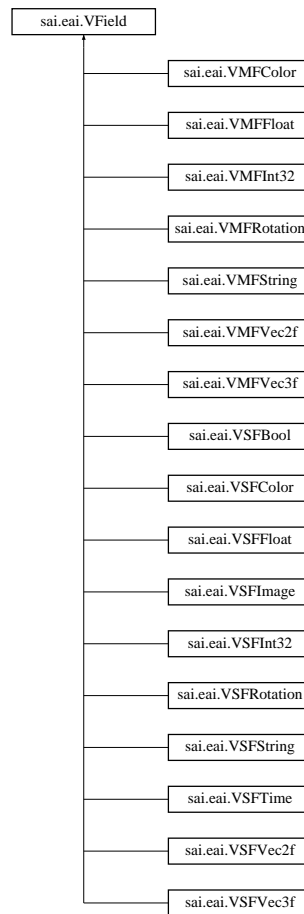
The documentation for this class was generated from the following files:

- src/libnurbs/nurbtess/monoTriangulation.h
- src/libnurbs/nurbtess/monoTriangulation.cc



## 4.1017 sai.eai.VField Class Reference

Inheritance diagram for sai.eai.VField:



### Public Member Functions

- byte **getType** ()
- abstract void **write** (DataOutputStream out) throws IOException

### Static Public Attributes

- static final byte **NOTHING** = -1
- static final byte **SFBOOL** = 0
- static final byte **SFCOLOR** = 1
- static final byte **SFFLOAT** = 2
- static final byte **SFIMAGE** = 3
- static final byte **SFINT32** = 4
- static final byte **SFNODE** = 5
- static final byte **SFROTATION** = 6
- static final byte **SFSTRING** = 7
- static final byte **SFTIME** = 8
- static final byte **SFVEC2F** = 9
- static final byte **SFVEC3F** = 10

- static final byte **MFCOLOR** = 11
- static final byte **MFFLOAT** = 12
- static final byte **MFINT32** = 13
- static final byte **MFNODE** = 14
- static final byte **MFROTATION** = 15
- static final byte **MFSTRING** = 16
- static final byte **MFVEC2F** = 17
- static final byte **MFVEC3F** = 18

#### 4.1017.1 Detailed Description

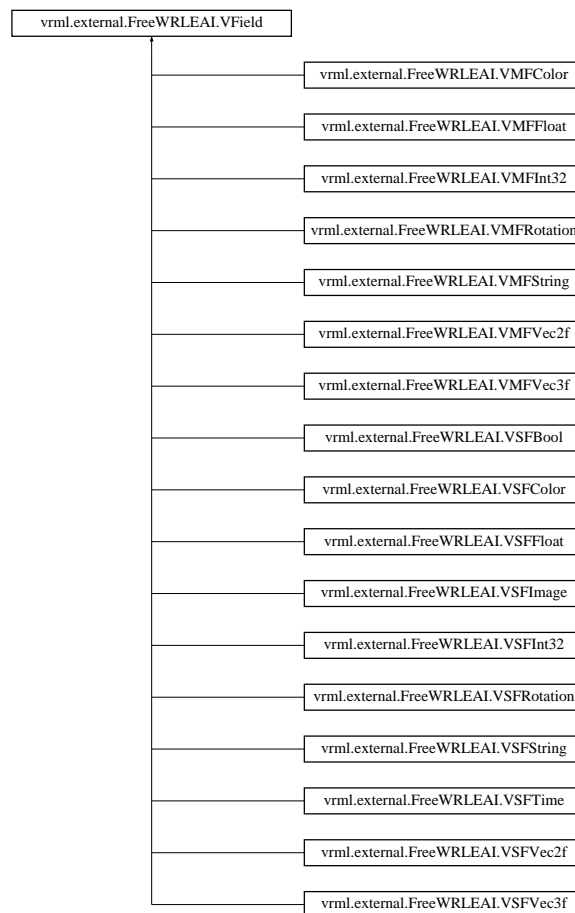
Definition at line 24 of file VField.java.

The documentation for this class was generated from the following file:

- src/java/sai/eai/VField.java

### 4.1018 vrml.external.FreeWRLEAI.VField Class Reference

Inheritance diagram for vrml.external.FreeWRLEAI.VField:



## Public Member Functions

- byte **getType** ()
- abstract void **write** (DataOutputStream out) throws IOException

## Static Public Attributes

- static final byte **NOTHING** = -1
- static final byte **SFBOOL** = 0
- static final byte **SFCOLOR** = 1
- static final byte **SFFLOAT** = 2
- static final byte **SFIMAGE** = 3
- static final byte **SFINT32** = 4
- static final byte **SFNODE** = 5
- static final byte **SFROTATION** = 6
- static final byte **SFSTRING** = 7
- static final byte **SFTIME** = 8
- static final byte **SFVEC2F** = 9
- static final byte **SFVEC3F** = 10
- static final byte **MFCOLOR** = 11
- static final byte **MFFLOAT** = 12
- static final byte **MFINT32** = 13
- static final byte **MFNODE** = 14
- static final byte **MFROTATION** = 15
- static final byte **MFSTRING** = 16
- static final byte **MFVEC2F** = 17
- static final byte **MFVEC3F** = 18

### 4.1018.1 Detailed Description

Definition at line 24 of file VField.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/FreeWRLEAI/VField.java

## 4.1019 vid\_stream Struct Reference

### Data Fields

- unsigned int **h\_size**
- unsigned int **v\_size**
- unsigned int **mb\_height**
- unsigned int **mb\_width**
- unsigned char **aspect\_ratio**
- unsigned char **picture\_rate**
- unsigned int **bit\_rate**
- unsigned int **vbv\_buffer\_size**
- int **const\_param\_flag**
- unsigned char **intra\_quant\_matrix** [8][8]

- unsigned char **non\_intra\_quant\_matrix** [8][8]
- char \* **ext\_data**
- char \* **user\_data**
- **GoP** group
- **Pict** picture
- **Slice** slice
- **Macroblock** mblock
- **Block** block
- int **state**
- int **bit\_offset**
- unsigned int \* **buffer**
- int **buf\_length**
- unsigned int \* **buf\_start**
- int **max\_buf\_length**
- int **film\_has\_ended**
- int **sys\_layer**
- unsigned int **num\_left**
- unsigned int **leftover\_bytes**
- int **EOF\_flag**
- FILE \* **input**
- long **seekValue**
- int **swap**
- int **Parse\_done**
- int **gAudioStreamID**
- int **gVideoStreamID**
- int **gReservedStreamID**
- int **right\_for**
- int **down\_for**
- int **right\_half\_for**
- int **down\_half\_for**
- unsigned int **curBits**
- int **matched\_depth**
- char \* **filename**
- int **ditherType**
- char \* **ditherFlags**
- int **totNumFrames**
- double **realTimeStart**
- **PictImage** \* **past**
- **PictImage** \* **future**
- **PictImage** \* **current**
- **PictImage** \* **ring** [RING\_BUF\_SIZE]
- int **ppm\_width**
- int **ppm\_height**
- int **ppm\_modulus**

#### 4.1019.1 Detailed Description

Definition at line 191 of file mpeg\_berkley.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/mpeg\_berkley.h

## 4.1020 viewer Struct Reference

### Data Fields

- struct **point\_XYZ** **currentPosInModel**
- struct **point\_XYZ** **Pos**
- **Quaternion** **Quat**
- struct **point\_XYZ** **Pos0**
- **Quaternion** **Quat0**
- struct **point\_XYZ** **Up**
- int **headlight**
- int **collision**
- double **speed**
- double **Dist**
- int **isStereo**
- int **isStereoB**
- int **iside**
- int **isideB**
- int **sidebyside**
- int **updown**
- int **updownB**
- int **shutterGlasses**
- int **haveQuadbuffer**
- int **anaglyph**
- int **anaglyphB**
- int **dominantEye**
- int **eitherDominantEye**
- double **stereoParameter**
- double **eyehalf**
- double **eyehalfangle**
- double **screendist**
- double **eyedist**
- int **iprogram** [2]
- unsigned int **buffer**
- int **oktypes** [18]
- **X3D\_Viewer\_Walk** **walk**
- **X3D\_Viewer\_Examine** **examine**
- **X3D\_Viewer\_Fly** **fly**
- **X3D\_Viewer\_Spherical** **ypz**
- **X3D\_Viewer\_InPlane** **inplane**
- struct **point\_XYZ** **VPvelocity**
- int **SLERPing2**
- int **SLERPing2justStarted**
- int **SLERPing**
- double **startSLERPtime**
- int **SLERPing3**
- int **type**
- int **lastType**
- int **LookatMode**
- int **transitionType**
- double **transitionTime**
- double **lasttime**
- struct **point\_XYZ** **startSLERPPos**
- **Quaternion** **startSLERPQuat**

- double **startSLERPDist**
- double **endSLERPDist**
- struct **point\_XYZ** **endSLERPPos**
- **Quaternion** **endSLERPQuat**
- double **slerp\_viewmatrix** [16]
- double **slerp\_posorimatrix** [16]
- int **vp2rnSaved**
- int **doExamineModeDistanceCalculations**
- int **ortho**
- double **orthoField** [4]
- int **screenOrientation**
- double **nearPlane**
- double **farPlane**
- double **xcenter**
- double **backgroundPlane**
- GLDOUBLE **fieldofview**
- GLDOUBLE **fovZoom**
- int **wasBound**

#### 4.1020.1 Detailed Description

Definition at line 162 of file Viewer.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Viewer.h

### 4.1021 viewer\_examine Struct Reference

#### Data Fields

- struct **point\_XYZ** **Origin**
- **Quaternion** **OQuat**
- **Quaternion** **SQuat**
- double **ODist**
- double **SY**

#### 4.1021.1 Detailed Description

Definition at line 118 of file Viewer.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Viewer.h

## 4.1022 viewer\_fly Struct Reference

### Data Fields

- double **Velocity** [2][3]
- **KeyHit down** [2][3]
- int **ndown** [2][3]
- **KeyHit wasDown** [2][3][10]
- double **lasttime**

### 4.1022.1 Detailed Description

Definition at line 152 of file Viewer.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Viewer.h

## 4.1023 viewer\_inplane Struct Reference

### Data Fields

- double **x**
- double **y**
- double **xx**
- double **yy**
- int **on**
- int **ibut**

### 4.1023.1 Detailed Description

Definition at line 132 of file Viewer.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Viewer.h

## 4.1024 viewer\_walk Struct Reference

### Data Fields

- double **SX**
- double **SY**
- double **XD**
- double **YD**
- double **ZD**
- double **RD**

### 4.1024.1 Detailed Description

Definition at line 108 of file Viewer.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Viewer.h

## 4.1025 viewer\_ypz Struct Reference

### Data Fields

- double **ypz0** [3]
- double **ypz** [3]
- float **x**
- float **y**

### 4.1025.1 Detailed Description

Definition at line 126 of file Viewer.h.

The documentation for this struct was generated from the following file:

- src/lib/scenegraph/Viewer.h

## 4.1026 sai.eai.VIP Class Reference

### Static Public Member Functions

- static String **fieldName** (short value)

### Static Public Attributes

- static final short **QUIT** = -1
- static final short **MESSAGE** = -2
- static final short **ADD\_OBJECT** = -3
- static final short **REMOVE\_OBJECT** = -4
- static final short **PRIVATE\_MESSAGE** = -5
- static final short **CREATE\_OBJECT** = -6
- static final short **USER\_INFO** = -7
- static final short **SELF\_INFO** = -8
- static final short **SSRC** = -9
- static final short **TRANSFERREQUEST** = -10
- static final short **TRANSFERACCEPT** = -11
- static final short **TRANSFERREJECT** = -12
- static final short **TRANSFERREQUESTADD** = -13
- static final short **FILERREQUEST** = -14



- static final short **FRQRESPONSE** = -15
- static final short **POSITION** = 0
- static final short **ORIENTATION** = 1
- static final short **SCALE** = 2
- static final short **NAME** = 3
- static final short **OWNER** = 4
- static final short **PARENT** = 5
- static final short **CHILDREN** = 6
- static final short **DROPPED** = 7
- static final short **NUM\_FIELDS** = 4
- static final short **MAX\_GESTURES** = 10
- static final short **MAX\_CHILDREN** = 50

### 4.1026.1 Detailed Description

Definition at line 19 of file VIP.java.

The documentation for this class was generated from the following file:

- src/java/sai/eai/VIP.java

## 4.1027 vrml.external.FreeWRLEAI.VIP Class Reference

### Static Public Member Functions

- static String **fieldName** (short value)

### Static Public Attributes

- static final short **QUIT** = -1
- static final short **MESSAGE** = -2
- static final short **ADD\_OBJECT** = -3
- static final short **REMOVE\_OBJECT** = -4
- static final short **PRIVATE\_MESSAGE** = -5
- static final short **CREATE\_OBJECT** = -6
- static final short **USER\_INFO** = -7
- static final short **SELF\_INFO** = -8
- static final short **SSRC** = -9
- static final short **TRANSFERREQUEST** = -10
- static final short **TRANSFERACCEPT** = -11
- static final short **TRANSFERREJECT** = -12
- static final short **TRANSFERREQUESTADD** = -13
- static final short **FILEREQUEST** = -14
- static final short **FRQRESPONSE** = -15
- static final short **POSITION** = 0
- static final short **ORIENTATION** = 1
- static final short **SCALE** = 2
- static final short **NAME** = 3
- static final short **OWNER** = 4
- static final short **PARENT** = 5
- static final short **CHILDREN** = 6
- static final short **DROPPED** = 7
- static final short **NUM\_FIELDS** = 4
- static final short **MAX\_GESTURES** = 10
- static final short **MAX\_CHILDREN** = 50

### 4.1027.1 Detailed Description

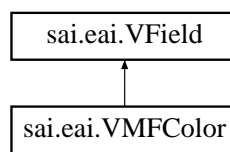
Definition at line 19 of file VIP.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/FreeWRLEAI/VIP.java

## 4.1028 sai.eai.VMFCOLOR Class Reference

Inheritance diagram for sai.eai.VMFCOLOR:



### Public Member Functions

- **VMFCOLOR** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- byte **getType** ()

### Additional Inherited Members

### 4.1028.1 Detailed Description

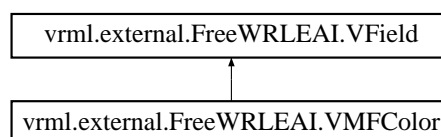
Definition at line 21 of file VMFCOLOR.java.

The documentation for this class was generated from the following file:

- src/java/sai/eai/VMFCOLOR.java

## 4.1029 vrml.external.FreeWRLEAI.VMFCOLOR Class Reference

Inheritance diagram for vrml.external.FreeWRLEAI.VMFCOLOR:



## Public Member Functions

- **VMFColor** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- byte **getType** ()

## Additional Inherited Members

### 4.1029.1 Detailed Description

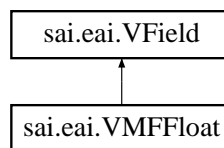
Definition at line 21 of file VMFColor.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/FreeWRLEAI/VMFColor.java

## 4.1030 sai.eai.VMFFloat Class Reference

Inheritance diagram for sai.eai.VMFFloat:



## Public Member Functions

- **VMFFloat** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- byte **getType** ()

## Additional Inherited Members

### 4.1030.1 Detailed Description

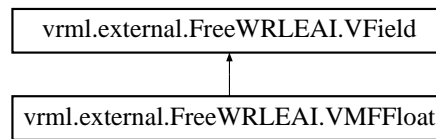
Definition at line 21 of file VMFFloat.java.

The documentation for this class was generated from the following file:

- src/java/sai/eai/VMFFloat.java

## 4.1031 vrml.external.FreeWRLEAI.VMFFloat Class Reference

Inheritance diagram for vrml.external.FreeWRLEAI.VMFFloat:



### Public Member Functions

- **VMFFloat** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- byte **getType** ()

### Additional Inherited Members

#### 4.1031.1 Detailed Description

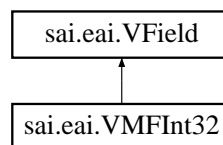
Definition at line 21 of file VMFFloat.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/FreeWRLEAI/VMFFloat.java

## 4.1032 sai.eai.VMFIInt32 Class Reference

Inheritance diagram for sai.eai.VMFIInt32:



### Public Member Functions

- **VMFIInt32** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- byte **getType** ()

## Additional Inherited Members

### 4.1032.1 Detailed Description

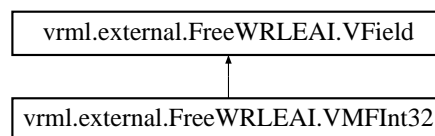
Definition at line 21 of file VMFIInt32.java.

The documentation for this class was generated from the following file:

- src/java/sai/eai/VMFIInt32.java

## 4.1033 vrml.external.FreeWRLEAI.VMFIInt32 Class Reference

Inheritance diagram for vrml.external.FreeWRLEAI.VMFIInt32:



## Public Member Functions

- **VMFIInt32** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- byte **getType** ()

## Additional Inherited Members

### 4.1033.1 Detailed Description

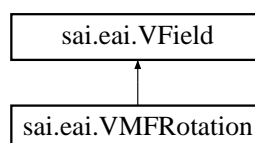
Definition at line 21 of file VMFIInt32.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/FreeWRLEAI/VMFIInt32.java

## 4.1034 sai.eai.VMFRotation Class Reference

Inheritance diagram for sai.eai.VMFRotation:



## Public Member Functions

- **VMFRotation** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- byte **getType** ()

## Additional Inherited Members

### 4.1034.1 Detailed Description

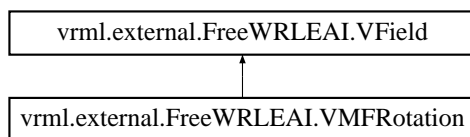
Definition at line 21 of file VMFRotation.java.

The documentation for this class was generated from the following file:

- src/java/sai/eai/VMFRotation.java

## 4.1035 vrml.external.FreeWRLEAI.VMFRotation Class Reference

Inheritance diagram for vrml.external.FreeWRLEAI.VMFRotation:



## Public Member Functions

- **VMFRotation** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- byte **getType** ()

## Additional Inherited Members

### 4.1035.1 Detailed Description

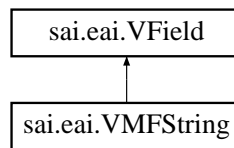
Definition at line 21 of file VMFRotation.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/FreeWRLEAI/VMFRotation.java

## 4.1036 sai.eai.VMFString Class Reference

Inheritance diagram for sai.eai.VMFString:



### Public Member Functions

- **VMFString** (DataInputStream in) throws IOException
- **VMFString** (String[] strings)
- void **write** (DataOutputStream out) throws IOException
- byte **getType** ()
- String[] **getValue** ()
- String **get1Value** (int pos)
- String **toString** ()

### Additional Inherited Members

#### 4.1036.1 Detailed Description

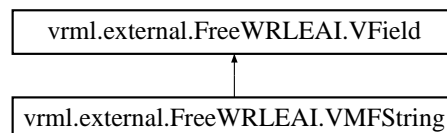
Definition at line 21 of file VMFString.java.

The documentation for this class was generated from the following file:

- src/java/sai/eai/VMFString.java

## 4.1037 vrml.external.FreeWRLEAI.VMFString Class Reference

Inheritance diagram for vrml.external.FreeWRLEAI.VMFString:



### Public Member Functions

- **VMFString** (DataInputStream in) throws IOException
- **VMFString** (String[] strings)
- void **write** (DataOutputStream out) throws IOException
- byte **getType** ()
- String[] **getValue** ()
- String **get1Value** (int pos)
- String **toString** ()

## Additional Inherited Members

### 4.1037.1 Detailed Description

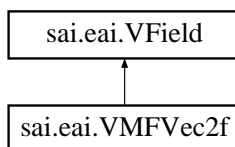
Definition at line 21 of file VMFString.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/FreeWRLEAI/VMFString.java

## 4.1038 sai.eai.VMFVec2f Class Reference

Inheritance diagram for sai.eai.VMFVec2f:



## Public Member Functions

- **VMFVec2f** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- byte **getType** ()

## Additional Inherited Members

### 4.1038.1 Detailed Description

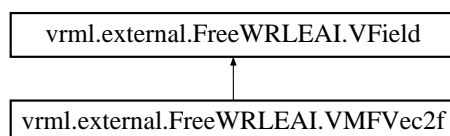
Definition at line 21 of file VMFVec2f.java.

The documentation for this class was generated from the following file:

- src/java/sai/eai/VMFVec2f.java

## 4.1039 vrml.external.FreeWRLEAI.VMFVec2f Class Reference

Inheritance diagram for vrml.external.FreeWRLEAI.VMFVec2f:





## Public Member Functions

- **VMFVec2f** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- byte **getType** ()

## Additional Inherited Members

### 4.1039.1 Detailed Description

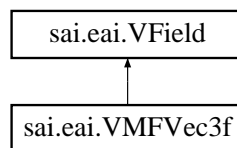
Definition at line 21 of file VMFVec2f.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/FreeWRLEAI/VMFVec2f.java

## 4.1040 sai.eai.VMFVec3f Class Reference

Inheritance diagram for sai.eai.VMFVec3f:



## Public Member Functions

- **VMFVec3f** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- byte **getType** ()

## Additional Inherited Members

### 4.1040.1 Detailed Description

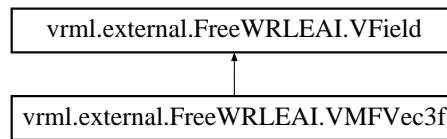
Definition at line 21 of file VMFVec3f.java.

The documentation for this class was generated from the following file:

- src/java/sai/eai/VMFVec3f.java

## 4.1041 vrml.external.FreeWRLEAI.VMFVec3f Class Reference

Inheritance diagram for vrml.external.FreeWRLEAI.VMFVec3f:



### Public Member Functions

- **VMFVec3f** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- byte **getType** ()

### Additional Inherited Members

#### 4.1041.1 Detailed Description

Definition at line 21 of file VMFVec3f.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/FreeWRLEAI/VMFVec3f.java

## 4.1042 void3 Struct Reference

### Data Fields

- void \* **one**
- void \* **two**
- void \* **three**

#### 4.1042.1 Detailed Description

Definition at line 697 of file headers.h.

The documentation for this struct was generated from the following file:

- src/lib/main/headers.h

## 4.1043 VRMLLexer Struct Reference

### Data Fields

- char \* **nextIn**
- char \* **startOfStringPtr** [LEXER\_INPUT\_STACK\_MAX]
- char \* **curlID**
- BOOL **isEof**
- int **lexerInputLevel**
- char \* **oldNextIn** [LEXER\_INPUT\_STACK\_MAX]
- **Stack** \* **userNodeNames**
- struct **Vector** \* **userNodeTypesVec**
- **Stack** \* **userNodeTypesStack**
- struct **Vector** \* **user\_initializeOnly**
- struct **Vector** \* **user\_inputOutput**
- struct **Vector** \* **user\_inputOnly**
- struct **Vector** \* **user\_outputOnly**

### 4.1043.1 Detailed Description

Definition at line 50 of file CParseLexer.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/CParseLexer.h

## 4.1044 sai.eai.VRMLObject Class Reference

### Public Member Functions

- **VRMLObject** (int id, String URL, **VRMLObjectObserver** observer)
- String[] **getFieldNames** ()
- **VField** **getField** (short field)
- void **setName** (String name)
- void **setField** (short field, **VField** value)
- String **toString** ()
- void **load** ()

### Data Fields

- int **id**
- String **URL**
- **VRMLObject** **next**
- String[] **gestures**
- boolean **loaded** = false

### Protected Member Functions

- void **doSetField** (short field, **VField** value)

## Protected Attributes

- String **name**
- String[] **fieldNames**
- **VRMLObjectObserver** **observer**
- **VField**[] **fields**

### 4.1044.1 Detailed Description

Definition at line 23 of file VRMLObject.java.

The documentation for this class was generated from the following file:

- src/java/sai/eai/VRMLObject.java

## 4.1045 vrml.external.FreeWRLEAI.VRMLObject Class Reference

### Public Member Functions

- **VRMLObject** (int id, String URL, **VRMLObjectObserver** observer)
- String[] **getFieldNames** ()
- **VField** **getField** (short field)
- void **setName** (String name)
- void **setField** (short field, **VField** value)
- String **toString** ()
- void **load** ()

### Data Fields

- int **id**
- String **URL**
- **VRMLObject** **next**
- String[] **gestures**
- boolean **loaded** = false

### Protected Member Functions

- void **doSetField** (short field, **VField** value)

## Protected Attributes

- String **name**
- String[] **fieldNames**
- **VRMLObjectObserver** **observer**
- **VField**[] **fields**

### 4.1045.1 Detailed Description

Definition at line 23 of file VRMLObject.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/FreeWRLEAI/VRMLObject.java

## 4.1046 sai.eai.VRMLObjectObserver Interface Reference

### Public Member Functions

- void **onClicked** ( VRMLObject obj)
- void **onLoaded** ( VRMLObject obj)

### 4.1046.1 Detailed Description

Definition at line 19 of file VRMLObjectObserver.java.

The documentation for this interface was generated from the following file:

- src/java/sai/eai/VRMLObjectObserver.java

## 4.1047 vrml.external.FreeWRLEAI.VRMLObjectObserver Interface Reference

### Public Member Functions

- void **onClicked** ( VRMLObject obj)
- void **onLoaded** ( VRMLObject obj)

### 4.1047.1 Detailed Description

Definition at line 19 of file VRMLObjectObserver.java.

The documentation for this interface was generated from the following file:

- src/java/vrml/external/FreeWRLEAI/VRMLObjectObserver.java

## 4.1048 VRMLParser Struct Reference

### Data Fields

- struct **VRMLLexer** \* **lexer**
- void \* **ectx**
- void \* **ptr**
- unsigned **ofs**
- struct **ProtoDefinition** \* **curPROTO**
- **Stack** \* **DEFedNodes**
- struct **Vector** \* **PROTOs**
- int **parsingX3DfromXML**
- **Stack** \* **brotoDEFedNodes**

### 4.1048.1 Detailed Description

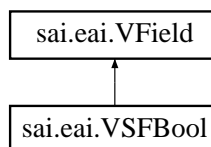
Definition at line 148 of file CParseParser.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/CParseParser.h

## 4.1049 sai.eai.VSFBool Class Reference

Inheritance diagram for sai.eai.VSFBool:



### Public Member Functions

- **VSFBool** (boolean value)
- **VSFBool** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- boolean **getValue** ()
- byte **getType** ()

### Additional Inherited Members

### 4.1049.1 Detailed Description

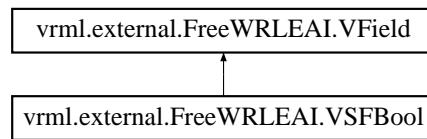
Definition at line 21 of file VSFBool.java.

The documentation for this class was generated from the following file:

- src/java/sai/eai/VSFBool.java

## 4.1050 vrml.external.FreeWRLEAI.VSFBool Class Reference

Inheritance diagram for vrml.external.FreeWRLEAI.VSFBool:



### Public Member Functions

- **VSFBool** (boolean value)
- **VSFBool** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- boolean **getValue** ()
- byte **getType** ()

### Additional Inherited Members

#### 4.1050.1 Detailed Description

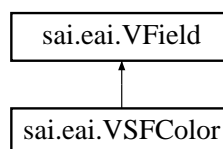
Definition at line 21 of file VSFBool.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/FreeWRLEAI/VSFBool.java

## 4.1051 sai.eai.VSFColor Class Reference

Inheritance diagram for sai.eai.VSFColor:



### Public Member Functions

- **VSFColor** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- byte **getType** ()

## Additional Inherited Members

### 4.1051.1 Detailed Description

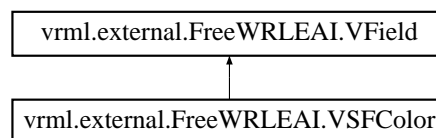
Definition at line 21 of file VSFCOLOR.java.

The documentation for this class was generated from the following file:

- src/java/sai/eai/VSFColor.java

## 4.1052 vrml.external.FreeWRLEAI.VSFColor Class Reference

Inheritance diagram for vrml.external.FreeWRLEAI.VSFColor:



## Public Member Functions

- **VSFColor** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- byte **getType** ()

## Additional Inherited Members

### 4.1052.1 Detailed Description

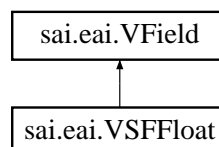
Definition at line 21 of file VSFCOLOR.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/FreeWRLEAI/VSFColor.java

## 4.1053 sai.eai.VSFFloat Class Reference

Inheritance diagram for sai.eai.VSFFloat:





## Public Member Functions

- **VSFFloat** (float value) throws IOException
- **VSFFloat** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- byte **getType** ()

## Additional Inherited Members

### 4.1053.1 Detailed Description

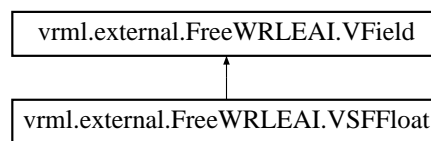
Definition at line 20 of file VSFFloat.java.

The documentation for this class was generated from the following file:

- src/java/sai/eai/VsFFloat.java

## 4.1054 vrml.external.FreeWRLEAI.VSFFloat Class Reference

Inheritance diagram for vrml.external.FreeWRLEAI.VSFFloat:



## Public Member Functions

- **VSFFloat** (float value) throws IOException
- **VSFFloat** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- byte **getType** ()

## Additional Inherited Members

### 4.1054.1 Detailed Description

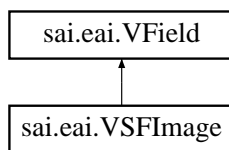
Definition at line 20 of file VSFFloat.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/FreeWRLEAI/VsFFloat.java

## 4.1055 sai.eai.VSFIImage Class Reference

Inheritance diagram for sai.eai.VSFIImage:



### Public Member Functions

- **VSFIImage** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- byte **getType** ()

### Additional Inherited Members

#### 4.1055.1 Detailed Description

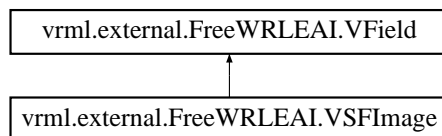
Definition at line 21 of file VSFIImage.java.

The documentation for this class was generated from the following file:

- src/java/sai/eai/VsFIImage.java

## 4.1056 vrml.external.FreeWRLEAI.VSFIImage Class Reference

Inheritance diagram for vrml.external.FreeWRLEAI.VSFIImage:



### Public Member Functions

- **VSFIImage** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- byte **getType** ()

## Additional Inherited Members

### 4.1056.1 Detailed Description

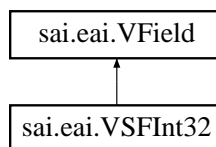
Definition at line 21 of file VSFImage.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/FreeWRLEAI/VSFImage.java

## 4.1057 sai.eai.VSFInt32 Class Reference

Inheritance diagram for sai.eai.VSFInt32:



## Public Member Functions

- **VSFInt32** (DataInputStream in) throws IOException
- **VSFInt32** (int v)
- void **write** (DataOutputStream out) throws IOException
- int **getValue** ()
- byte **getType** ()

## Additional Inherited Members

### 4.1057.1 Detailed Description

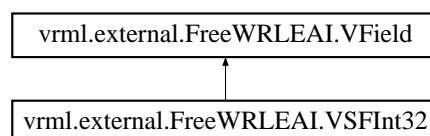
Definition at line 21 of file VSFInt32.java.

The documentation for this class was generated from the following file:

- src/java/sai/eai/VSFInt32.java

## 4.1058 vrml.external.FreeWRLEAI.VSFInt32 Class Reference

Inheritance diagram for vrml.external.FreeWRLEAI.VSFInt32:



## Public Member Functions

- **VSFInt32** (DataInputStream in) throws IOException
- **VSFInt32** (int v)
- void **write** (DataOutputStream out) throws IOException
- int **getValue** ()
- byte **getType** ()

## Additional Inherited Members

### 4.1058.1 Detailed Description

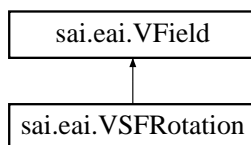
Definition at line 21 of file VSFInt32.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/FreeWRLEAI/VSFInt32.java

## 4.1059 sai.eai.VSFRotation Class Reference

Inheritance diagram for sai.eai.VSFRotation:



## Public Member Functions

- **VSFRotation** (float axisX, float axisY, float axisZ, float angle)
- **VSFRotation** (float[] values)
- **VSFRotation** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- String **toString** ()
- byte **getType** ()
- float[] **getValue** ()
- double **getAngle** ()

## Additional Inherited Members

### 4.1059.1 Detailed Description

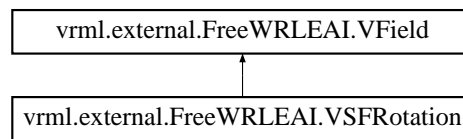
Definition at line 20 of file VSFRotation.java.

The documentation for this class was generated from the following file:

- src/java/sai/eai/VSFRotation.java

## 4.1060 vrml.external.FreeWRLEAI.VSFRotation Class Reference

Inheritance diagram for vrml.external.FreeWRLEAI.VSFRotation:



### Public Member Functions

- **VSFRotation** (float axisX, float axisY, float axisZ, float angle)
- **VSFRotation** (float[] values)
- **VSFRotation** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- String **toString** ()
- byte **getType** ()
- float[] **getValue** ()
- double **getAngle** ()

### Additional Inherited Members

#### 4.1060.1 Detailed Description

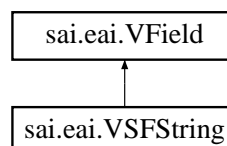
Definition at line 20 of file VSFRotation.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/FreeWRLEAI/VSFRotation.java

## 4.1061 sai.eai.VSFString Class Reference

Inheritance diagram for sai.eai.VSFString:



### Public Member Functions

- **VSFString** (String s)
- **VSFString** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- String **toString** ()
- String **getValue** ()
- byte **getType** ()

## Additional Inherited Members

### 4.1061.1 Detailed Description

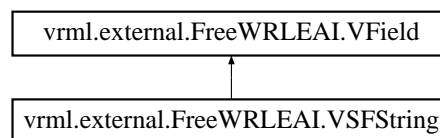
Definition at line 21 of file VSFString.java.

The documentation for this class was generated from the following file:

- src/java/sai/eai/VSFString.java

## 4.1062 vrml.external.FreeWRLEAI.VSFString Class Reference

Inheritance diagram for vrml.external.FreeWRLEAI.VSFString:



## Public Member Functions

- **VSFString** (String s)
- **VSFString** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- String **toString** ()
- String **getValue** ()
- byte **getType** ()

## Additional Inherited Members

### 4.1062.1 Detailed Description

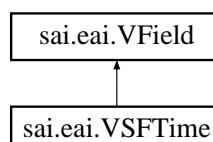
Definition at line 21 of file VSFString.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/FreeWRLEAI/VSFString.java

## 4.1063 sai.eai.VSFTIME Class Reference

Inheritance diagram for sai.eai.VSFTIME:



## Public Member Functions

- **VSFTIME** (double time)
- **VSFTIME** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- byte **getType** ()
- double **getValue** ()

## Additional Inherited Members

### 4.1063.1 Detailed Description

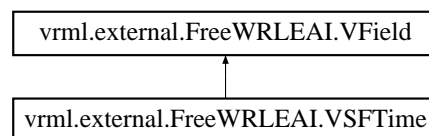
Definition at line 21 of file VSFTIME.java.

The documentation for this class was generated from the following file:

- src/java/sai/eai/VSTIME.java

## 4.1064 vrml.external.FreeWRLEAI.VSFTIME Class Reference

Inheritance diagram for vrml.external.FreeWRLEAI.VSFTIME:



## Public Member Functions

- **VSFTIME** (double time)
- **VSFTIME** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- byte **getType** ()
- double **getValue** ()

## Additional Inherited Members

### 4.1064.1 Detailed Description

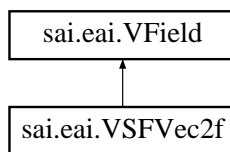
Definition at line 21 of file VSFTIME.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/FreeWRLEAI/VSTIME.java

## 4.1065 sai.eai.VSFVec2f Class Reference

Inheritance diagram for sai.eai.VSFVec2f:



### Public Member Functions

- **VSFVec2f** (float x, float y, float z)
- **VSFVec2f** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- byte **getType** ()

### Additional Inherited Members

#### 4.1065.1 Detailed Description

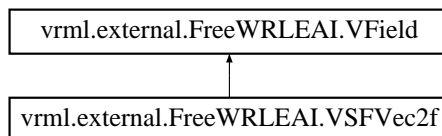
Definition at line 21 of file VSFVec2f.java.

The documentation for this class was generated from the following file:

- src/java/sai/eai/VSFVec2f.java

## 4.1066 vrml.external.FreeWRLEAI.VSFVec2f Class Reference

Inheritance diagram for vrml.external.FreeWRLEAI.VSFVec2f:



### Public Member Functions

- **VSFVec2f** (float x, float y, float z)
- **VSFVec2f** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- byte **getType** ()



## Additional Inherited Members

### 4.1066.1 Detailed Description

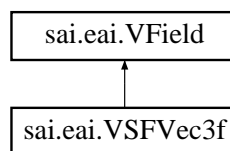
Definition at line 21 of file VSFVec2f.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/FreeWRLEAI/VSFVec2f.java

## 4.1067 sai.eai.VSFVec3f Class Reference

Inheritance diagram for sai.eai.VSFVec3f:



## Public Member Functions

- **VSFVec3f** (float x, float y, float z)
- **VSFVec3f** (float[] values)
- **VSFVec3f** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- String **toString** ()
- byte **getType** ()
- float[] **getValue** ()
- **VSFVec3f plus** ( VSFVec3f v)
- **VSFVec3f minus** ( VSFVec3f v)
- **VSFVec3f times** (float s)
- double **getDistance** ( VSFVec3f v)
- double **getAngle** ( VSFVec3f v)

## Additional Inherited Members

### 4.1067.1 Detailed Description

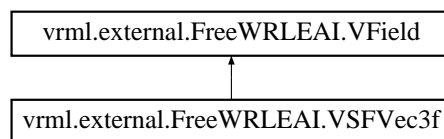
Definition at line 19 of file VSFVec3f.java.

The documentation for this class was generated from the following file:

- src/java/sai/eai/VSFVec3f.java

## 4.1068 vrml.external.FreeWRLEAI.VSFVec3f Class Reference

Inheritance diagram for vrml.external.FreeWRLEAI.VSFVec3f:



### Public Member Functions

- **VSFVec3f** (float x, float y, float z)
- **VSFVec3f** (float[] values)
- **VSFVec3f** (DataInputStream in) throws IOException
- void **write** (DataOutputStream out) throws IOException
- String **toString** ()
- byte **getType** ()
- float[] **getValue** ()
- **VSFVec3f plus** ( **VSFVec3f** v)
- **VSFVec3f minus** ( **VSFVec3f** v)
- **VSFVec3f times** (float s)
- double **getDistance** ( **VSFVec3f** v)
- double **getAngle** ( **VSFVec3f** v)

### Additional Inherited Members

#### 4.1068.1 Detailed Description

Definition at line 19 of file VSFVec3f.java.

The documentation for this class was generated from the following file:

- src/java/vrml/external/FreeWRLEAI/VSFVec3f.java

## 4.1069 walk\_cbdata Struct Reference

### Data Fields

- int(\* **fkey** )(const char \* **key**, int index, **cson\_value** \*val, void \*cbdata)
- int(\* **fval** )( **cson\_value** \*val, int index, void \*cbdata)
- void \* **data**
- void \* **arr**
- int **arrtype**

### 4.1069.1 Detailed Description

Definition at line 234 of file SSRServer.c.

The documentation for this struct was generated from the following file:

- src/SSR/SSRServer.c

## 4.1070 WarfareFamilyPdu Struct Reference

### Data Fields

- struct **Pdu** **myPdu**
- struct **EntityID** **firingEntityID**  
*ID of the entity that shot.*
- struct **EntityID** **targetEntityID**  
*ID of the entity that is being shot at.*

### 4.1070.1 Detailed Description

Definition at line 994 of file DIS.h.

The documentation for this struct was generated from the following file:

- src/lib/DIS/DIS.h

## 4.1071 WEB3DNATIVE Struct Reference

### Data Fields

- int **fieldType**
- union {  
    void \* **native**  
    union **anyVrml** \* **anyvrml**  
};
- int \* **valueChanged**
- int **kind**
- char **gc**

### 4.1071.1 Detailed Description

Definition at line 84 of file FWTYPE.h.

The documentation for this struct was generated from the following file:

- src/lib/world\_script/FWTYPE.h

## 4.1072 X3D\_Anchor Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **addChildren**
- struct **Multi\_Node** **removeChildren**
- struct **Multi\_Node** **\_\_sibAffectors**
- struct **Multi\_Node** **children**
- struct **Uni\_String** \* **description**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_String** **parameter**
- struct **Multi\_String** **url**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**
- void \* **\_parentResource**

### 4.1072.1 Detailed Description

Definition at line 2694 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1073 X3D\_Appearance Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**

- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **fillProperties**
- struct **X3D\_Node** \* **lineProperties**
- struct **X3D\_Node** \* **material**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Node** **shaders**
- struct **Multi\_Node** **effects**
- struct **X3D\_Node** \* **texture**
- struct **X3D\_Node** \* **textureTransform**

### 4.1073.1 Detailed Description

Definition at line 2723 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1074 X3D\_Arc2D Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- float **endAngle**
- float **radius**
- float **startAngle**
- struct **Multi\_Vec2f** **\_\_points**
- int **\_\_numPoints**

### 4.1074.1 Detailed Description

Definition at line 2749 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1075 X3D\_ArcClose2D Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Uni\_String** \* **closureType**
- float **endAngle**
- float **radius**
- int **solid**
- float **startAngle**
- struct **Multi\_Vec2f** **\_\_points**
- struct **Multi\_Vec2f** **\_\_texCoords**
- int **\_\_numPoints**
- int **\_\_simpleDisk**
- void \* **\_\_wireindices**

### 4.1075.1 Detailed Description

Definition at line 2773 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1076 X3D\_AudioClip Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**

- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Uni\_String** \* **description**
- int **loop**
- struct **X3D\_Node** \* **metadata**
- double **pauseTime**
- float **pitch**
- double **resumeTime**
- double **startTime**
- double **stopTime**
- struct **Multi\_String** **url**
- double **duration\_changed**
- double **elapsedTime**
- int **isActive**
- int **isPaused**
- void \* **\_parentResource**
- int **\_\_loadstatus**
- void \* **\_\_loadResource**
- int **\_\_sourceNumber**
- double **\_\_inittime**
- double **\_\_lasttime**

#### 4.1076.1 Detailed Description

Definition at line 2802 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1077 X3D\_BackdropBackground Struct Reference

#### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **set\_bind**
- double **bindTime**
- int **isBound**
- float **transparency**
- struct **SFColor** **color**
- struct **X3D\_Node** \* **metadata**
- int **\_\_texture**
- int **\_\_VBO**
- struct **Multi\_String** **url**

### 4.1077.1 Detailed Description

Definition at line 2839 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1078 X3D\_Background Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **set\_bind**
- struct **Multi\_Float** **groundAngle**
- struct **Multi\_Color** **groundColor**
- struct **Multi\_Float** **skyAngle**
- struct **Multi\_Color** **skyColor**
- double **bindTime**
- int **isBound**
- int **\_layerId**
- void \* **\_parentResource**
- struct **Multi\_Vec3f** **\_\_points**
- struct **Multi\_Color** **\_\_colours**
- int **\_\_quadcount**
- float **transparency**
- struct **Multi\_String** **frontUrl**
- struct **Multi\_String** **backUrl**
- struct **Multi\_String** **topUrl**
- struct **Multi\_String** **bottomUrl**
- struct **Multi\_String** **leftUrl**
- struct **Multi\_String** **rightUrl**
- struct **X3D\_Node** \* **metadata**
- int **\_\_textureright**
- struct **X3D\_Node** \* **\_\_frontTexture**
- struct **X3D\_Node** \* **\_\_backTexture**
- struct **X3D\_Node** \* **\_\_topTexture**
- struct **X3D\_Node** \* **\_\_bottomTexture**
- struct **X3D\_Node** \* **\_\_leftTexture**
- struct **X3D\_Node** \* **\_\_rightTexture**
- int **\_\_VBO**



### 4.1078.1 Detailed Description

Definition at line 2866 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1079 X3D\_BallJoint Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFVec3f** **anchorPoint**
- struct **X3D\_Node** \* **body1**
- struct **X3D\_Node** \* **body2**
- struct **Multi\_String** **forceOutput**
- struct **X3D\_Node** \* **metadata**
- struct **SFVec3f** **body1AnchorPoint**
- struct **SFVec3f** **body2AnchorPoint**
- void \* **\_joint**
- int **\_forceout**
- struct **SFVec3f** **\_\_old\_anchorPoint**
- struct **X3D\_Node** \* **\_\_old\_body1**
- struct **X3D\_Node** \* **\_\_old\_body2**

### 4.1079.1 Detailed Description

Definition at line 2912 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1080 X3D\_Billboard Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **addChildren**
- struct **Multi\_Node** **removeChildren**
- struct **Multi\_Node** **\_\_sibAffectors**
- struct **SFVec3f** **axisOfRotation**
- struct **Multi\_Node** **children**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**
- struct **X3D\_Node** \* **metadata**
- double **\_rotationAngle**

### 4.1080.1 Detailed Description

Definition at line 2942 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1081 X3D\_BlendedVolumeStyle Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**

- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **surfaceNormals**
- struct **X3D\_Node** \* **renderStyle**
- struct **X3D\_Node** \* **voxels**
- float **weightConstant1**
- float **weightConstant2**
- struct **Uni\_String** \* **weightFunction1**
- struct **Uni\_String** \* **weightFunction2**
- struct **X3D\_Node** \* **weightTransferFunction1**
- struct **X3D\_Node** \* **weightTransferFunction2**
- struct **Multi\_Int32** **\_fbohandles**
- int **\_weightFunction1**
- int **\_weightFunction2**

#### 4.1081.1 Detailed Description

Definition at line 2969 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1082 X3D\_BooleanFilter Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **set\_boolean**
- int **inputFalse**
- int **inputNegate**
- int **inputTrue**
- struct **X3D\_Node** \* **metadata**

### 4.1082.1 Detailed Description

Definition at line 3001 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1083 X3D\_BooleanSequencer Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **next**
- int **previous**
- float **set\_fraction**
- struct **Multi\_Float** **key**
- struct **Multi\_Bool** **keyValue**
- int **value\_changed**
- struct **X3D\_Node** \* **metadata**
- int **\_index**

### 4.1083.1 Detailed Description

Definition at line 3024 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1084 X3D\_BooleanToggle Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **set\_boolean**
- int **toggle**
- struct **X3D\_Node** \* **metadata**

### 4.1084.1 Detailed Description

Definition at line 3050 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1085 X3D\_BooleanTrigger Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- double **set\_triggerTime**
- int **triggerTrue**
- struct **X3D\_Node** \* **metadata**

### 4.1085.1 Detailed Description

Definition at line 3071 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1086 X3D\_BoundaryEnhancementVolumeStyle Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- struct **X3D\_Node** \* **metadata**
- float **boundaryOpacity**
- float **opacityFactor**
- float **retainedOpacity**

### 4.1086.1 Detailed Description

Definition at line 3092 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1087 X3D\_BoundedPhysicsModel Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- struct **X3D\_Node** \* **geometry**
- struct **X3D\_Node** \* **metadata**

### 4.1087.1 Detailed Description

Definition at line 3115 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1088 X3D\_Box Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **SFVec3f** **size**
- int **solid**
- struct **Multi\_Vec3f** **\_\_points**

### 4.1088.1 Detailed Description

Definition at line 3136 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1089 X3D\_CADAssembly Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **addChildren**
- struct **Multi\_Node** **removeChildren**
- struct **Multi\_Node** **\_\_sibAffectors**
- struct **Multi\_Node** **children**
- struct **X3D\_Node** \* **metadata**
- struct **Uni\_String** \* **name**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**
- struct **Multi\_Node** **\_sortedChildren**

### 4.1089.1 Detailed Description

Definition at line 3158 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h



## 4.1090 X3D\_CADFace Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Uni\_String** \* **name**
- struct **X3D\_Node** \* **shape**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**

### 4.1090.1 Detailed Description

Definition at line 3185 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1091 X3D\_CADLayer Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **addChildren**
- struct **Multi\_Node** **removeChildren**
- struct **Multi\_Node** **\_\_sibAffectors**
- struct **Multi\_Node** **children**
- struct **X3D\_Node** \* **metadata**
- struct **Uni\_String** \* **name**
- struct **Multi\_Bool** **visible**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**

### 4.1091.1 Detailed Description

Definition at line 3208 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1092 X3D\_CADPart Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **addChildren**
- struct **Multi\_Node** **removeChildren**
- struct **Multi\_Node** **\_\_sibAffectors**
- struct **SFVec3f** **center**
- struct **Multi\_Node** **children**
- struct **X3D\_Node** \* **metadata**
- struct **Uni\_String** \* **name**
- struct **SFRotation** **rotation**
- struct **SFVec3f** **scale**
- struct **SFRotation** **scaleOrientation**
- struct **SFVec3f** **translation**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**
- int **\_\_do\_center**
- int **\_\_do\_trans**
- int **\_\_do\_rotation**
- int **\_\_do\_scaleO**
- int **\_\_do\_scale**
- int **\_\_do\_anything**
- struct **Multi\_Node** **\_sortedChildren**

### 4.1092.1 Detailed Description

Definition at line 3235 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1093 X3D\_CalibratedCameraSensor Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- int **isActive**
- struct **X3D\_Node** \* **metadata**
- struct **Uni\_String** \* **description**
- struct **Multi\_Int32** **image**
- struct **SFVec2f** **focalPoint**
- float **fieldOfView**
- struct **Uni\_String** \* **fovMode**
- float **aspectRatio**

### 4.1093.1 Detailed Description

Definition at line 3273 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1094 X3D\_CartoonVolumeStyle Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **surfaceNormals**
- struct **SFColorRGBA** **orthogonalColor**
- struct **SFColorRGBA** **parallelColor**
- int **colorSteps**

### 4.1094.1 Detailed Description

Definition at line 3300 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1095 X3D\_Circle2D Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- float **radius**
- struct **Multi\_Vec2f** **\_\_points**
- int **\_\_numPoints**

### 4.1095.1 Detailed Description

Definition at line 3324 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1096 X3D\_ClipPlane Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- struct **X3D\_Node** \* **metadata**
- struct **SFVec4f** **plane**

### 4.1096.1 Detailed Description

Definition at line 3346 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1097 X3D\_CollidableOffset Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- struct **X3D\_Node** \* **metadata**
- struct **SFRotation** **rotation**
- struct **SFVec3f** **translation**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**
- int **\_\_do\_trans**
- int **\_\_do\_rotation**
- struct **X3D\_Node** \* **collidable**
- void \* **\_geom**
- struct **SFRotation** **\_initialRotation**
- struct **SFVec3f** **\_initialTranslation**
- int **\_initialized**
- void \* **\_csensor**

### 4.1097.1 Detailed Description

Definition at line 3367 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1098 X3D\_CollidableShape Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- struct **X3D\_Node** \* **metadata**
- struct **SFRotation** **rotation**
- struct **SFVec3f** **translation**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**
- int **\_\_do\_trans**
- int **\_\_do\_rotation**
- struct **X3D\_Node** \* **shape**
- void \* **\_geom**
- struct **SFRotation** **\_initialRotation**
- struct **SFVec3f** **\_initialTranslation**
- int **\_initialized**
- void \* **\_csensor**

### 4.1098.1 Detailed Description

Definition at line 3399 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1099 X3D\_Collision Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**

- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **addChildren**
- struct **Multi\_Node** **removeChildren**
- struct **Multi\_Node** **\_\_sibAffectors**
- struct **Multi\_Node** **children**
- int **enabled**
- int **collide**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**
- struct **X3D\_Node** \* **proxy**
- double **collideTime**
- struct **X3D\_Node** \* **metadata**
- int **\_\_hit**

#### 4.1099.1 Detailed Description

Definition at line 3431 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1100 X3D\_CollisionCollection Struct Reference

#### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_String** **appliedParameters**
- float **bounce**
- struct **Multi\_Node** **collidables**
- int **enabled**
- struct **SFVec2f** **frictionCoefficients**
- struct **X3D\_Node** \* **metadata**

- float **minBounceSpeed**
- struct **SFVec2f** **slipFactors**
- float **softnessConstantForceMix**
- float **softnessErrorCorrection**
- struct **SFVec2f** **surfaceSpeed**
- void \* **\_class**
- void \* **\_csensor**
- int **\_appliedParametersMask**

#### 4.1100.1 Detailed Description

Definition at line 3461 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1101 X3D\_CollisionSensor Struct Reference

#### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **collider**
- int **enabled**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Node** **intersections**
- struct **Multi\_Node** **contacts**
- int **isActive**

#### 4.1101.1 Detailed Description

Definition at line 3493 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h



## 4.1102 X3D\_CollisionSpace Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **collidables**
- int **enabled**
- struct **X3D\_Node** \* **metadata**
- int **useGeometry**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**
- void \* **\_space**

### 4.1102.1 Detailed Description

Definition at line 3517 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1103 X3D\_Color Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Color** **color**
- struct **X3D\_Node** \* **metadata**

### 4.1103.1 Detailed Description

Definition at line 3542 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1104 X3D\_ColorChaser Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- void \* **\_p**
- void \* **\_t**
- int **isActive**
- double **duration**
- double **\_bufferendtime**
- double **\_steptime**
- struct **SFColor** **value\_changed**
- struct **SFColor** **initialDestination**
- struct **SFColor** **initialValue**
- struct **SFColor** **set\_destination**
- struct **SFColor** **set\_value**
- void \* **\_buffer**
- struct **SFColor** **\_previousvalue**
- struct **SFColor** **\_destination**

### 4.1104.1 Detailed Description

Definition at line 3562 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1105 X3D\_ColorDamper Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- void \* **\_p**
- void \* **\_t**
- double **tau**
- float **tolerance**
- int **isActive**
- int **order**
- double **\_tau**
- double **\_lasttick**
- int **\_takefirstinput**
- struct **SFColor** **value\_changed**
- struct **SFColor** **initialDestination**
- struct **SFColor** **initialValue**
- struct **SFColor** **set\_destination**
- struct **SFColor** **set\_value**
- void \* **\_values**
- struct **SFColor** **\_input**

### 4.1105.1 Detailed Description

Definition at line 3595 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1106 X3D\_ColorInterpolator Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- float **set\_fraction**
- struct **Multi\_Float** **key**
- struct **Multi\_Color** **keyValue**
- struct **X3D\_Node** \* **metadata**
- struct **SFColor** **value\_changed**

### 4.1106.1 Detailed Description

Definition at line 3630 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1107 X3D\_ColorRGBA Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_ColorRGBA** **color**
- struct **X3D\_Node** \* **metadata**

### 4.1107.1 Detailed Description

Definition at line 3653 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1108 X3D\_ComposedCubeMapTexture Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **back**
- struct **X3D\_Node** \* **bottom**
- struct **X3D\_Node** \* **front**
- struct **X3D\_Node** \* **left**
- struct **X3D\_Node** \* **top**
- struct **X3D\_Node** \* **right**
- void \* **\_parentResource**

### 4.1108.1 Detailed Description

Definition at line 3673 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1109 X3D\_ComposedShader Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **activate**
- struct **Multi\_Node** parts
- int **isSelected**
- int **isValid**
- struct **Uni\_String** \* **language**
- struct **X3D\_Node** \* **metadata**
- int **\_initialized**
- struct **X3D\_Node** \* **\_shaderUserDefinedFields**
- int **\_shaderUserNumber**
- pthread\_t **\_shaderLoadThread**
- int **\_retrievedURLData**

### 4.1109.1 Detailed Description

Definition at line 3699 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1110 X3D\_ComposedTexture3D Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**

- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Node** **texture**
- struct **X3D\_Node** \* **textureProperties**
- int **repeatS**
- int **repeatT**
- int **repeatR**
- int **\_\_textureTableIndex**
- void \* **\_parentResource**

### 4.1110.1 Detailed Description

Definition at line 3728 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1111 X3D\_ComposedVolumeStyle Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Node** **renderStyle**

### 4.1111.1 Detailed Description

Definition at line 3754 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1112 X3D\_CompositeVolumeStyle Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Node** **renderStyle**

### 4.1112.1 Detailed Description

Definition at line 3775 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1113 X3D\_Cone Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- int **bottom**
- float **bottomRadius**
- float **height**
- int **side**
- int **solid**
- struct **Multi\_Vec3f** **\_\_sidepoints**
- struct **Multi\_Vec3f** **\_\_botpoints**
- struct **Multi\_Vec3f** **\_\_normals**
- int **\_\_coneVBO**
- int **\_\_coneTriangles**
- void \* **\_\_wireindices**



### 4.1113.1 Detailed Description

Definition at line 3796 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1114 X3D\_ConeEmitter Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- float **angle**
- struct **SFVec3f** **direction**
- struct **X3D\_Node** \* **metadata**
- struct **SFVec3f** **position**
- float **speed**
- float **variation**
- float **mass**
- float **surfaceArea**

### 4.1114.1 Detailed Description

Definition at line 3826 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1115 X3D\_Contact Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_String** **appliedParameters**
- struct **X3D\_Node** \* **body1**
- struct **X3D\_Node** \* **body2**
- float **bounce**
- struct **SFVec3f** **contactNormal**
- float **depth**
- struct **SFVec2f** **frictionCoefficients**
- struct **SFVec3f** **frictionDirection**
- struct **X3D\_Node** \* **geometry1**
- struct **X3D\_Node** \* **geometry2**
- struct **X3D\_Node** \* **metadata**
- float **minBounceSpeed**
- struct **SFVec3f** **position**
- struct **SFVec2f** **slipCoefficients**
- float **softnessConstantForceMix**
- float **softnessErrorCorrection**
- struct **SFVec2f** **surfaceSpeed**
- int **\_appliedParameters**

### 4.1115.1 Detailed Description

Definition at line 3852 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1116 X3D\_Contour2D Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **addChildren**
- struct **Multi\_Node** **removeChildren**
- struct **Multi\_Node** **\_\_sibAffectors**
- struct **Multi\_Node** **children**
- struct **X3D\_Node** \* **metadata**

### 4.1116.1 Detailed Description

Definition at line 3888 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1117 X3D\_ContourPolyline2D Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Vec2d** **controlPoint**
- struct **Multi\_Vec2f** **point**

### 4.1117.1 Detailed Description

Definition at line 3911 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1118 X3D\_Coordinate Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Vec3f** **point**
- struct **X3D\_Node** \* **metadata**

### 4.1118.1 Detailed Description

Definition at line 3932 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1119 X3D\_CoordinateChaser Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]

- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- void \* **\_p**
- void \* **\_t**
- int **isActive**
- double **duration**
- double **\_bufferendtime**
- double **\_steptime**
- struct **Multi\_Vec3f** **value\_changed**
- struct **Multi\_Vec3f** **initialDestination**
- struct **Multi\_Vec3f** **initialValue**
- struct **Multi\_Vec3f** **set\_destination**
- struct **Multi\_Vec3f** **set\_value**
- void \* **\_buffer**
- struct **Multi\_Vec3f** **\_previousvalue**
- struct **Multi\_Vec3f** **\_destination**

#### 4.1119.1 Detailed Description

Definition at line 3952 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1120 X3D\_CoordinateDamper Struct Reference

#### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- void \* **\_p**
- void \* **\_t**
- double **tau**
- float **tolerance**

- int **isActive**
- int **order**
- double **\_tau**
- double **\_lasttick**
- int **\_takefirstinput**
- struct **Multi\_Vec3f** **value\_changed**
- struct **Multi\_Vec3f** **initialDestination**
- struct **Multi\_Vec3f** **initialValue**
- struct **Multi\_Vec3f** **set\_destination**
- struct **Multi\_Vec3f** **set\_value**
- void \* **\_values**
- struct **Multi\_Vec3f** **\_input**

#### 4.1120.1 Detailed Description

Definition at line 3985 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1121 X3D\_CoordinateDouble Struct Reference

#### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Vec3d** **point**

#### 4.1121.1 Detailed Description

Definition at line 4020 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1122 X3D\_CoordinateInterpolator Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- float **set\_fraction**
- struct **Multi\_Float** **key**
- struct **Multi\_Vec3f** **keyValue**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Vec3f** **value\_changed**
- int **\_GPU\_Routes\_out**
- int **\_CPU\_Routes\_out**
- int **\_keyVBO**
- int **\_keyValueVBO**

### 4.1122.1 Detailed Description

Definition at line 4040 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1123 X3D\_CoordinateInterpolator2D Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- float **set\_fraction**
- struct **Multi\_Float** **key**
- struct **Multi\_Vec2f** **keyValue**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Vec2f** **value\_changed**

### 4.1123.1 Detailed Description

Definition at line 4067 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1124 X3D\_Cylinder Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- int **bottom**
- float **height**
- float **radius**
- int **side**
- int **solid**
- int **top**
- struct **Multi\_Vec3f** **\_\_points**
- struct **Multi\_Vec3f** **\_\_normals**
- int **\_\_cylinderVBO**
- int **\_\_cylinderTriangles**
- void \* **\_\_wireindices**

### 4.1124.1 Detailed Description

Definition at line 4090 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h



## 4.1125 X3D\_CylinderSensor Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **autoOffset**
- struct **SFRotation** **axisRotation**
- float **diskAngle**
- int **enabled**
- float **maxAngle**
- float **minAngle**
- float **offset**
- int **isActive**
- int **isOver**
- struct **Uni\_String** \* **description**
- struct **SFRotation** **rotation\_changed**
- struct **SFVec3f** **trackPoint\_changed**
- struct **X3D\_Node** \* **metadata**
- int **sensorLocalOutput**
- struct **SFVec3f** **\_oldtrackPoint**
- struct **SFRotation** **\_oldrotation**
- struct **SFVec3f** **\_origPoint**
- float **\_radius**
- int **\_usingDisk**
- int **\_\_oldEnabled**

### 4.1125.1 Detailed Description

Definition at line 4120 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1126 X3D\_DirectionalLight Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- float **ambientIntensity**
- struct **SFColor** **color**
- struct **SFVec3f** **direction**
- int **global**
- float **intensity**
- struct **X3D\_Node** \* **metadata**
- int **on**
- struct **SFVec4f** **\_dir**
- struct **SFVec4f** **\_col**
- struct **SFVec4f** **\_amb**

### 4.1126.1 Detailed Description

Definition at line 4237 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1127 X3D\_DISEntityManager Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**

- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- int **isActive**
- double **timestamp**
- struct **Uni\_String** \* **address**
- int **port**
- struct **Uni\_String** \* **multicastRelayHost**
- int **multicastRelayPort**
- struct **Uni\_String** \* **networkMode**
- int **isNetworkReader**
- int **isNetworkWriter**
- int **isStandAlone**
- double **readInterval**
- double **writeInterval**
- int **rtpHeaderExpected**
- int **isRtpHeaderHeard**
- int **\_registered**
- struct **X3D\_Node** \* **\_dsock**
- double **\_lasttime**
- int **\_pduchange\_networksensor**
- struct **X3D\_Node** \* **\_oldState**
- int **entityID**
- int **applicationID**
- int **siteID**
- struct **Multi\_Node** mapping
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Node** addedEntities
- struct **Multi\_Node** removedEntities
- struct **Multi\_Node** addEntities
- struct **Multi\_Node** removeEntities
- struct **Multi\_Node** entities
- int **\_pduchange\_create**
- int **\_pduchange\_remove**
- int **\_pduchange\_em\_info**

### 4.1127.1 Detailed Description

Definition at line 4158 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1128 X3D\_DISEntityTypeMapping Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_String** **url**
- int **kind**
- int **domain**
- int **country**
- int **category**
- int **subcategory**
- int **specific**
- int **extra**
- struct **X3D\_Node** \* **\_child**

### 4.1128.1 Detailed Description

Definition at line 4209 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1129 X3D\_Disk2D Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**

- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- float **innerRadius**
- float **outerRadius**
- int **solid**
- struct **Multi\_Vec2f** **\_\_points**
- struct **Multi\_Vec2f** **\_\_texCoords**
- int **\_\_numPoints**
- int **\_\_simpleDisk**
- void \* **\_\_wireindices**

#### 4.1129.1 Detailed Description

Definition at line 4265 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1130 X3D\_DoubleAxisHingeJoint Struct Reference

#### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFVec3f** **anchorPoint**
- struct **SFVec3f** **axis1**
- struct **SFVec3f** **axis2**
- struct **X3D\_Node** \* **body1**
- struct **X3D\_Node** \* **body2**
- float **desiredAngularVelocity1**
- float **desiredAngularVelocity2**
- struct **Multi\_String** **forceOutput**
- float **maxAngle1**
- float **maxTorque1**
- float **maxTorque2**
- struct **X3D\_Node** \* **metadata**
- float **minAngle1**

- float **stopBounce1**
- float **stopConstantForceMix1**
- float **stopErrorCorrection1**
- float **suspensionErrorCorrection**
- float **suspensionForce**
- struct **SFVec3f** **body1AnchorPoint**
- struct **SFVec3f** **body1Axis**
- struct **SFVec3f** **body2AnchorPoint**
- struct **SFVec3f** **body2Axis**
- float **hinge1Angle**
- float **hinge1AngleRate**
- float **hinge2Angle**
- float **hinge2AngleRate**
- void \* **\_joint**
- int **\_forceout**
- struct **SFVec3f** **\_\_old\_anchorPoint**
- struct **SFVec3f** **\_\_old\_axis1**
- struct **SFVec3f** **\_\_old\_axis2**
- struct **X3D\_Node** \* **\_\_old\_body1**
- struct **X3D\_Node** \* **\_\_old\_body2**
- void \* **\_motor1**
- void \* **\_motor2**
- float **axis1Angle**

#### 4.1130.1 Detailed Description

Definition at line 4292 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1131 X3D\_EaseInEaseOut Struct Reference

#### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- float **set\_fraction**
- struct **Multi\_Vec2f** **easeInEaseOut**
- struct **Multi\_Float** **key**
- struct **X3D\_Node** \* **metadata**
- float **modifiedFraction\_changed**

### 4.1131.1 Detailed Description

Definition at line 4346 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1132 X3D\_EdgeEnhancementVolumeStyle Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **surfaceNormals**
- struct **SFColorRGBA** **edgeColor**
- float **gradientThreshold**

### 4.1132.1 Detailed Description

Definition at line 4369 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1133 X3D\_Effect Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **activate**
- struct **Multi\_Node** parts
- int **isSelected**
- int **isValid**
- struct **Uni\_String** \* **language**
- struct **X3D\_Node** \* **metadata**
- int **\_initialized**
- struct **X3D\_Node** \* **\_shaderUserDefinedFields**
- int **\_shaderUserNumber**
- pthread\_t **\_shaderLoadThread**
- int **\_retrievedURLData**

### 4.1133.1 Detailed Description

Definition at line 4392 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1134 X3D\_EffectPart Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**



- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_String** **url**
- struct **Uni\_String** \* **type**
- int **\_\_loadstatus**
- void \* **\_parentResource**
- void \* **\_\_loadResource**
- struct **X3D\_Node** \* **\_shaderUserDefinedFields**

#### 4.1134.1 Detailed Description

Definition at line 4421 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1135 X3D\_ElevationGrid Struct Reference

#### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Float** **set\_height**
- struct **Multi\_Node** **attrib**
- struct **X3D\_Node** \* **color**
- struct **X3D\_Node** \* **fogCoord**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **normal**
- struct **X3D\_Node** \* **texCoord**
- int **ccw**
- int **colorPerVertex**
- float **creaseAngle**
- struct **Multi\_Float** **height**
- int **normalPerVertex**
- int **solid**
- int **xDimension**
- float **xSpacing**
- int **zDimension**
- float **zSpacing**
- struct **Multi\_Int32** **\_coordIndex**

### 4.1135.1 Detailed Description

Definition at line 4446 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1136 X3D\_EspduTransform Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- int **isActive**
- double **timestamp**
- struct **Uni\_String** \* **address**
- int **port**
- struct **Uni\_String** \* **multicastRelayHost**
- int **multicastRelayPort**
- struct **Uni\_String** \* **networkMode**
- int **isNetworkReader**
- int **isNetworkWriter**
- int **isStandAlone**
- double **readInterval**
- double **writeInterval**
- int **rtpHeaderExpected**
- int **isRtpHeaderHeard**
- int **\_registered**
- struct **X3D\_Node** \* **\_dsock**
- double **\_lasttime**
- int **\_pduchange\_networksensor**
- struct **X3D\_Node** \* **\_oldState**
- int **entityID**
- int **applicationID**
- int **siteID**
- struct **Multi\_String** **geoSystem**
- struct **SFVec3d** **geoCoords**
- struct **X3D\_Node** \* **\_\_geoSystem**
- int **entityKind**

- int **entityDomain**
- int **entityCountry**
- int **entityCategory**
- int **entitySubCategory**
- int **entitySpecific**
- int **entityExtra**
- int **forceID**
- struct **Uni\_String** \* **marking**
- int **deadReckoning**
- struct **SFVec3f** **linearVelocity**
- struct **SFVec3f** **linearAcceleration**
- struct **SFVec3f** **\_p0**
- struct **SFVec3f** **\_v0**
- struct **SFVec3f** **\_a0**
- struct **SFRotation** **\_angularVelocity**
- struct **SFRotation** **\_r0**
- int **\_change\_count**
- int **\_sent**
- struct **SFVec3f** **\_lastp0**
- struct **SFRotation** **\_lastr0**
- double **\_lastp0time**
- double **\_lastframetime**
- struct **SFVec3f** **\_smoothingDelta**
- int **\_smoothingCount**
- float **set\_articulationParameterValue0**
- float **set\_articulationParameterValue1**
- float **set\_articulationParameterValue2**
- float **set\_articulationParameterValue3**
- float **set\_articulationParameterValue4**
- float **set\_articulationParameterValue5**
- float **set\_articulationParameterValue6**
- float **set\_articulationParameterValue7**
- int **articulationParameterCount**
- struct **Multi\_Int32** **articulationParameterDesignatorArray**
- struct **Multi\_Int32** **articulationParameterChangeIndicatorArr**
- struct **Multi\_Int32** **articulationParameterIdPartAttachedToAr**
- struct **Multi\_Int32** **articulationParameterTypeArray**
- struct **Multi\_Float** **articulationParameterArray**
- float **articulationParameterValue0\_changed**
- float **articulationParameterValue1\_changed**
- float **articulationParameterValue2\_changed**
- float **articulationParameterValue3\_changed**
- float **articulationParameterValue4\_changed**
- float **articulationParameterValue5\_changed**
- float **articulationParameterValue6\_changed**
- float **articulationParameterValue7\_changed**
- int **\_pduchange\_es**
- int **collisionType**
- double **collideTime**
- int **isCollided**
- int **\_pduchange\_collision**
- int **eventEntityID**
- int **eventApplicationID**
- int **eventSiteID**
- int **eventNumber**

- int **fired1**
- int **fired2**
- int **fireMissionIndex**
- float **firingRange**
- double **firedTime**
- int **\_pduchange\_fire**
- struct **SFVec3f** **detonationLocation**
- struct **SFVec3f** **detonationRelativeLocation**
- int **detonationResult**
- double **detonateTime**
- int **isDetonated**
- int **\_pduchange\_detonation**
- int **munitionEntityID**
- int **munitionApplicationID**
- int **munitionSiteID**
- struct **SFVec3f** **munitionStartPoint**
- struct **SFVec3f** **munitionEndPoint**
- int **munitionQuantity**
- int **firingRate**
- int **fuse**
- int **warhead**
- struct **Multi\_Node** **addChildren**
- struct **Multi\_Node** **removeChildren**
- struct **Multi\_Node** **\_\_sibAffectors**
- struct **SFVec3f** **center**
- struct **Multi\_Node** **children**
- struct **X3D\_Node** \* **metadata**
- struct **SFRotation** **rotation**
- struct **SFVec3f** **scale**
- struct **SFRotation** **scaleOrientation**
- struct **SFVec3f** **translation**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**
- int **\_\_do\_center**
- int **\_\_do\_trans**
- int **\_\_do\_rotation**
- int **\_\_do\_scaleO**
- int **\_\_do\_scale**
- int **\_\_do\_anything**
- struct **Multi\_Node** **\_sortedChildren**

#### 4.1136.1 Detailed Description

Definition at line 4482 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1137 X3D\_ExplosionEmitter Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **SFVec3f** **position**
- float **speed**
- float **variation**
- float **mass**
- float **surfaceArea**

### 4.1137.1 Detailed Description

Definition at line 4622 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1138 X3D\_Extrusion Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Vec2f** **set\_crossSection**

- struct **Multi\_Rotation** set\_orientation
- struct **Multi\_Vec2f** set\_scale
- struct **Multi\_Vec3f** set\_spine
- struct **X3D\_Node** \* metadata
- int **beginCap**
- int **ccw**
- int **convex**
- float **creaseAngle**
- struct **Multi\_Vec2f** crossSection
- int **endCap**
- struct **Multi\_Rotation** orientation
- struct **Multi\_Vec2f** scale
- int **solid**
- struct **Multi\_Vec3f** spine

#### 4.1138.1 Detailed Description

Definition at line 4646 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1139 X3D\_FillProperties Struct Reference

#### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **filled**
- struct **SFColor** **hatchColor**
- int **hatched**
- int **hatchStyle**
- struct **X3D\_Node** \* **metadata**
- int **\_enabled**
- struct **SFVec2f** **\_hatchScale**

### 4.1139.1 Detailed Description

Definition at line 4679 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1140 X3D\_FloatVertexAttribute Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Float** **value**
- struct **Uni\_String** \* **name**
- int **numComponents**
- struct **X3D\_Node** \* **metadata**

### 4.1140.1 Detailed Description

Definition at line 4704 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1141 X3D\_Fog Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFColor** **color**
- struct **Uni\_String** \* **fogType**
- float **visibilityRange**
- float **\_\_fogScale**
- int **\_\_fogType**
- int **set\_bind**
- double **bindTime**
- int **isBound**
- int **\_layerId**
- struct **X3D\_Node** \* **metadata**

### 4.1141.1 Detailed Description

Definition at line 4726 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1142 X3D\_FogCoordinate Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Float** **depth**
- struct **X3D\_Node** \* **metadata**



### 4.1142.1 Detailed Description

Definition at line 4754 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1143 X3D\_FontStyle Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_String** family
- int **horizontal**
- struct **Multi\_String** justify
- struct **Uni\_String** \* **language**
- int **leftToRight**
- float **size**
- float **spacing**
- struct **Uni\_String** \* **style**
- int **topToBottom**

### 4.1143.1 Detailed Description

Definition at line 4774 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1144 X3D\_ForcePhysicsModel Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- struct **SFVec3f** **force**
- struct **X3D\_Node** \* **metadata**

### 4.1144.1 Detailed Description

Definition at line 4802 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1145 X3D\_GeneratedCubeMapTexture Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **textureProperties**
- int **\_\_textureTableIndex**
- void \* **\_parentResource**
- struct **Multi\_Node** **\_\_subTextures**
- int **\_\_regenSubTextures**
- struct **Uni\_String** \* **update**
- int **size**

### 4.1145.1 Detailed Description

Definition at line 4823 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1146 X3D\_GeoConvert Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFVec3d** **set\_geoCoords**
- struct **SFVec3d** **set\_gcCoords**
- struct **Multi\_String** **geoSystem**
- struct **X3D\_Node** \* **metadata**
- struct **SFVec3d** **gcCoords\_changed**
- struct **SFVec3d** **geoCoords\_changed**
- struct **X3D\_Node** \* **\_\_geoSystem**
- struct **SFVec3d** **\_\_oldgeoCoords**
- struct **SFVec3d** **\_\_oldgcCoords**

### 4.1146.1 Detailed Description

Definition at line 4849 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1147 X3D\_GeoCoordinate Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Vec3d** **point**
- struct **X3D\_Node** \* **geoOrigin**
- struct **Multi\_String** **geoSystem**
- struct **X3D\_Node** \* **\_\_geoSystem**
- struct **Multi\_Vec3f** **\_\_movedCoords**

### 4.1147.1 Detailed Description

Definition at line 4876 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1148 X3D\_GeoElevationGrid Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Double** **set\_height**

- struct **X3D\_Node** \* **color**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **normal**
- struct **X3D\_Node** \* **texCoord**
- float **yScale**
- int **ccw**
- int **colorPerVertex**
- double **creaseAngle**
- struct **SFVec3d** **geoGridOrigin**
- struct **X3D\_Node** \* **geoOrigin**
- struct **Multi\_String** **geoSystem**
- struct **Multi\_Double** **height**
- int **normalPerVertex**
- int **solid**
- int **xDimension**
- double **xSpacing**
- int **zDimension**
- double **zSpacing**
- struct **Multi\_Int32** **\_coordIndex**
- struct **X3D\_Node** \* **\_\_geoSystem**
- struct **SFVec3d** **\_\_autoOffset**
- struct **SFVec4d** **\_\_localOrient**
- struct **Multi\_Int32** **\_\_planets**

#### 4.1148.1 Detailed Description

Definition at line 4900 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1149 X3D\_GeoLocation Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **addChildren**
- struct **Multi\_Node** **removeChildren**

- struct **Multi\_Node \_\_sibAffectors**
- struct **Multi\_Node children**
- struct **SFVec3d geoCoords**
- struct **X3D\_Node \* metadata**
- struct **X3D\_Node \* geoOrigin**
- struct **Multi\_String geoSystem**
- struct **SFVec3f bboxCenter**
- struct **SFVec3f bboxSize**
- int **relativeHeight**
- double **\_gridHeight**
- struct **X3D\_Node \* \_\_geoSystem**
- struct **SFVec3d \_\_position**
- struct **SFVec3d \_\_movedCoords**
- struct **SFVec3d \_\_movedgd**
- struct **SFVec4d \_\_localOrient**
- struct **SFVec4d \_\_offsetOrient**
- struct **SFVec3d \_\_oldgeoCoords**
- struct **Multi\_Node \_\_oldChildren**
- struct **Multi\_Node \_sortedChildren**

#### 4.1149.1 Detailed Description

Definition at line 4986 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1150 X3D\_GeoLOD Struct Reference

#### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector \* \_parentVector**
- double **\_dist**
- float **\_extent [6]**
- struct **X3D\_PolyRep \* \_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node \* \_executionContext**
- struct **X3D\_Node \* metadata**
- struct **Multi\_Node children**
- int **level\_changed**
- struct **SFVec3d center**
- struct **Multi\_String child1Url**
- struct **Multi\_String child2Url**

- struct **Multi\_String** child3Url
- struct **Multi\_String** child4Url
- struct **X3D\_Node** \* geoOrigin
- struct **Multi\_String** geoSystem
- float range
- struct **Multi\_String** rootUrl
- struct **Multi\_Node** rootNode
- struct **SFVec3f** bboxCenter
- struct **SFVec3f** bboxSize
- struct **X3D\_Node** \* \_\_geoSystem
- struct **SFVec3d** \_\_movedCoords
- int \_\_inRange
- struct **X3D\_Node** \* \_\_child1Node
- struct **X3D\_Node** \* \_\_child2Node
- struct **X3D\_Node** \* \_\_child3Node
- struct **X3D\_Node** \* \_\_child4Node
- struct **X3D\_Node** \* \_\_rootUrl
- int \_\_childloadstatus
- int \_\_rooturlloadstatus
- int \_\_level

#### 4.1150.1 Detailed Description

Definition at line 4942 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1151 X3D\_GeoMetadata Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** data
- struct **Multi\_String** summary
- struct **Multi\_String** url
- struct **X3D\_Node** \* metadata

### 4.1151.1 Detailed Description

Definition at line 5025 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1152 X3D\_GeoOrigin Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFVec3d** **geoCoords**
- struct **Multi\_String** **geoSystem**
- struct **X3D\_Node** \* **metadata**
- int **rotateYUp**
- struct **X3D\_Node** \* **\_\_geoSystem**
- struct **SFVec3d** **\_\_movedCoords**
- struct **SFVec3d** **\_\_movedgd**
- struct **SFVec3d** **\_\_oldgeoCoords**
- struct **Multi\_String** **\_\_oldMFString**
- struct **SFVec4d** **\_\_rotyup**

### 4.1152.1 Detailed Description

Definition at line 5047 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h



## 4.1153 X3D\_GeoPlanet Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **addChildren**
- struct **Multi\_Node** **removeChildren**
- struct **Multi\_Node** **\_\_sibAffectors**
- struct **Multi\_Node** **children**
- struct **X3D\_Node** \* **metadata**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**
- struct **Uni\_String** \* **description**
- int **planetId**
- struct **Multi\_Node** **\_\_oldChildren**
- struct **Multi\_Node** **\_sortedChildren**

### 4.1153.1 Detailed Description

Definition at line 5075 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1154 X3D\_GeoPositionInterpolator Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**

- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- float **set\_fraction**
- struct **Multi\_Float** **key**
- struct **Multi\_Vec3d** **keyValue**
- struct **X3D\_Node** \* **metadata**
- struct **SFVec3d** **geovalue\_changed**
- struct **SFVec3f** **value\_changed**
- struct **X3D\_Node** \* **geoOrigin**
- struct **Multi\_String** **geoSystem**
- struct **X3D\_Node** \* **\_\_geoSystem**
- struct **Multi\_Vec3f** **\_\_movedValue**
- struct **Multi\_Float** **\_\_oldKeyPtr**
- struct **Multi\_Vec3d** **\_\_oldKeyValuePtr**

#### 4.1154.1 Detailed Description

Definition at line 5104 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1155 X3D\_GeoProximitySensor Struct Reference

#### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- struct **SFVec3d** **geoCenter**
- struct **SFVec3d** **center**
- struct **X3D\_Node** \* **metadata**
- struct **SFVec3f** **size**
- struct **SFVec3f** **centerOfRotation\_changed**
- double **enterTime**
- double **exitTime**
- struct **SFVec3d** **geoCoord\_changed**

- int **isActive**
- struct **SFRotation** orientation\_changed
- struct **SFVec3f** position\_changed
- struct **X3D\_Node** \* geoOrigin
- struct **Multi\_String** geoSystem
- int \_\_hit
- struct **SFVec3f** \_\_t1
- struct **SFRotation** \_\_t2
- struct **SFVec3d** \_\_t3
- struct **X3D\_Node** \* \_\_geoSystem
- struct **SFVec3d** \_\_movedCoords
- struct **SFVec4d** \_\_localOrient
- int \_\_oldEnabled
- struct **SFVec3d** \_\_oldGeoCenter
- struct **SFVec3f** \_\_oldSize

### 4.1155.1 Detailed Description

Definition at line 5134 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1156 X3D\_GeoTouchSensor Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Uni\_String** \* **description**
- int **enabled**
- struct **X3D\_Node** \* **metadata**
- struct **SFVec3f** hitNormal\_changed
- struct **SFVec3f** hitPoint\_changed
- struct **SFVec2f** hitTexCoord\_changed
- struct **SFVec3d** hitGeoCoord\_changed
- int **isActive**
- int **isOver**
- double **touchTime**
- struct **X3D\_Node** \* **geoOrigin**
- struct **Multi\_String** geoSystem
- struct **X3D\_Node** \* **\_\_geoSystem**
- struct **SFVec3f** \_oldhitNormal
- struct **SFVec3f** \_oldhitPoint
- struct **SFVec2f** \_oldhitTexCoord
- int **\_\_oldEnabled**

### 4.1156.1 Detailed Description

Definition at line 5176 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1157 X3D\_GeoTransform Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **addChildren**
- struct **Multi\_Node** **removeChildren**
- struct **Multi\_Node** **\_\_sibAffectors**
- struct **SFVec3f** **center**
- struct **Multi\_Node** **children**
- struct **SFVec3d** **geoCenter**
- struct **X3D\_Node** \* **metadata**
- struct **SFRotation** **rotation**
- struct **SFVec3f** **scale**
- struct **SFRotation** **scaleOrientation**
- struct **SFVec3f** **translation**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**
- struct **X3D\_Node** \* **geoOrigin**
- struct **Multi\_String** **geoSystem**
- int **\_\_do\_center**
- int **\_\_do\_trans**
- int **\_\_do\_rotation**
- int **\_\_do\_scaleO**
- int **\_\_do\_scale**
- int **\_\_do\_anything**
- struct **X3D\_Node** \* **\_\_geoSystem**
- struct **SFVec3d** **\_\_movedCoords**
- struct **SFVec4d** **\_\_localOrient**
- struct **SFVec3d** **\_\_oldGeoCenter**
- struct **Multi\_Node** **\_\_oldChildren**
- struct **Multi\_Node** **\_sortedChildren**

### 4.1157.1 Detailed Description

Definition at line 5211 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1158 X3D\_GeoViewpoint Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **\_layerId**
- int **\_donethispass**
- int **set\_bind**
- double **bindTime**
- int **isBound**
- struct **Uni\_String** \* **description**
- int **jump**
- float **fieldOfView**
- struct **X3D\_Node** \* **metadata**
- struct **SFRotation** **orientation**
- struct **SFVec3d** **position**
- struct **SFVec3d** **centerOfRotation**
- int **headlight**
- struct **Multi\_String** **navType**
- struct **X3D\_Node** \* **geoOrigin**
- struct **Multi\_String** **geoSystem**
- float **speedFactor**
- int **retainUserOffsets**
- int **\_initializedOnce**
- struct **SFRotation** **\_orientation**
- struct **SFVec3d** **\_position**
- int **relativeHeight**
- int **\_resetRelativeHeight**
- int **\_prepped\_planet**
- struct **X3D\_Node** \* **\_\_geoSystem**
- struct **SFVec3d** **\_\_movedPosition**
- struct **SFRotation** **\_\_movedOrientation**

- struct **SFRotation** \_\_movedOrientationB
- struct **SFVec3d** \_\_movedgd
- struct **Uni\_String** \* \_\_oldSFString
- float \_\_oldFieldOfView
- int \_\_oldHeadlight
- int \_\_oldJump
- struct **Multi\_String** \_\_oldMFString

#### 4.1158.1 Detailed Description

Definition at line 5256 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1159 X3D\_Group Struct Reference

#### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **addChildren**
- struct **Multi\_Node** **removeChildren**
- struct **Multi\_Node** **\_\_sibAffectors**
- struct **Multi\_Node** **children**
- struct **X3D\_Node** \* **metadata**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**
- struct **Multi\_Node** **\_sortedChildren**

#### 4.1159.1 Detailed Description

Definition at line 5308 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1160 X3D\_HAnimDisplacer Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Int32** **coordIndex**
- struct **Multi\_Vec3f** **displacements**
- struct **Uni\_String** \* **name**
- float **weight**
- struct **X3D\_Node** \* **metadata**

### 4.1160.1 Detailed Description

Definition at line 5334 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1161 X3D\_HAnimHumanoid Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFVec3f** **center**
- struct **Multi\_String** **info**

- struct **Multi\_Node** joints
- struct **Uni\_String** \* name
- struct **SFRotation** rotation
- struct **SFVec3f** scale
- struct **SFRotation** scaleOrientation
- struct **Multi\_Node** segments
- struct **Multi\_Node** sites
- struct **Multi\_Node** skeleton
- struct **Multi\_Node** skin
- struct **X3D\_Node** \* skinCoord
- struct **X3D\_Node** \* skinNormal
- struct **Multi\_Node** \_\_sibAffectors
- struct **SFVec3f** translation
- struct **Uni\_String** \* version
- struct **Multi\_Node** viewpoints
- struct **SFVec3f** bboxCenter
- struct **SFVec3f** bboxSize
- struct **X3D\_Node** \* metadata
- void \* \_JT
- void \* \_PVI
- void \* \_PVW
- int \_NV
- void \* \_origCoords
- void \* \_origNorms

#### 4.1161.1 Detailed Description

Definition at line 5357 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1162 X3D\_HAnimJoint Struct Reference

#### Data Fields

- int \_nodeType
- int \_renderFlags
- int \_hit
- int \_change
- int \_ichange
- struct **Vector** \* \_parentVector
- double \_dist
- float \_extent [6]
- struct **X3D\_PolyRep** \* \_intern
- int referenceCount
- int \_defaultContainer
- void \* \_gc
- struct **X3D\_Node** \* \_executionContext
- struct **Multi\_Node** addChildren



- struct **Multi\_Node** removeChildren
- struct **Multi\_Node** \_\_sibAffectors
- struct **Multi\_Node** children
- struct **SFVec3f** center
- struct **SFRotation** rotation
- struct **SFVec3f** scale
- struct **SFRotation** scaleOrientation
- struct **SFVec3f** translation
- struct **Multi\_Node** displacers
- struct **SFRotation** limitOrientation
- struct **Multi\_Float** llimit
- struct **Uni\_String** \* name
- struct **Multi\_Int32** skinCoordIndex
- struct **Multi\_Float** skinCoordWeight
- struct **Multi\_Float** stiffness
- struct **Multi\_Float** ulimit
- struct **SFVec3f** bboxCenter
- struct **SFVec3f** bboxSize
- struct **X3D\_Node** \* metadata
- int \_\_do\_center
- int \_\_do\_trans
- int \_\_do\_rotation
- int \_\_do\_scaleO
- int \_\_do\_scale
- int \_\_do\_anything

#### 4.1162.1 Detailed Description

Definition at line 5401 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1163 X3D\_HAnimSegment Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**

- struct **Multi\_Node** addChildren
- struct **Multi\_Node** removeChildren
- struct **Multi\_Node** \_\_sibAffectors
- struct **Multi\_Node** children
- struct **Uni\_String** \* name
- struct **SFVec3f** bboxCenter
- struct **SFVec3f** bboxSize
- struct **SFVec3f** centerOfMass
- struct **X3D\_Node** \* coord
- struct **Multi\_Node** displacers
- float **mass**
- struct **Multi\_Float** momentsOfInertia
- struct **X3D\_Node** \* metadata
- void \* **\_origCoords**

### 4.1163.1 Detailed Description

Definition at line 5445 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1164 X3D\_HAnimSite Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** addChildren
- struct **Multi\_Node** removeChildren
- struct **Multi\_Node** \_\_sibAffectors
- struct **Multi\_Node** children
- struct **Uni\_String** \* name
- struct **SFVec3f** bboxCenter
- struct **SFVec3f** bboxSize
- struct **SFVec3f** center
- struct **SFRotation** rotation
- struct **SFVec3f** scale
- struct **SFRotation** scaleOrientation

- struct **SFVec3f** translation
- struct **X3D\_Node** \* metadata
- int **\_\_do\_center**
- int **\_\_do\_trans**
- int **\_\_do\_rotation**
- int **\_\_do\_scaleO**
- int **\_\_do\_scale**
- int **\_\_do\_anything**

#### 4.1164.1 Detailed Description

Definition at line 5477 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1165 X3D\_ImageBackdropBackground Struct Reference

#### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **set\_bind**
- double **bindTime**
- int **isBound**
- float **transparency**
- struct **SFColor** **color**
- struct **X3D\_Node** \* **metadata**
- int **\_\_texture**
- int **\_\_VBO**
- struct **Multi\_Int32** **image**

#### 4.1165.1 Detailed Description

Definition at line 5514 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1166 X3D\_ImageCubeMapTexture Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **textureProperties**
- int **\_\_textureTableIndex**
- void \* **\_parentResource**
- struct **Multi\_Node** **\_\_subTextures**
- int **\_\_regenSubTextures**
- struct **Multi\_String** **url**

### 4.1166.1 Detailed Description

Definition at line 5541 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1167 X3D\_ImageTexture Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_String** **url**
- int **repeatS**
- int **repeatT**
- struct **X3D\_Node** \* **textureProperties**
- int **\_\_textureTableIndex**
- void \* **\_parentResource**

### 4.1167.1 Detailed Description

Definition at line 5566 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1168 X3D\_ImageTexture3D Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_String** **url**
- int **repeatS**
- int **repeatT**
- int **repeatR**
- struct **X3D\_Node** \* **textureProperties**
- int **\_\_textureTableIndex**
- void \* **\_parentResource**
- int **\_needs\_gradient**

### 4.1168.1 Detailed Description

Definition at line 5591 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1169 X3D\_IndexedFaceSet Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Int32** **set\_colorIndex**
- struct **Multi\_Int32** **set\_coordIndex**
- struct **Multi\_Int32** **set\_normalIndex**
- struct **Multi\_Int32** **set\_texCoordIndex**
- struct **Multi\_Node** **attrib**
- struct **X3D\_Node** \* **color**
- struct **X3D\_Node** \* **coord**
- struct **X3D\_Node** \* **fogCoord**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **normal**
- struct **X3D\_Node** \* **texCoord**
- int **ccw**
- struct **Multi\_Int32** **colorIndex**
- int **colorPerVertex**
- int **convex**
- struct **Multi\_Int32** **coordIndex**
- float **creaseAngle**
- struct **Multi\_Int32** **normalIndex**
- int **normalPerVertex**
- int **solid**
- struct **Multi\_Int32** **texCoordIndex**

### 4.1169.1 Detailed Description

Definition at line 5618 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1170 X3D\_IndexedLineSet Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Int32** **set\_colorIndex**
- struct **Multi\_Int32** **set\_coordIndex**
- struct **Multi\_Node** **attrib**
- struct **X3D\_Node** \* **color**
- struct **X3D\_Node** \* **coord**
- struct **X3D\_Node** \* **fogCoord**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Int32** **colorIndex**
- int **colorPerVertex**
- struct **Multi\_Int32** **coordIndex**
- void \* **\_\_vertArr**
- void \* **\_\_vertIndx**
- void \* **\_\_xcolours**
- void \* **\_\_vertices**
- void \* **\_\_vertexCount**
- int **\_\_segCount**

### 4.1170.1 Detailed Description

Definition at line 5657 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1171 X3D\_IndexedQuadSet Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Int32** **set\_index**
- struct **Multi\_Node** **attrib**
- struct **X3D\_Node** \* **color**
- struct **X3D\_Node** \* **coord**
- struct **X3D\_Node** \* **fogCoord**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **normal**
- struct **X3D\_Node** \* **texCoord**
- int **ccw**
- struct **Multi\_Int32** **index**
- int **colorPerVertex**
- int **normalPerVertex**
- int **solid**
- struct **Multi\_Int32** **\_coordIndex**

### 4.1171.1 Detailed Description

Definition at line 5691 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1172 X3D\_IndexedTriangleFanSet Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**



- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Int32** **set\_index**
- struct **Multi\_Node** **attrib**
- struct **X3D\_Node** \* **color**
- struct **X3D\_Node** \* **coord**
- struct **X3D\_Node** \* **fogCoord**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **normal**
- struct **X3D\_Node** \* **texCoord**
- int **ccw**
- int **colorPerVertex**
- int **normalPerVertex**
- int **solid**
- struct **Multi\_Int32** **index**
- struct **Multi\_Int32** **\_coordIndex**

### 4.1172.1 Detailed Description

Definition at line 5723 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1173 X3D\_IndexedTriangleSet Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Int32** **set\_index**
- struct **Multi\_Node** **attrib**
- struct **X3D\_Node** \* **color**
- struct **X3D\_Node** \* **coord**

- struct **X3D\_Node** \* **fogCoord**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **normal**
- struct **X3D\_Node** \* **texCoord**
- int **ccw**
- int **colorPerVertex**
- int **normalPerVertex**
- int **solid**
- struct **Multi\_Int32** **index**
- struct **Multi\_Int32** **\_coordIndex**

#### 4.1173.1 Detailed Description

Definition at line 5755 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1174 X3D\_IndexedTriangleStripSet Struct Reference

#### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Int32** **set\_index**
- struct **Multi\_Node** **attrib**
- struct **X3D\_Node** \* **color**
- struct **X3D\_Node** \* **coord**
- struct **X3D\_Node** \* **fogCoord**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **normal**
- struct **X3D\_Node** \* **texCoord**
- int **ccw**
- int **colorPerVertex**
- int **normalPerVertex**
- int **solid**
- struct **Multi\_Int32** **index**
- struct **Multi\_Int32** **\_coordIndex**

### 4.1174.1 Detailed Description

Definition at line 5787 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1175 X3D\_Inline Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **\_\_children**
- struct **X3D\_Node** \* **metadata**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**
- struct **Multi\_Node** **\_sortedChildren**
- struct **Multi\_Node** **addChildren**
- struct **Multi\_Node** **removeChildren**
- struct **Multi\_Node** **\_\_sibAffectors**
- void \* **\_\_protoDeclares**
- void \* **\_\_externProtoDeclares**
- void \* **\_\_nodes**
- void \* **\_\_subcontexts**
- void \* **\_\_GC**
- void \* **\_\_protoDef**
- int **\_\_protoFlags**
- struct **X3D\_Node** \* **\_\_prototype**
- struct **X3D\_Node** \* **\_\_parentProto**
- void \* **\_\_ROUTES**
- void \* **\_\_EXPORTS**
- void \* **\_\_IMPORTS**
- void \* **\_\_DEFnames**
- void \* **\_\_IS**
- void \* **\_\_scripts**
- struct **Multi\_String** **url**
- struct **Multi\_String** **\_\_oldurl**
- void \* **\_\_afterPound**
- int **\_\_loadstatus**

- void \* **\_parentResource**
- void \* **\_\_loadResource**
- void \* **\_\_typename**
- int **load**
- int **\_\_oldload**
- double **\_\_unitlengthfactor**
- int **\_\_specversion**

#### 4.1175.1 Detailed Description

Definition at line 5819 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1176 X3D\_IntegerSequencer Struct Reference

#### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **next**
- int **previous**
- float **set\_fraction**
- struct **Multi\_Float** **key**
- struct **Multi\_Int32** **keyValue**
- int **value\_changed**
- struct **X3D\_Node** \* **metadata**
- int **\_index**

#### 4.1176.1 Detailed Description

Definition at line 5871 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1177 X3D\_IntegerTrigger Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **set\_boolean**
- int **integerKey**
- int **triggerValue**
- struct **X3D\_Node** \* **metadata**

### 4.1177.1 Detailed Description

Definition at line 5897 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1178 X3D\_IsoSurfaceVolumeData Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFVec3f** **dimensions**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **voxels**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**
- void \* **\_boxtris**
- struct **Multi\_Node** **renderStyle**
- float **contourStepSize**
- struct **X3D\_Node** \* **gradients**
- float **surfaceTolerance**
- struct **Multi\_Float** **surfaceValues**

### 4.1178.1 Detailed Description

Definition at line 5919 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1179 X3D\_KeySensor Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- int **actionKeyPress**
- int **actionKeyRelease**
- int **altKey**
- int **controlKey**
- int **isActive**
- struct **Uni\_String** \* **keyPress**
- struct **Uni\_String** \* **keyRelease**
- int **shiftKey**
- struct **X3D\_Node** \* **metadata**
- int **\_\_oldEnabled**

### 4.1179.1 Detailed Description

Definition at line 5948 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1180 X3D\_Layer Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **addChildren**
- struct **Multi\_Node** **removeChildren**
- struct **Multi\_Node** **\_\_sibAffectors**
- struct **Multi\_Node** **children**
- struct **X3D\_Node** \* **metadata**
- int **isPickable**
- struct **X3D\_Node** \* **viewport**

### 4.1180.1 Detailed Description

Definition at line 6009 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1181 X3D\_LayerSet Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **activeLayer**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Node** **layers**
- struct **Multi\_Int32** **order**

### 4.1181.1 Detailed Description

Definition at line 6034 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1182 X3D\_Layout Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_String** **align**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Float** **offset**
- struct **Multi\_String** **offsetUnits**
- struct **Multi\_String** **scaleMode**
- struct **Multi\_Float** **size**
- struct **Multi\_String** **sizeUnits**
- struct **Multi\_Int32** **\_align**
- struct **Multi\_Int32** **\_offsetUnits**
- struct **Multi\_Int32** **\_scaleMode**
- struct **Multi\_Int32** **\_sizeUnits**
- struct **Multi\_Float** **\_scale**

### 4.1182.1 Detailed Description

Definition at line 6056 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h



## 4.1183 X3D\_LayoutGroup Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **addChildren**
- struct **Multi\_Node** **removeChildren**
- struct **Multi\_Node** **\_\_sibAffectors**
- struct **Multi\_Node** **children**
- struct **X3D\_Node** \* **metadata**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**
- struct **X3D\_Node** \* **layout**
- struct **X3D\_Node** \* **viewport**

### 4.1183.1 Detailed Description

Definition at line 6086 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1184 X3D\_LayoutLayer Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**

- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **addChildren**
- struct **Multi\_Node** **removeChildren**
- struct **Multi\_Node** **\_\_sibAffectors**
- struct **Multi\_Node** **children**
- struct **X3D\_Node** \* **metadata**
- int **isPickable**
- struct **X3D\_Node** \* **viewport**
- struct **X3D\_Node** \* **layout**

#### 4.1184.1 Detailed Description

Definition at line 6113 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1185 X3D\_LinePickSensor Struct Reference

#### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_String** **objectType**
- struct **X3D\_Node** \* **pickingGeometry**
- struct **Multi\_Node** **pickTarget**
- int **isActive**
- struct **Multi\_Node** **pickedGeometry**
- struct **Uni\_String** \* **intersectionType**
- struct **Uni\_String** \* **sortOrder**
- struct **Uni\_String** \* **matchCriterion**
- int **\_\_oldEnabled**
- struct **Multi\_Vec3f** **pickedPoint**
- struct **Multi\_Vec3f** **pickedNormal**
- struct **Multi\_Vec3f** **pickedTextureCoordinate**

### 4.1185.1 Detailed Description

Definition at line 6139 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1186 X3D\_LineProperties Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **applied**
- int **linetype**
- float **linewidthScaleFactor**
- struct **X3D\_Node** \* **metadata**

### 4.1186.1 Detailed Description

Definition at line 6171 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1187 X3D\_LineSensor Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **autoOffset**
- struct **SFVec3f** **direction**
- int **enabled**
- float **maxPosition**
- float **minPosition**
- float **offset**
- int **isActive**
- int **isOver**
- struct **Uni\_String** \* **description**
- struct **SFVec3f** **trackPoint\_changed**
- struct **SFVec3f** **translation\_changed**
- struct **X3D\_Node** \* **metadata**
- struct **SFVec3f** **\_oldtrackPoint**
- struct **SFVec3f** **\_oldtranslation**
- struct **SFVec3f** **\_origPoint**
- int **\_\_oldEnabled**

### 4.1187.1 Detailed Description

Definition at line 6193 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1188 X3D\_LineSet Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **attrib**
- struct **X3D\_Node** \* **color**
- struct **X3D\_Node** \* **coord**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **fogCoord**
- struct **Multi\_Int32** **vertexCount**
- void \* **\_\_vertArr**
- void \* **\_\_vertIndx**
- int **\_\_segCount**

### 4.1188.1 Detailed Description

Definition at line 6227 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1189 X3D\_LoadSensor Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**

- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- struct **X3D\_Node** \* **metadata**
- double **timeOut**
- struct **Multi\_Node** **watchList**
- int **isActive**
- int **isLoaded**
- double **loadTime**
- float **progress**
- int **\_\_loading**
- int **\_\_finishedloading**
- double **\_\_StartLoadTime**
- int **\_\_oldEnabled**

#### 4.1189.1 Detailed Description

Definition at line 6254 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1190 X3D\_LocalFog Struct Reference

#### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFColor** **color**
- struct **Uni\_String** \* **fogType**
- float **visibilityRange**
- float **\_\_fogScale**
- int **\_\_fogType**
- int **enabled**
- struct **X3D\_Node** \* **metadata**

### 4.1190.1 Detailed Description

Definition at line 6284 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1191 X3D\_LOD Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **addChildren**
- struct **Multi\_Node** **removeChildren**
- struct **Multi\_Node** **\_\_sibAffectors**
- struct **Multi\_Node** **level**
- struct **Multi\_Node** **children**
- struct **SFVec3f** **center**
- struct **Multi\_Float** **range**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**
- struct **X3D\_Node** \* **metadata**
- int **level\_changed**
- int **forceTransitions**
- int **\_\_isX3D**
- void \* **\_selected**

### 4.1191.1 Detailed Description

Definition at line 5977 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1192 X3D\_Material Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- float **ambientIntensity**
- struct **SFColor** **diffuseColor**
- struct **SFColor** **emissiveColor**
- struct **X3D\_Node** \* **metadata**
- float **shininess**
- struct **SFColor** **specularColor**
- float **transparency**
- struct **Multi\_Float** **\_verifiedColor**

### 4.1192.1 Detailed Description

Definition at line 6309 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1193 X3D\_Matrix3VertexAttribute Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Matrix3f** **value**
- struct **Uni\_String** \* **name**
- struct **X3D\_Node** \* **metadata**



### 4.1193.1 Detailed Description

Definition at line 6335 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1194 X3D\_Matrix4VertexAttribute Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Matrix4f** value
- struct **Uni\_String** \* **name**

### 4.1194.1 Detailed Description

Definition at line 6356 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1195 X3D\_MetadataBoolean Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Uni\_String** \* **name**
- struct **Uni\_String** \* **reference**
- struct **Multi\_Bool** value

### 4.1195.1 Detailed Description

Definition at line 6377 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1196 X3D\_MetadataDouble Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Uni\_String** \* **name**
- struct **Uni\_String** \* **reference**
- struct **Multi\_Double** **value**

### 4.1196.1 Detailed Description

Definition at line 6399 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1197 X3D\_MetadataFloat Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Uni\_String** \* **name**
- struct **Uni\_String** \* **reference**
- struct **Multi\_Float** value

### 4.1197.1 Detailed Description

Definition at line 6421 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1198 X3D\_MetadataInteger Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Uni\_String** \* **name**
- struct **Uni\_String** \* **reference**
- struct **Multi\_Int32** value

### 4.1198.1 Detailed Description

Definition at line 6443 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1199 X3D\_MetadataMFBool Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Bool** **value**
- struct **Multi\_Bool** **valueChanged**
- struct **Multi\_Bool** **setValue**
- double **tickTime**

### 4.1199.1 Detailed Description

Definition at line 6465 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1200 X3D\_MetadataMFColor Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Color** value
- struct **Multi\_Color** valueChanged
- struct **Multi\_Color** setValue
- double **tickTime**

### 4.1200.1 Detailed Description

Definition at line 6487 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1201 X3D\_MetadataMFColorRGBA Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_ColorRGBA** value
- struct **Multi\_ColorRGBA** valueChanged
- struct **Multi\_ColorRGBA** setValue
- double **tickTime**

### 4.1201.1 Detailed Description

Definition at line 6509 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1202 X3D\_MetadataMFDouble Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Double** **value**
- struct **Multi\_Double** **valueChanged**
- struct **Multi\_Double** **setValue**
- double **tickTime**

### 4.1202.1 Detailed Description

Definition at line 6531 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1203 X3D\_MetadataMFFloat Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Float** value
- struct **Multi\_Float** valueChanged
- struct **Multi\_Float** setValue
- double **tickTime**

### 4.1203.1 Detailed Description

Definition at line 6553 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1204 X3D\_MetadataMInt32 Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Int32** value
- struct **Multi\_Int32** valueChanged
- struct **Multi\_Int32** setValue
- double **tickTime**

#### 4.1204.1 Detailed Description

Definition at line 6575 of file Structs.h.

The documentation for this struct was generated from the following file:

- `src/lib/vrml_parser/Structs.h`

### 4.1205 X3D\_MetadataMFMatrix3d Struct Reference

#### Data Fields

- `int _nodeType`
- `int _renderFlags`
- `int _hit`
- `int _change`
- `int _ichange`
- `struct Vector * _parentVector`
- `double _dist`
- `float _extent [6]`
- `struct X3D_PolyRep * _intern`
- `int referenceCount`
- `int _defaultContainer`
- `void * _gc`
- `struct X3D_Node * _executionContext`
- `struct Multi_Matrix3d value`
- `struct Multi_Matrix3d valueChanged`
- `struct Multi_Matrix3d setValue`
- `double tickTime`

#### 4.1205.1 Detailed Description

Definition at line 6597 of file Structs.h.

The documentation for this struct was generated from the following file:

- `src/lib/vrml_parser/Structs.h`



## 4.1206 X3D\_MetadataMFMatrix3f Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Matrix3f** value
- struct **Multi\_Matrix3f** valueChanged
- struct **Multi\_Matrix3f** setValue
- double **tickTime**

### 4.1206.1 Detailed Description

Definition at line 6619 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1207 X3D\_MetadataMFMatrix4d Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Matrix4d** value
- struct **Multi\_Matrix4d** valueChanged
- struct **Multi\_Matrix4d** setValue
- double **tickTime**

### 4.1207.1 Detailed Description

Definition at line 6641 of file Structs.h.

The documentation for this struct was generated from the following file:

- `src/lib/vrml_parser/Structs.h`

## 4.1208 X3D\_MetadataMFMatrix4f Struct Reference

### Data Fields

- `int _nodeType`
- `int _renderFlags`
- `int _hit`
- `int _change`
- `int _ichange`
- `struct Vector * _parentVector`
- `double _dist`
- `float _extent [6]`
- `struct X3D_PolyRep * _intern`
- `int referenceCount`
- `int _defaultContainer`
- `void * _gc`
- `struct X3D_Node * _executionContext`
- `struct Multi_Matrix4f value`
- `struct Multi_Matrix4f valueChanged`
- `struct Multi_Matrix4f setValue`
- `double tickTime`

### 4.1208.1 Detailed Description

Definition at line 6663 of file Structs.h.

The documentation for this struct was generated from the following file:

- `src/lib/vrml_parser/Structs.h`

## 4.1209 X3D\_MetadataMFNode Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** value
- struct **Multi\_Node** valueChanged
- struct **Multi\_Node** setValue
- double **tickTime**

### 4.1209.1 Detailed Description

Definition at line 6685 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1210 X3D\_MetadataMFRotation Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Rotation** value
- struct **Multi\_Rotation** valueChanged
- struct **Multi\_Rotation** setValue
- double **tickTime**

### 4.1210.1 Detailed Description

Definition at line 6707 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1211 X3D\_MetadataMFString Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_String** value
- struct **Multi\_String** valueChanged
- struct **Multi\_String** setValue
- double **tickTime**

### 4.1211.1 Detailed Description

Definition at line 6729 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1212 X3D\_MetadataMFTIME Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Time** value
- struct **Multi\_Time** valueChanged
- struct **Multi\_Time** setValue
- double **tickTime**

### 4.1212.1 Detailed Description

Definition at line 6751 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1213 X3D\_MetadataMFVec2d Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Vec2d** value
- struct **Multi\_Vec2d** valueChanged
- struct **Multi\_Vec2d** setValue
- double **tickTime**

### 4.1213.1 Detailed Description

Definition at line 6773 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1214 X3D\_MetadataMFVec2f Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Vec2f** **value**
- struct **Multi\_Vec2f** **valueChanged**
- struct **Multi\_Vec2f** **setValue**
- double **tickTime**

### 4.1214.1 Detailed Description

Definition at line 6795 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1215 X3D\_MetadataMFVec3d Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Vec3d** value
- struct **Multi\_Vec3d** valueChanged
- struct **Multi\_Vec3d** setValue
- double **tickTime**

### 4.1215.1 Detailed Description

Definition at line 6817 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1216 X3D\_MetadataMFVec3f Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Vec3f** value
- struct **Multi\_Vec3f** valueChanged
- struct **Multi\_Vec3f** setValue
- double **tickTime**

### 4.1216.1 Detailed Description

Definition at line 6839 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1217 X3D\_MetadataMFVec4d Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Vec4d** value
- struct **Multi\_Vec4d** valueChanged
- struct **Multi\_Vec4d** setValue
- double **tickTime**

### 4.1217.1 Detailed Description

Definition at line 6861 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h



## 4.1218 X3D\_MetadataMFVec4f Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Vec4f** value
- struct **Multi\_Vec4f** valueChanged
- struct **Multi\_Vec4f** setValue
- double **tickTime**

### 4.1218.1 Detailed Description

Definition at line 6883 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1219 X3D\_MetadataSet Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Uni\_String** \* **name**
- struct **Uni\_String** \* **reference**
- struct **Multi\_Node** value

### 4.1219.1 Detailed Description

Definition at line 7367 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1220 X3D\_MetadataSFBool Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **value**
- int **valueChanged**
- int **setValue**
- double **tickTime**

### 4.1220.1 Detailed Description

Definition at line 6905 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1221 X3D\_MetadataSFCOLOR Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFCOLOR** value
- struct **SFCOLOR** valueChanged
- struct **SFCOLOR** setValue
- double **tickTime**

### 4.1221.1 Detailed Description

Definition at line 6927 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1222 X3D\_MetadataSFCOLORRGBA Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFCOLORRGBA** value
- struct **SFCOLORRGBA** valueChanged
- struct **SFCOLORRGBA** setValue
- double **tickTime**

### 4.1222.1 Detailed Description

Definition at line 6949 of file Structs.h.

The documentation for this struct was generated from the following file:

- `src/lib/vrml_parser/Structs.h`

## 4.1223 X3D\_MetadataSFDouble Struct Reference

### Data Fields

- `int _nodeType`
- `int _renderFlags`
- `int _hit`
- `int _change`
- `int _ichange`
- `struct Vector * _parentVector`
- `double _dist`
- `float _extent [6]`
- `struct X3D_PolyRep * _intern`
- `int referenceCount`
- `int _defaultContainer`
- `void * _gc`
- `struct X3D_Node * _executionContext`
- `double value`
- `double valueChanged`
- `double setValue`
- `double tickTime`

### 4.1223.1 Detailed Description

Definition at line 6971 of file Structs.h.

The documentation for this struct was generated from the following file:

- `src/lib/vrml_parser/Structs.h`

## 4.1224 X3D\_MetadataSFFloat Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- float **value**
- float **valueChanged**
- float **setValue**
- double **tickTime**

### 4.1224.1 Detailed Description

Definition at line 6993 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1225 X3D\_MetadataSFImage Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Int32** **value**
- struct **Multi\_Int32** **valueChanged**
- struct **Multi\_Int32** **setValue**
- double **tickTime**

### 4.1225.1 Detailed Description

Definition at line 7015 of file Structs.h.

The documentation for this struct was generated from the following file:

- `src/lib/vrml_parser/Structs.h`

## 4.1226 X3D\_MetadataSFInt32 Struct Reference

### Data Fields

- `int _nodeType`
- `int _renderFlags`
- `int _hit`
- `int _change`
- `int _ichange`
- `struct Vector * _parentVector`
- `double _dist`
- `float _extent [6]`
- `struct X3D_PolyRep * _intern`
- `int referenceCount`
- `int _defaultContainer`
- `void * _gc`
- `struct X3D_Node * _executionContext`
- `int value`
- `int valueChanged`
- `int setValue`
- `double tickTime`

### 4.1226.1 Detailed Description

Definition at line 7037 of file Structs.h.

The documentation for this struct was generated from the following file:

- `src/lib/vrml_parser/Structs.h`

## 4.1227 X3D\_MetadataSFMMatrix3d Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFMMatrix3d** **value**
- struct **SFMMatrix3d** **valueChanged**
- struct **SFMMatrix3d** **setValue**
- double **tickTime**

### 4.1227.1 Detailed Description

Definition at line 7059 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1228 X3D\_MetadataSFMMatrix3f Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFMMatrix3f** **value**
- struct **SFMMatrix3f** **valueChanged**
- struct **SFMMatrix3f** **setValue**
- double **tickTime**

### 4.1228.1 Detailed Description

Definition at line 7081 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1229 X3D\_MetadataSFMatrix4d Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFMatrix4d** **value**
- struct **SFMatrix4d** **valueChanged**
- struct **SFMatrix4d** **setValue**
- double **tickTime**

### 4.1229.1 Detailed Description

Definition at line 7103 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h



## 4.1230 X3D\_MetadataSFMatrix4f Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFMatrix4f** **value**
- struct **SFMatrix4f** **valueChanged**
- struct **SFMatrix4f** **setValue**
- double **tickTime**

### 4.1230.1 Detailed Description

Definition at line 7125 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1231 X3D\_MetadataSFNode Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **value**
- struct **X3D\_Node** \* **valueChanged**
- struct **X3D\_Node** \* **setValue**
- double **tickTime**

### 4.1231.1 Detailed Description

Definition at line 7147 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1232 X3D\_MetadataSFRotation Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFRotation** **value**
- struct **SFRotation** **valueChanged**
- struct **SFRotation** **setValue**
- double **tickTime**

### 4.1232.1 Detailed Description

Definition at line 7169 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1233 X3D\_MetadataSFString Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Uni\_String** \* **value**
- struct **Uni\_String** \* **valueChanged**
- struct **Uni\_String** \* **setValue**
- double **tickTime**

### 4.1233.1 Detailed Description

Definition at line 7191 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1234 X3D\_MetadataSFTime Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- double **value**
- double **valueChanged**
- double **setValue**
- double **tickTime**

#### 4.1234.1 Detailed Description

Definition at line 7213 of file Structs.h.

The documentation for this struct was generated from the following file:

- `src/lib/vrml_parser/Structs.h`

### 4.1235 X3D\_MetadataSFVec2d Struct Reference

#### Data Fields

- `int _nodeType`
- `int _renderFlags`
- `int _hit`
- `int _change`
- `int _ichange`
- `struct Vector * _parentVector`
- `double _dist`
- `float _extent [6]`
- `struct X3D_PolyRep * _intern`
- `int referenceCount`
- `int _defaultContainer`
- `void * _gc`
- `struct X3D_Node * _executionContext`
- `struct SFVec2d value`
- `struct SFVec2d valueChanged`
- `struct SFVec2d setValue`
- `double tickTime`

#### 4.1235.1 Detailed Description

Definition at line 7235 of file Structs.h.

The documentation for this struct was generated from the following file:

- `src/lib/vrml_parser/Structs.h`

## 4.1236 X3D\_MetadataSFVec2f Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFVec2f** value
- struct **SFVec2f** valueChanged
- struct **SFVec2f** setValue
- double **tickTime**

### 4.1236.1 Detailed Description

Definition at line 7257 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1237 X3D\_MetadataSFVec3d Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFVec3d** value
- struct **SFVec3d** valueChanged
- struct **SFVec3d** setValue
- double **tickTime**

### 4.1237.1 Detailed Description

Definition at line 7279 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1238 X3D\_MetadataSFVec3f Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFVec3f** **value**
- struct **SFVec3f** **valueChanged**
- struct **SFVec3f** **setValue**
- double **tickTime**

### 4.1238.1 Detailed Description

Definition at line 7301 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1239 X3D\_MetadataSFVec4d Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFVec4d** **value**
- struct **SFVec4d** **valueChanged**
- struct **SFVec4d** **setValue**
- double **tickTime**

### 4.1239.1 Detailed Description

Definition at line 7323 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1240 X3D\_MetadataSFVec4f Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFVec4f** **value**
- struct **SFVec4f** **valueChanged**
- struct **SFVec4f** **setValue**
- double **tickTime**

### 4.1240.1 Detailed Description

Definition at line 7345 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1241 X3D\_MetadataString Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Uni\_String** \* **name**
- struct **Uni\_String** \* **reference**
- struct **Multi\_String** **value**

### 4.1241.1 Detailed Description

Definition at line 7389 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h



## 4.1242 X3D\_MotorJoint Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- float **axis1Angle**
- float **axis1Torque**
- float **axis2Angle**
- float **axis2Torque**
- float **axis3Angle**
- float **axis3Torque**
- struct **X3D\_Node** \* **body1**
- struct **X3D\_Node** \* **body2**
- int **enabledAxes**
- struct **Multi\_String** **forceOutput**
- struct **X3D\_Node** \* **metadata**
- struct **SFVec3f** **motor1Axis**
- struct **SFVec3f** **motor2Axis**
- struct **SFVec3f** **motor3Axis**
- float **stop1Bounce**
- float **stop1ErrorCorrection**
- float **stop2Bounce**
- float **stop2ErrorCorrection**
- float **stop3Bounce**
- float **stop3ErrorCorrection**
- float **motor1Angle**
- float **motor1AngleRate**
- float **motor2Angle**
- float **motor2AngleRate**
- float **motor3Angle**
- float **motor3AngleRate**
- int **autoCalc**
- void \* **\_joint**
- int **\_forceout**
- struct **SFVec3f** **\_\_old\_motor1Axis**
- struct **SFVec3f** **\_\_old\_motor2Axis**
- struct **SFVec3f** **\_\_old\_motor3Axis**
- struct **X3D\_Node** \* **\_\_old\_body1**
- struct **X3D\_Node** \* **\_\_old\_body2**
- float **\_\_old\_axis1Angle**
- float **\_\_old\_axis2Angle**
- float **\_\_old\_axis3Angle**

### 4.1242.1 Detailed Description

Definition at line 7411 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1243 X3D\_MovieTexture Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Uni\_String** \* **description**
- int **loop**
- struct **X3D\_Node** \* **metadata**
- double **pauseTime**
- float **pitch**
- double **resumeTime**
- double **startTime**
- double **stopTime**
- struct **Multi\_String** **url**
- double **duration\_changed**
- double **elapsedTime**
- int **isActive**
- int **isPaused**
- void \* **\_parentResource**
- int **\_\_loadstatus**
- void \* **\_\_loadResource**
- int **\_\_sourceNumber**
- double **\_\_inittime**
- double **\_\_lasttime**
- int **repeatS**
- int **repeatT**
- struct **X3D\_Node** \* **textureProperties**
- int **\_\_textureTableIndex**
- float **speed**
- float **\_\_frac**
- int **\_\_ctex**
- int **\_\_lowest**
- int **\_\_highest**
- void \* **\_\_fw\_movie**

### 4.1243.1 Detailed Description

Definition at line 7466 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1244 X3D\_MultiTexture Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- float **alpha**
- struct **SFColor** **color**
- struct **Multi\_String** **function**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_String** **mode**
- struct **Multi\_String** **source**
- struct **Multi\_Node** **texture**
- void \* **\_\_xparams**

### 4.1244.1 Detailed Description

Definition at line 7513 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1245 X3D\_MultiTextureCoordinate Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Node** **texCoord**

### 4.1245.1 Detailed Description

Definition at line 7539 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1246 X3D\_MultiTextureTransform Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Node** **textureTransform**

### 4.1246.1 Detailed Description

Definition at line 7559 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1247 X3D\_NavigationInfo Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **set\_bind**
- struct **Multi\_Float** **avatarSize**
- int **headlight**
- float **speed**
- struct **Multi\_String** **type**
- float **visibilityLimit**
- int **isBound**
- int **\_layerId**
- struct **Multi\_String** **transitionType**
- double **bindTime**
- struct **X3D\_Node** \* **metadata**
- double **transitionTime**
- int **transitionComplete**

### 4.1247.1 Detailed Description

Definition at line 7579 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1248 X3D\_Node Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**

### 4.1248.1 Detailed Description

Definition at line 2589 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1249 X3D\_Normal Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Vec3f** **vector**

### 4.1249.1 Detailed Description

Definition at line 7610 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1250 X3D\_NormalInterpolator Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- float **set\_fraction**
- struct **Multi\_Float** **key**
- struct **Multi\_Vec3f** **keyValue**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Vec3f** **value\_changed**

### 4.1250.1 Detailed Description

Definition at line 7630 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1251 X3D\_NurbsCurve Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **controlPoint**
- struct **Multi\_Double** **weight**
- struct **Multi\_Double** **knot**
- int **order**
- int **tessellation**
- int **closed**
- float **\_tscale**
- struct **Multi\_Vec3f** **\_\_points**
- int **\_\_numPoints**

### 4.1251.1 Detailed Description

Definition at line 7653 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1252 X3D\_NurbsCurve2D Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**



- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Vec2d** **controlPoint**
- struct **Multi\_Double** **weight**
- struct **Multi\_Double** **knot**
- int **order**
- int **tessellation**
- int **closed**
- float **\_tscale**

### 4.1252.1 Detailed Description

Definition at line 7681 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1253 X3D\_NurbsOrientationInterpolator Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **controlPoint**
- struct **Multi\_Double** **weight**
- struct **Multi\_Double** **knot**
- int **order**
- float **set\_fraction**
- struct **SFRotation** **value\_changed**
- struct **Multi\_Float** **\_knot**
- struct **Multi\_Vec4f** **\_xyzw**
- int **\_OK**
- struct **SFVec2f** **\_knotrange**

### 4.1253.1 Detailed Description

Definition at line 7707 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1254 X3D\_NurbsPatchSurface Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **controlPoint**
- struct **Multi\_Double** **weight**
- struct **Multi\_Double** **uKnot**
- int **uOrder**
- int **uDimension**
- int **uTessellation**
- int **uClosed**
- struct **Multi\_Double** **vKnot**
- int **vOrder**
- int **vDimension**
- int **vTessellation**
- int **vClosed**
- struct **X3D\_Node** \* **texCoord**
- int **solid**
- float **\_tscale**

### 4.1254.1 Detailed Description

Definition at line 7736 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1255 X3D\_NurbsPositionInterpolator Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **controlPoint**
- struct **Multi\_Double** **weight**
- struct **Multi\_Double** **knot**
- int **order**
- float **set\_fraction**
- struct **SFVec3f** **value\_changed**
- struct **Multi\_Float** **knot**
- struct **Multi\_Vec4f** **\_xyzw**
- int **\_OK**
- struct **SFVec2f** **\_knotrange**

### 4.1255.1 Detailed Description

Definition at line 7770 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1256 X3D\_NurbsSet Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**

- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **addGeometry**
- struct **Multi\_Node** **removeGeometry**
- struct **Multi\_Node** **geometry**
- struct **X3D\_Node** \* **metadata**
- float **tessellationScale**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**

#### 4.1256.1 Detailed Description

Definition at line 7799 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1257 X3D\_NurbsSurfaceInterpolator Struct Reference

#### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **controlPoint**
- struct **Multi\_Double** **weight**
- struct **Multi\_Double** **uKnot**
- int **uOrder**
- int **uDimension**
- struct **Multi\_Double** **vKnot**
- int **vOrder**
- int **vDimension**
- struct **SFVec2f** **set\_fraction**
- struct **SFVec3f** **position\_changed**
- struct **SFVec3f** **normal\_changed**
- struct **Multi\_Float** **uKnot**
- struct **Multi\_Float** **vKnot**
- struct **Multi\_Vec4f** **\_controlPoint**
- int **\_OK**

### 4.1257.1 Detailed Description

Definition at line 7824 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1258 X3D\_NurbsSweptSurface Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **crossSectionCurve**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **trajectoryCurve**
- int **ccw**
- int **solid**
- struct **Uni\_String** \* **method**
- struct **X3D\_Node** \* **\_patch**
- int **\_method**

### 4.1258.1 Detailed Description

Definition at line 7858 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1259 X3D\_NurbsSwungSurface Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **profileCurve**
- struct **X3D\_Node** \* **trajectoryCurve**
- int **ccw**
- int **solid**
- struct **X3D\_Node** \* **\_patch**

### 4.1259.1 Detailed Description

Definition at line 7884 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1260 X3D\_NurbsTextureCoordinate Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**

- struct **Multi\_Vec2f** controlPoint
- struct **Multi\_Float** weight
- struct **Multi\_Double** uKnot
- int **uOrder**
- int **uDimension**
- struct **Multi\_Double** vKnot
- int **vOrder**
- int **vDimension**
- struct **Multi\_Float** \_uKnot
- struct **Multi\_Float** \_vKnot
- struct **Multi\_Vec4f** \_controlPoint

#### 4.1260.1 Detailed Description

Definition at line 7908 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1261 X3D\_NurbsTrimmedSurface Struct Reference

#### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **controlPoint**
- struct **Multi\_Double** weight
- struct **Multi\_Double** uKnot
- int **uOrder**
- int **uDimension**
- int **uTessellation**
- int **uClosed**
- struct **Multi\_Double** vKnot
- int **vOrder**
- int **vDimension**
- int **vTessellation**
- int **vClosed**
- struct **X3D\_Node** \* **texCoord**
- int **solid**
- struct **Multi\_Node** addTrimmingContour
- struct **Multi\_Node** removeTrimmingContour
- struct **Multi\_Node** trimmingContour
- float **\_tscale**

### 4.1261.1 Detailed Description

Definition at line 7938 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1262 X3D\_OpacityMapVolumeStyle Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **transferFunction**

### 4.1262.1 Detailed Description

Definition at line 8016 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h



## 4.1263 X3D\_OrientationChaser Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- void \* **\_p**
- void \* **\_t**
- int **isActive**
- double **duration**
- double **\_bufferendtime**
- double **\_steptime**
- struct **SFRotation** **value\_changed**
- struct **SFRotation** **initialDestination**
- struct **SFRotation** **initialValue**
- struct **SFRotation** **set\_destination**
- struct **SFRotation** **set\_value**
- void \* **\_buffer**
- struct **SFRotation** **\_previousvalue**
- struct **SFRotation** **\_destination**

### 4.1263.1 Detailed Description

Definition at line 8037 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1264 X3D\_OrientationDamper Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- void \* **\_p**
- void \* **\_t**
- double **tau**
- float **tolerance**
- int **isActive**
- int **order**
- double **\_tau**
- double **\_lasttick**
- int **\_takefirstinput**
- struct **SFRotation** **value\_changed**
- struct **SFRotation** **initialDestination**
- struct **SFRotation** **initialValue**
- struct **SFRotation** **set\_destination**
- struct **SFRotation** **set\_value**
- void \* **\_values**
- struct **SFRotation** **\_input**

### 4.1264.1 Detailed Description

Definition at line 8070 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1265 X3D\_OrientationInterpolator Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- float **set\_fraction**
- struct **Multi\_Float** **key**
- struct **Multi\_Rotation** **keyValue**
- struct **X3D\_Node** \* **metadata**
- struct **SFRotation** **value\_changed**

### 4.1265.1 Detailed Description

Definition at line 8105 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1266 X3D\_OrthoViewpoint Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **\_layerId**
- int **\_donethispass**

- int **set\_bind**
- double **bindTime**
- int **isBound**
- struct **Uni\_String** \* **description**
- int **jump**
- struct **Multi\_Float** **fieldOfView**
- struct **X3D\_Node** \* **metadata**
- struct **SFRotation** **orientation**
- struct **SFVec3f** **position**
- struct **SFVec3f** **centerOfRotation**
- int **retainUserOffsets**
- int **\_initializedOnce**
- struct **SFRotation** **\_orientation**
- struct **SFVec3f** **\_position**

#### 4.1266.1 Detailed Description

Definition at line 8128 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1267 X3D\_OSC\_Sensor Struct Reference

#### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- struct **Uni\_String** \* **description**
- struct **Uni\_String** \* **protocol**
- struct **Uni\_String** \* **listenfor**
- int **port**
- struct **Uni\_String** \* **filter**
- struct **Uni\_String** \* **handler**
- struct **Multi\_String** **talksTo**
- int **FIFOsize**
- int **int32Inp**
- float **floatInp**

- struct **Uni\_String** \* **stringInp**
- int **gotEvents**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Node\_talkToNodes**
- int **\_status**
- void \* **\_int32InpFIFO**
- void \* **\_floatInpFIFO**
- void \* **\_stringInpFIFO**
- void \* **\_int32OutFIFO**
- void \* **\_floatOutFIFO**
- void \* **\_stringOutFIFO**
- struct **X3D\_Node** \* **\_\_oldmetadata**

### 4.1267.1 Detailed Description

Definition at line 7975 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1268 X3D\_PackagedShader Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **activate**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_String** **url**
- int **isSelected**
- int **isValid**
- struct **Uni\_String** \* **language**
- int **\_initialized**
- int **\_shaderUserNumber**
- struct **X3D\_Node** \* **\_shaderUserDefinedFields**
- pthread\_t **\_shaderLoadThread**
- int **\_retrievedURLData**

### 4.1268.1 Detailed Description

Definition at line 8162 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1269 X3D\_ParticleSystem Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **appearance**
- struct **X3D\_Node** \* **geometry**
- struct **X3D\_Node** \* **metadata**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**
- int **\_shaderflags\_base**
- int **\_shaderflags\_effects**
- int **\_shaderflags\_usershaders**
- int **createParticles**
- int **enabled**
- float **lifetimeVariation**
- int **maxParticles**
- float **particleLifetime**
- struct **SFVec2f** **particleSize**
- int **isActive**
- struct **X3D\_Node** \* **colorRamp**
- struct **Multi\_Float** **colorKey**
- struct **X3D\_Node** \* **emitter**
- struct **Uni\_String** \* **geometryType**
- struct **Multi\_Node** **physics**
- struct **X3D\_Node** \* **texCoordRamp**
- struct **Multi\_Float** **texCoordKey**
- void \* **\_tris**
- void \* **\_ttex**
- void \* **\_ltex**
- void \* **\_particles**
- double **\_lasttime**
- int **\_geometryType**
- float **\_remainder**

### 4.1269.1 Detailed Description

Definition at line 8191 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1270 X3D\_PickableGroup Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **addChildren**
- struct **Multi\_Node** **removeChildren**
- struct **Multi\_Node** **\_\_sibAffectors**
- struct **Multi\_Node** **children**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_String** **objectType**
- int **pickable**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**

### 4.1270.1 Detailed Description

Definition at line 8238 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1271 X3D\_PixelTexture Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Int32** **image**
- struct **X3D\_Node** \* **metadata**
- int **repeatS**
- int **repeatT**
- struct **X3D\_Node** \* **textureProperties**
- void \* **\_parentResource**
- int **\_\_textureTableIndex**

### 4.1271.1 Detailed Description

Definition at line 8265 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1272 X3D\_PixelTexture3D Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**



- struct **Multi\_Int32** image
- struct **X3D\_Node** \* metadata
- int **repeatS**
- int **repeatT**
- int **repeatR**
- struct **X3D\_Node** \* textureProperties
- int **\_\_textureTableIndex**
- void \* **\_parentResource**
- int **\_needs\_gradient**

### 4.1272.1 Detailed Description

Definition at line 8290 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1273 X3D\_PlaneSensor Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **autoOffset**
- struct **SFRotation** axisRotation
- int **enabled**
- struct **SFVec2f** maxPosition
- struct **SFVec2f** minPosition
- struct **SFVec3f** offset
- int **isActive**
- int **isOver**
- struct **Uni\_String** \* **description**
- struct **SFVec3f** trackPoint\_changed
- struct **SFVec3f** translation\_changed
- struct **X3D\_Node** \* metadata
- int **sensorLocalOutput**
- struct **SFVec3f** \_oldtrackPoint
- struct **SFVec3f** \_oldtranslation
- struct **SFVec3f** \_origPoint
- int **\_\_oldEnabled**

### 4.1273.1 Detailed Description

Definition at line 8317 of file Structs.h.

The documentation for this struct was generated from the following file:

- `src/lib/vrml_parser/Structs.h`

## 4.1274 X3D\_PointEmitter Struct Reference

### Data Fields

- `int _nodeType`
- `int _renderFlags`
- `int _hit`
- `int _change`
- `int _ichange`
- `struct Vector * _parentVector`
- `double _dist`
- `float _extent [6]`
- `struct X3D_PolyRep * _intern`
- `int referenceCount`
- `int _defaultContainer`
- `void * _gc`
- `struct X3D_Node * _executionContext`
- `struct SFVec3f direction`
- `struct X3D_Node * metadata`
- `struct SFVec3f position`
- `float speed`
- `float variation`
- `float mass`
- `float surfaceArea`

### 4.1274.1 Detailed Description

Definition at line 8352 of file Structs.h.

The documentation for this struct was generated from the following file:

- `src/lib/vrml_parser/Structs.h`

## 4.1275 X3D\_PointLight Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- float **ambientIntensity**
- struct **SFVec3f** **attenuation**
- struct **SFColor** **color**
- int **global**
- float **intensity**
- struct **SFVec3f** **location**
- struct **X3D\_Node** \* **metadata**
- int **on**
- float **radius**
- struct **SFVec4f** **\_loc**
- struct **SFVec4f** **\_col**
- struct **SFVec4f** **\_amb**

### 4.1275.1 Detailed Description

Definition at line 8377 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1276 X3D\_PointPickSensor Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]

- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_String** **objectType**
- struct **X3D\_Node** \* **pickingGeometry**
- struct **Multi\_Node** **pickTarget**
- int **isActive**
- struct **Multi\_Node** **pickedGeometry**
- struct **Uni\_String** \* **intersectionType**
- struct **Uni\_String** \* **sortOrder**
- struct **Uni\_String** \* **matchCriterion**
- int **\_\_oldEnabled**
- struct **Multi\_Vec3f** **pickedPoint**
- int **\_oldIsActive**
- struct **Multi\_Node** **\_oldpickTarget**
- struct **Multi\_Node** **\_oldpickedGeometry**
- struct **Multi\_Vec3f** **\_oldpickedPoint**
- struct **SFVec3f** **\_bboxCenter**
- struct **SFVec3f** **\_bboxSize**
- struct **Uni\_String** \* **set\_intersectionType**
- struct **Uni\_String** \* **set\_sortOrder**

#### 4.1276.1 Detailed Description

Definition at line 8407 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1277 X3D\_PointSensor Struct Reference

#### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**

- int **autoOffset**
- int **enabled**
- struct **SFVec3f** **maxPosition**
- struct **SFVec3f** **minPosition**
- struct **SFVec3f** **offset**
- int **isActive**
- int **isOver**
- struct **Uni\_String** \* **description**
- struct **SFVec3f** **trackPoint\_changed**
- struct **SFVec3f** **translation\_changed**
- struct **X3D\_Node** \* **metadata**
- struct **SFVec3f** **\_oldtrackPoint**
- struct **SFVec3f** **\_oldtranslation**
- struct **SFVec3f** **\_origPoint**
- int **\_\_oldEnabled**

### 4.1277.1 Detailed Description

Definition at line 8445 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1278 X3D\_PointSet Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **attrib**
- struct **X3D\_Node** \* **color**
- struct **X3D\_Node** \* **coord**
- struct **X3D\_Node** \* **fogCoord**
- struct **X3D\_Node** \* **metadata**
- int **\_pointsVBO**
- int **\_coloursVBO**
- int **\_npoints**
- int **\_colourSize**

### 4.1278.1 Detailed Description

Definition at line 8478 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1279 X3D\_Polyline2D Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Vec2f** **lineSegments**

### 4.1279.1 Detailed Description

Definition at line 8505 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1280 X3D\_PolylineEmitter Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]

- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Int32** **set\_coordIndex**
- int **set\_coordinate**
- struct **X3D\_Node** \* **coord**
- struct **SFVec3f** **direction**
- struct **X3D\_Node** \* **metadata**
- float **speed**
- float **variation**
- struct **Multi\_Int32** **coordIndex**
- float **mass**
- float **surfaceArea**
- int **\_method**
- int **\_nseg**
- void \* **\_segs**
- void \* **\_portions**

#### 4.1280.1 Detailed Description

Definition at line 8525 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1281 X3D\_Polypoint2D Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Vec2f** **point**

### 4.1281.1 Detailed Description

Definition at line 8557 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1282 X3D\_PolyRep Struct Reference

### Data Fields

- int **irep\_change**
- int **ccw**
- int **ntri**
- int **streamed**
- GLuint \* **cindex**
- GLuint \* **colindex**
- GLuint \* **norindex**
- GLuint \* **tcindex**
- ushort \* **tri\_indices**
- ushort \* **wire\_indices**
- float \* **actualCoord**
- float \* **actualFog**
- float \* **color**
- float \* **normal**
- float \* **flat\_normal**
- int **last\_normal\_type**
- int **last\_index\_type**
- float \* **GeneratedTexCoords** [4]
- int **ntexdim** [4]
- int **ntcoord**
- int **tcoordtype**
- int **texgentype**
- GLfloat **minVals** [3]
- GLfloat **maxVals** [3]
- GLfloat **transparency**
- int **isRGBAcolorNode**
- GLuint **VBO\_buffers** [VBO\_COUNT]

### 4.1282.1 Detailed Description

Definition at line 62 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h



## 4.1283 X3D\_PositionChaser Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- void \* **\_p**
- void \* **\_t**
- int **isActive**
- double **duration**
- double **\_bufferendtime**
- double **\_steptime**
- struct **SFVec3f** **value\_changed**
- struct **SFVec3f** **initialDestination**
- struct **SFVec3f** **initialValue**
- struct **SFVec3f** **set\_destination**
- struct **SFVec3f** **set\_value**
- void \* **\_buffer**
- struct **SFVec3f** **\_previousvalue**
- struct **SFVec3f** **\_destination**

### 4.1283.1 Detailed Description

Definition at line 8577 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1284 X3D\_PositionChaser2D Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- void \* **\_p**
- void \* **\_t**
- int **isActive**
- double **duration**
- double **\_bufferendtime**
- double **\_steptime**
- struct **SFVec2f** **value\_changed**
- struct **SFVec2f** **initialDestination**
- struct **SFVec2f** **initialValue**
- struct **SFVec2f** **set\_destination**
- struct **SFVec2f** **set\_value**
- void \* **\_buffer**
- struct **SFVec2f** **\_previousvalue**
- struct **SFVec2f** **\_destination**

### 4.1284.1 Detailed Description

Definition at line 8610 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1285 X3D\_PositionDamper Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- void \* **\_p**
- void \* **\_t**
- double **tau**
- float **tolerance**
- int **isActive**
- int **order**
- double **\_tau**
- double **\_lasttick**
- int **\_takefirstinput**
- struct **SFVec3f** **value\_changed**
- struct **SFVec3f** **initialDestination**
- struct **SFVec3f** **initialValue**
- struct **SFVec3f** **set\_destination**
- struct **SFVec3f** **set\_value**
- void \* **\_values**
- struct **SFVec3f** **\_input**

### 4.1285.1 Detailed Description

Definition at line 8643 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1286 X3D\_PositionDamper2D Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- void \* **\_p**
- void \* **\_t**
- double **tau**
- float **tolerance**
- int **isActive**
- int **order**
- double **\_tau**
- double **\_lasttick**
- int **\_takefirstinput**
- struct **SFVec2f** **value\_changed**
- struct **SFVec2f** **initialDestination**
- struct **SFVec2f** **initialValue**
- struct **SFVec2f** **set\_destination**
- struct **SFVec2f** **set\_value**
- void \* **\_values**
- struct **SFVec2f** **\_input**

### 4.1286.1 Detailed Description

Definition at line 8678 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1287 X3D\_PositionInterpolator Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- float **set\_fraction**
- struct **Multi\_Float** **key**
- struct **Multi\_Vec3f** **keyValue**
- struct **X3D\_Node** \* **metadata**
- struct **SFVec3f** **value\_changed**

### 4.1287.1 Detailed Description

Definition at line 8713 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1288 X3D\_PositionInterpolator2D Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- float **set\_fraction**
- struct **Multi\_Float** **key**
- struct **Multi\_Vec2f** **keyValue**
- struct **X3D\_Node** \* **metadata**
- struct **SFVec2f** **value\_changed**

### 4.1288.1 Detailed Description

Definition at line 8736 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1289 X3D\_PrimitivePickSensor Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_String** **objectType**
- struct **X3D\_Node** \* **pickingGeometry**
- struct **Multi\_Node** **pickTarget**
- int **isActive**
- struct **Multi\_Node** **pickedGeometry**
- struct **Uni\_String** \* **intersectionType**
- struct **Uni\_String** \* **sortOrder**
- struct **Uni\_String** \* **matchCriterion**
- int **\_\_oldEnabled**

### 4.1289.1 Detailed Description

Definition at line 8759 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1290 X3D\_ProgramShader Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **activate**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Node** **programs**
- int **isSelected**
- int **isValid**
- struct **Uni\_String** \* **language**
- int **\_initialized**
- int **\_shaderUserNumber**
- pthread\_t **\_shaderLoadThread**
- int **\_retrievedURLData**

### 4.1290.1 Detailed Description

Definition at line 8788 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1291 X3D\_ProjectionVolumeStyle Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- struct **X3D\_Node** \* **metadata**
- float **intensityThreshold**
- struct **Uni\_String** \* **type**
- int **\_type**

### 4.1291.1 Detailed Description

Definition at line 8816 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1292 X3D\_Proto Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **\_\_children**
- struct **X3D\_Node** \* **metadata**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**
- struct **Multi\_Node** **\_sortedChildren**
- struct **Multi\_Node** **addChildren**
- struct **Multi\_Node** **removeChildren**
- struct **Multi\_Node** **\_\_sibAffectors**
- void \* **\_\_protoDeclares**
- void \* **\_\_externProtoDeclares**
- void \* **\_\_nodes**
- void \* **\_\_subcontexts**
- void \* **\_\_GC**
- void \* **\_\_protoDef**
- int **\_\_protoFlags**
- struct **X3D\_Node** \* **\_\_prototype**
- struct **X3D\_Node** \* **\_\_parentProto**
- void \* **\_\_ROUTES**
- void \* **\_\_EXPORTS**
- void \* **\_\_IMPORTS**
- void \* **\_\_DEFnames**
- void \* **\_\_IS**
- void \* **\_\_scripts**
- struct **Multi\_String** **url**
- struct **Multi\_String** **\_\_oldurl**
- void \* **\_\_afterPound**
- int **\_\_loadstatus**



- void \* **\_parentResource**
- void \* **\_\_loadResource**
- void \* **\_\_typename**
- int **load**
- int **\_\_oldload**
- double **\_\_unitlengthfactor**
- int **\_\_specversion**

#### 4.1292.1 Detailed Description

Definition at line 8839 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1293 X3D\_ProximitySensor Struct Reference

#### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFVec3f** **center**
- struct **SFVec3f** **size**
- int **enabled**
- int **isActive**
- struct **SFVec3f** **position\_changed**
- struct **SFRotation** **orientation\_changed**
- double **enterTime**
- double **exitTime**
- struct **SFVec3f** **centerOfRotation\_changed**
- struct **X3D\_Node** \* **metadata**
- int **\_\_hit**
- struct **SFVec3f** **\_\_t1**
- struct **SFRotation** **\_\_t2**
- int **\_\_oldEnabled**

### 4.1293.1 Detailed Description

Definition at line 8891 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1294 X3D\_QuadSet Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **attrib**
- struct **X3D\_Node** \* **color**
- struct **X3D\_Node** \* **coord**
- struct **X3D\_Node** \* **fogCoord**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **normal**
- struct **X3D\_Node** \* **texCoord**
- int **ccw**
- int **colorPerVertex**
- int **normalPerVertex**
- int **solid**
- struct **Multi\_Int32** **\_coordIndex**

### 4.1294.1 Detailed Description

Definition at line 8923 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1295 X3D\_ReceiverPdu Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- int **isActive**
- double **timestamp**
- struct **Uni\_String** \* **address**
- int **port**
- struct **Uni\_String** \* **multicastRelayHost**
- int **multicastRelayPort**
- struct **Uni\_String** \* **networkMode**
- int **isNetworkReader**
- int **isNetworkWriter**
- int **isStandAlone**
- double **readInterval**
- double **writeInterval**
- int **rtpHeaderExpected**
- int **isRtpHeaderHeard**
- int **\_registered**
- struct **X3D\_Node** \* **\_dsock**
- double **\_lasttime**
- int **\_pduchange\_networksensor**
- struct **X3D\_Node** \* **\_oldState**
- int **entityID**
- int **applicationID**
- int **siteID**
- struct **Multi\_String** **geoSystem**
- struct **SFVec3d** **geoCoords**
- struct **X3D\_Node** \* **\_\_geoSystem**
- int **radioID**
- int **whichGeometry**
- int **receiverState**
- float **receivedPower**
- int **transmitterEntityID**
- int **transmitterApplicationID**
- int **transmitterSiteID**
- int **transmitterRadioID**
- int **\_pduchange\_receiver**

### 4.1295.1 Detailed Description

Definition at line 8953 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1296 X3D\_Rectangle2D Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **SFVec2f** **size**
- int **solid**
- struct **Multi\_Vec3f** **\_\_points**
- int **\_\_numPoints**

### 4.1296.1 Detailed Description

Definition at line 9006 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1297 X3D\_RigidBody Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- float **angularDampingFactor**
- struct **SFVec3f** **angularVelocity**
- int **autoDamp**
- int **autoDisable**
- struct **SFVec3f** **centerOfMass**
- float **disableAngularSpeed**
- float **disableLinearSpeed**
- float **disableTime**
- int **enabled**
- struct **SFVec3f** **finiteRotationAxis**
- int **fixed**
- struct **Multi\_Vec3f** **forces**
- struct **Multi\_Node** **geometry**
- struct **SFMatrix3f** **inertia**
- float **linearDampingFactor**
- struct **SFVec3f** **linearVelocity**
- float **mass**
- struct **X3D\_Node** \* **massDensityModel**
- struct **X3D\_Node** \* **metadata**
- struct **SFRotation** **orientation**
- struct **SFVec3f** **position**
- struct **Multi\_Vec3f** **torques**
- int **useFiniteRotation**
- int **useGlobalGravity**
- void \* **\_body**
- struct **SFVec3f** **\_\_old\_angularVelocity**
- struct **SFVec3f** **\_\_old\_centerOfMass**
- struct **SFVec3f** **\_\_old\_finiteRotationAxis**
- struct **SFVec3f** **\_\_old\_linearVelocity**
- struct **SFRotation** **\_\_old\_orientation**
- struct **SFVec3f** **\_\_old\_position**
- void \* **\_geomIdentityTransform**

### 4.1297.1 Detailed Description

Definition at line 9029 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1298 X3D\_RigidBodyCollection Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **set\_contacts**
- int **autoDisable**
- struct **Multi\_Node** **bodies**
- float **constantForceMix**
- float **contactSurfaceThickness**
- float **disableAngularSpeed**
- float **disableLinearSpeed**
- float **disableTime**
- int **enabled**
- float **errorCorrection**
- struct **SFVec3f** **gravity**
- int **iterations**
- struct **Multi\_Node** **joints**
- float **maxCorrectionSpeed**
- struct **X3D\_Node** \* **metadata**
- int **preferAccuracy**
- struct **X3D\_Node** \* **collider**
- void \* **\_world**
- void \* **\_group**

### 4.1298.1 Detailed Description

Definition at line 9079 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1299 X3D\_ScalarChaser Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- void \* **\_p**
- void \* **\_t**
- int **isActive**
- double **duration**
- double **\_bufferendtime**
- double **\_steptime**
- float **value\_changed**
- float **initialDestination**
- float **initialValue**
- float **set\_destination**
- float **set\_value**
- void \* **\_buffer**
- float **\_previousvalue**
- float **\_destination**

### 4.1299.1 Detailed Description

Definition at line 9116 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1300 X3D\_ScalarDamper Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- void \* **\_p**
- void \* **\_t**
- double **tau**
- float **tolerance**
- int **isActive**
- int **order**
- double **\_tau**
- double **\_lasttick**
- int **\_takefirstinput**
- float **value\_changed**
- float **initialDestination**
- float **initialValue**
- float **set\_destination**
- float **set\_value**
- void \* **\_values**
- float **\_input**

### 4.1300.1 Detailed Description

Definition at line 9149 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h



## 4.1301 X3D\_ScalarInterpolator Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- float **set\_fraction**
- struct **Multi\_Float** **key**
- struct **Multi\_Float** **keyValue**
- struct **X3D\_Node** \* **metadata**
- float **value\_changed**

### 4.1301.1 Detailed Description

Definition at line 9184 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1302 X3D\_ScreenFontStyle Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_String** **family**
- int **horizontal**
- struct **Multi\_String** **justify**
- struct **Uni\_String** \* **language**
- int **leftToRight**
- float **pointSize**
- float **spacing**
- struct **Uni\_String** \* **style**
- int **topToBottom**

### 4.1302.1 Detailed Description

Definition at line 9207 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1303 X3D\_ScreenGroup Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **addChildren**
- struct **Multi\_Node** **removeChildren**
- struct **Multi\_Node** **\_\_sibAffectors**
- struct **Multi\_Node** **children**
- struct **X3D\_Node** \* **metadata**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**

### 4.1303.1 Detailed Description

Definition at line 9235 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1304 X3D\_Script Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_String** **url**
- int **directOutput**
- int **mustEvaluate**
- struct **X3D\_Node** \* **metadata**
- void \* **\_\_scriptObj**
- void \* **\_parentResource**

### 4.1304.1 Detailed Description

Definition at line 9260 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1305 X3D\_SegmentedVolumeData Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFVec3f** **dimensions**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **voxels**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**
- void \* **\_boxtris**
- struct **Multi\_Node** **renderStyle**
- struct **Multi\_Bool** **segmentEnabled**
- struct **X3D\_Node** \* **segmentIdentifiers**

### 4.1305.1 Detailed Description

Definition at line 9284 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1306 X3D\_ShadedVolumeStyle Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **surfaceNormals**
- int **lighting**
- int **shadows**
- struct **X3D\_Node** \* **material**
- struct **Uni\_String** \* **phaseFunction**
- int **\_phaseFunction**

### 4.1306.1 Detailed Description

Definition at line 9311 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1307 X3D\_ShaderPart Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_String** **url**
- struct **Uni\_String** \* **type**
- int **\_\_loadstatus**
- void \* **\_parentResource**
- void \* **\_\_loadResource**
- struct **X3D\_Node** \* **\_shaderUserDefinedFields**

### 4.1307.1 Detailed Description

Definition at line 9337 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1308 X3D\_ShaderProgram Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_String** **url**
- struct **Uni\_String** \* **type**
- int **\_\_loadstatus**
- void \* **\_parentResource**
- void \* **\_\_loadResource**
- struct **X3D\_Node** \* **\_shaderUserDefinedFields**

### 4.1308.1 Detailed Description

Definition at line 9362 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1309 X3D\_Shape Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **appearance**
- struct **X3D\_Node** \* **geometry**
- struct **X3D\_Node** \* **metadata**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**
- int **\_shaderflags\_base**
- int **\_shaderflags\_effects**
- int **\_shaderflags\_usershaders**
- int **\_\_visible**
- int **\_\_occludeCheckCount**
- int **\_\_Samples**

### 4.1309.1 Detailed Description

Definition at line 9387 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1310 X3D\_SignalPdu Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- int **isActive**
- double **timestamp**
- struct **Uni\_String** \* **address**
- int **port**
- struct **Uni\_String** \* **multicastRelayHost**
- int **multicastRelayPort**
- struct **Uni\_String** \* **networkMode**
- int **isNetworkReader**
- int **isNetworkWriter**
- int **isStandAlone**
- double **readInterval**
- double **writeInterval**
- int **rtpHeaderExpected**
- int **isRtpHeaderHeard**
- int **\_registered**
- struct **X3D\_Node** \* **\_dsock**
- double **\_lasttime**
- int **\_pduchange\_networksensor**
- struct **X3D\_Node** \* **\_oldState**
- int **entityID**
- int **applicationID**
- int **siteID**
- struct **Multi\_String** **geoSystem**
- struct **SFVec3d** **geoCoords**
- struct **X3D\_Node** \* **\_\_geoSystem**
- int **radioID**
- int **whichGeometry**
- struct **Multi\_Int32** **data**
- int **dataLength**
- int **encodingScheme**
- int **sampleRate**
- int **samples**
- int **tdlType**
- int **\_pduchange\_signal**

### 4.1310.1 Detailed Description

Definition at line 9416 of file Structs.h.

The documentation for this struct was generated from the following file:

- `src/lib/vrml_parser/Structs.h`

## 4.1311 X3D\_SilhouetteEnhancementVolumeStyle Struct Reference

### Data Fields

- `int _nodeType`
- `int _renderFlags`
- `int _hit`
- `int _change`
- `int _ichange`
- `struct Vector * _parentVector`
- `double _dist`
- `float _extent [6]`
- `struct X3D_PolyRep * _intern`
- `int referenceCount`
- `int _defaultContainer`
- `void * _gc`
- `struct X3D_Node * _executionContext`
- `int enabled`
- `struct X3D_Node * metadata`
- `struct X3D_Node * surfaceNormals`
- `float silhouetteBoundaryOpacity`
- `float silhouetteRetainedOpacity`
- `float silhouetteSharpness`

### 4.1311.1 Detailed Description

Definition at line 9469 of file Structs.h.

The documentation for this struct was generated from the following file:

- `src/lib/vrml_parser/Structs.h`



## 4.1312 X3D\_SingleAxisHingeJoint Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFVec3f** **anchorPoint**
- struct **SFVec3f** **axis**
- struct **X3D\_Node** \* **body1**
- struct **X3D\_Node** \* **body2**
- struct **Multi\_String** **forceOutput**
- float **maxAngle**
- struct **X3D\_Node** \* **metadata**
- float **minAngle**
- float **stopBounce**
- float **stopErrorCorrection**
- float **angle**
- float **angleRate**
- struct **SFVec3f** **body1AnchorPoint**
- struct **SFVec3f** **body2AnchorPoint**
- void \* **\_joint**
- int **\_forceout**
- struct **SFVec3f** **\_\_old\_anchorPoint**
- struct **SFVec3f** **\_\_old\_axis**
- struct **X3D\_Node** \* **\_\_old\_body1**
- struct **X3D\_Node** \* **\_\_old\_body2**

### 4.1312.1 Detailed Description

Definition at line 9493 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1313 X3D\_SliderJoint Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFVec3f** **axis**
- struct **X3D\_Node** \* **body1**
- struct **X3D\_Node** \* **body2**
- struct **Multi\_String** **forceOutput**
- float **maxSeparation**
- struct **X3D\_Node** \* **metadata**
- float **minSeparation**
- float **sliderForce**
- float **stopBounce**
- float **stopErrorCorrection**
- float **separation**
- float **separationRate**
- void \* **\_joint**
- int **\_forceout**
- struct **SFVec3f** **\_\_old\_axis**
- struct **X3D\_Node** \* **\_\_old\_body1**
- struct **X3D\_Node** \* **\_\_old\_body2**

### 4.1313.1 Detailed Description

Definition at line 9531 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1314 X3D\_Sound Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFVec3f** **direction**
- float **intensity**
- struct **SFVec3f** **location**
- float **maxBack**
- float **maxFront**
- struct **X3D\_Node** \* **metadata**
- float **minBack**
- float **minFront**
- float **priority**
- struct **X3D\_Node** \* **source**
- int **spatialize**
- int **\_\_sourceNumber**
- struct **SFVec3f** **\_\_lastlocation**
- double **\_\_lasttime**

### 4.1314.1 Detailed Description

Definition at line 9566 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1315 X3D\_Sphere Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**

- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- float **radius**
- int **solid**
- struct **Multi\_Vec3f** **\_\_points**
- int **\_sideVBO**
- int **\_\_SphereIndxVBO**
- void \* **\_\_pindices**
- int **\_\_wireindicesVBO**

#### 4.1315.1 Detailed Description

Definition at line 9598 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1316 X3D\_SphereSensor Struct Reference

#### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **autoOffset**
- int **enabled**
- struct **SFRotation** **offset**
- int **isActive**
- struct **SFRotation** **rotation\_changed**
- struct **SFVec3f** **trackPoint\_changed**
- struct **SFVec3f** **\_oldtrackPoint**
- struct **SFRotation** **\_oldrotation**
- int **isOver**
- struct **Uni\_String** \* **description**
- struct **X3D\_Node** \* **metadata**
- struct **SFVec3f** **\_origPoint**
- struct **SFVec3f** **\_origNormalizedPoint**
- float **\_radius**
- int **\_\_oldEnabled**

### 4.1316.1 Detailed Description

Definition at line 9624 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1317 X3D\_SplinePositionInterpolator Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- float **set\_fraction**
- int **closed**
- struct **Multi\_Float** **key**
- struct **Multi\_Vec3f** **keyValue**
- struct **Multi\_Vec3f** **keyVelocity**
- struct **X3D\_Node** \* **metadata**
- int **normalizeVelocity**
- struct **SFVec3f** **value\_changed**
- struct **Multi\_Vec3f** **\_T0**
- struct **Multi\_Vec3f** **\_T1**

### 4.1317.1 Detailed Description

Definition at line 9657 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1318 X3D\_SplinePositionInterpolator2D Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- float **set\_fraction**
- int **closed**
- struct **Multi\_Float** **key**
- struct **Multi\_Vec2f** **keyValue**
- struct **Multi\_Vec2f** **keyVelocity**
- struct **X3D\_Node** \* **metadata**
- int **normalizeVelocity**
- struct **SFVec2f** **value\_changed**
- struct **Multi\_Vec2f** **\_T0**
- struct **Multi\_Vec2f** **\_T1**

### 4.1318.1 Detailed Description

Definition at line 9685 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1319 X3D\_SplineScalarInterpolator Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**

- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- float **set\_fraction**
- int **closed**
- struct **Multi\_Float** **key**
- struct **Multi\_Float** **keyValue**
- struct **Multi\_Float** **keyVelocity**
- struct **X3D\_Node** \* **metadata**
- int **normalizeVelocity**
- float **value\_changed**
- struct **Multi\_Float\_T0**
- struct **Multi\_Float\_T1**

### 4.1319.1 Detailed Description

Definition at line 9713 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1320 X3D\_SpotLight Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- float **ambientIntensity**
- struct **SFVec3f** **attenuation**
- float **beamWidth**
- struct **SFColor** **color**
- float **cutOffAngle**
- struct **SFVec3f** **direction**
- int **global**
- float **intensity**
- struct **SFVec3f** **location**
- struct **X3D\_Node** \* **metadata**
- int **on**
- float **radius**
- struct **SFVec4f** **\_dir**
- struct **SFVec4f** **\_loc**
- struct **SFVec4f** **\_col**
- struct **SFVec4f** **\_amb**

### 4.1320.1 Detailed Description

Definition at line 9741 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1321 X3D\_SquadOrientationInterpolator Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- float **set\_fraction**
- struct **Multi\_Float** **key**
- struct **Multi\_Rotation** **keyValue**
- struct **X3D\_Node** \* **metadata**
- int **normalizeVelocity**
- int **closed**
- struct **SFRotation** **value\_changed**
- struct **Multi\_Float** **\_normkey**
- struct **Multi\_Rotation** **\_normkeyValue**

### 4.1321.1 Detailed Description

Definition at line 9775 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h



## 4.1322 X3D\_StaticGroup Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Node** **children**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**
- struct **Multi\_Node** **\_\_sibAffectors**
- int **\_\_transparency**
- int **\_\_solid**
- struct **Multi\_Node** **\_sortedChildren**

### 4.1322.1 Detailed Description

Definition at line 9802 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1323 X3D\_StringSensor Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**

- struct **X3D\_Node** \* **\_executionContext**
- int **deletionAllowed**
- int **enabled**
- struct **Uni\_String** \* **enteredText**
- struct **Uni\_String** \* **finalText**
- int **isActive**
- struct **X3D\_Node** \* **metadata**
- int **singleton**
- int **\_initialized**
- int **\_\_oldEnabled**

#### 4.1323.1 Detailed Description

Definition at line 9828 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1324 X3D\_SurfaceEmitter Struct Reference

#### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Int32** **set\_coordIndex**
- int **set\_coordinate**
- struct **X3D\_Node** \* **metadata**
- float **speed**
- float **variation**
- struct **Multi\_Int32** **coordIndex**
- float **mass**
- struct **X3D\_Node** \* **surface**
- float **surfaceArea**
- struct **X3D\_Node** \* **geometry**
- void \* **\_ifs**

### 4.1324.1 Detailed Description

Definition at line 9855 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1325 X3D\_Switch Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **addChildren**
- struct **Multi\_Node** **removeChildren**
- struct **Multi\_Node** **\_\_sibAffectors**
- struct **Multi\_Node** **choice**
- struct **Multi\_Node** **children**
- struct **X3D\_Node** \* **metadata**
- int **whichChoice**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**
- int **\_\_isX3D**

### 4.1325.1 Detailed Description

Definition at line 9884 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1326 X3D\_Teapot Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- int **solid**
- void \* **\_\_ifsnode**

### 4.1326.1 Detailed Description

Definition at line 9912 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1327 X3D\_TexCoordChaser2D Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- void \* **\_p**
- void \* **\_t**
- int **isActive**

- double **duration**
- double **\_bufferendtime**
- double **\_steptime**
- struct **Multi\_Vec2f** **value\_changed**
- struct **Multi\_Vec2f** **initialDestination**
- struct **Multi\_Vec2f** **initialValue**
- struct **Multi\_Vec2f** **set\_destination**
- struct **Multi\_Vec2f** **set\_value**
- void \* **\_buffer**
- struct **Multi\_Vec2f** **\_previousvalue**
- struct **Multi\_Vec2f** **\_destination**

### 4.1327.1 Detailed Description

Definition at line 9933 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1328 X3D\_TexCoordDamper2D Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- void \* **\_p**
- void \* **\_t**
- double **tau**
- float **tolerance**
- int **isActive**
- int **order**
- double **\_tau**
- double **\_lasttick**
- int **\_takefirstinput**
- struct **Multi\_Vec2f** **value\_changed**
- struct **Multi\_Vec2f** **initialDestination**
- struct **Multi\_Vec2f** **initialValue**
- struct **Multi\_Vec2f** **set\_destination**
- struct **Multi\_Vec2f** **set\_value**
- void \* **\_values**
- struct **Multi\_Vec2f** **\_input**

### 4.1328.1 Detailed Description

Definition at line 9966 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1329 X3D\_Text Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **fontStyle**
- struct **Multi\_Float** **length**
- float **maxExtent**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_String** **string**
- struct **Multi\_Vec2f** **lineBounds**
- struct **SFVec3f** **origin**
- int **solid**
- struct **SFVec2f** **textBounds**
- int **\_isScreen**
- void \* **\_screendata**

### 4.1329.1 Detailed Description

Definition at line 10001 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1330 X3D\_TextureBackground Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **set\_bind**
- struct **Multi\_Float** **groundAngle**
- struct **Multi\_Color** **groundColor**
- struct **Multi\_Float** **skyAngle**
- struct **Multi\_Color** **skyColor**
- double **bindTime**
- int **isBound**
- int **\_layerId**
- struct **X3D\_Node** \* **metadata**
- void \* **\_parentResource**
- struct **Multi\_Vec3f** **\_\_points**
- struct **Multi\_Vec3f** **\_\_colours**
- int **\_\_quadcount**
- int **\_\_VBO**
- struct **X3D\_Node** \* **frontTexture**
- struct **X3D\_Node** \* **backTexture**
- struct **X3D\_Node** \* **topTexture**
- struct **X3D\_Node** \* **bottomTexture**
- struct **X3D\_Node** \* **leftTexture**
- struct **X3D\_Node** \* **rightTexture**
- struct **Multi\_Float** **transparency**

### 4.1330.1 Detailed Description

Definition at line 10030 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1331 X3D\_TextureCoordinate Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Vec2f** **point**

### 4.1331.1 Detailed Description

Definition at line 10069 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1332 X3D\_TextureCoordinate3D Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Vec3f** **point**



### 4.1332.1 Detailed Description

Definition at line 10089 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1333 X3D\_TextureCoordinate4D Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Vec4f** **point**

### 4.1333.1 Detailed Description

Definition at line 10109 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1334 X3D\_TextureCoordinateGenerator Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Uni\_String** \* **mode**
- struct **Multi\_Float** **parameter**

### 4.1334.1 Detailed Description

Definition at line 10129 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1335 X3D\_TextureProjectorParallel Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Uni\_String** \* **description**
- struct **SFVec3f** **location**
- struct **SFVec3f** **direction**
- struct **SFVec3f** **upVector**
- struct **Multi\_Float** **fieldOfView**
- float **aspectRatio**
- float **nearDistance**
- float **farDistance**
- int **global**
- int **on**
- struct **X3D\_Node** \* **texture**
- int **backCull**
- struct **SFVec4f** **\_dir**
- struct **SFVec4f** **\_loc**
- struct **SFVec4f** **\_upVec**

### 4.1335.1 Detailed Description

Definition at line 10150 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1336 X3D\_TextureProjectorPerspective Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Uni\_String** \* **description**
- struct **SFVec3f** **location**
- struct **SFVec3f** **direction**
- struct **SFVec3f** **upVector**
- float **fieldOfView**
- float **aspectRatio**
- float **nearDistance**
- float **farDistance**
- int **global**
- int **on**
- struct **X3D\_Node** \* **texture**
- int **backCull**
- struct **SFVec4f** **\_dir**
- struct **SFVec4f** **\_loc**
- struct **SFVec4f** **\_upVec**

### 4.1336.1 Detailed Description

Definition at line 10184 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1337 X3D\_TextureProperties Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- float **anisotropicDegree**
- struct **SFColorRGBA** **borderColor**
- int **borderWidth**
- struct **Uni\_String** \* **boundaryModeS**
- struct **Uni\_String** \* **boundaryModeT**
- struct **Uni\_String** \* **boundaryModeR**
- struct **Uni\_String** \* **magnificationFilter**
- struct **X3D\_Node** \* **metadata**
- struct **Uni\_String** \* **minificationFilter**
- struct **Uni\_String** \* **textureCompression**
- float **texturePriority**
- int **generateMipMaps**

### 4.1337.1 Detailed Description

Definition at line 10218 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1338 X3D\_TextureTransform Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]

- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFVec2f** **center**
- struct **X3D\_Node** \* **metadata**
- float **rotation**
- struct **SFVec2f** **scale**
- struct **SFVec2f** **translation**

#### 4.1338.1 Detailed Description

Definition at line 10248 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1339 X3D\_TextureTransform3D Struct Reference

#### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFVec3f** **center**
- struct **X3D\_Node** \* **metadata**
- struct **SFRotation** **rotation**
- struct **SFVec3f** **scale**
- struct **SFVec3f** **translation**

#### 4.1339.1 Detailed Description

Definition at line 10271 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1340 X3D\_TextureTransformMatrix3D Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **SFMatrix4f** **matrix**

### 4.1340.1 Detailed Description

Definition at line 10294 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1341 X3D\_TimeSensor Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- double **cycleInterval**
- int **enabled**
- int **loop**
- struct **X3D\_Node** \* **metadata**
- double **pauseTime**

- double **resumeTime**
- double **startTime**
- double **stopTime**
- double **cycleTime**
- double **elapsedTime**
- float **fraction\_changed**
- int **isActive**
- double **isPaused**
- double **time**
- double **\_\_inittime**
- double **\_\_ctflag**
- int **\_\_oldEnabled**
- double **\_\_lasttime**

#### 4.1341.1 Detailed Description

Definition at line 10314 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1342 X3D\_TimeTrigger Struct Reference

#### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **set\_boolean**
- double **triggerTime**
- struct **X3D\_Node** \* **metadata**

#### 4.1342.1 Detailed Description

Definition at line 10350 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1343 X3D\_ToneMappedVolumeStyle Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **surfaceNormals**
- struct **SFColorRGBA** **coolColor**
- struct **SFColorRGBA** **warmColor**

### 4.1343.1 Detailed Description

Definition at line 10371 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1344 X3D\_TouchSensor Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- struct **SFVec3f** **hitNormal\_changed**



- struct **SFVec3f** hitPoint\_changed
- struct **SFVec2f** hitTexCoord\_changed
- struct **SFVec3f** \_oldhitNormal
- struct **SFVec3f** \_oldhitPoint
- struct **SFVec2f** \_oldhitTexCoord
- int **isActive**
- int **isOver**
- struct **Uni\_String** \* **description**
- double **touchTime**
- struct **X3D\_Node** \* **metadata**
- int **\_\_oldEnabled**

#### 4.1344.1 Detailed Description

Definition at line 10394 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1345 X3D\_TrackingSensor Struct Reference

#### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- struct **SFVec3f** **position**
- struct **SFRotation** **rotation**
- int **isActive**
- struct **Uni\_String** \* **description**
- struct **X3D\_Node** \* **metadata**
- int **isPositionAvailable**
- int **isRotationAvailable**

### 4.1345.1 Detailed Description

Definition at line 10425 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1346 X3D\_Transform Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **addChildren**
- struct **Multi\_Node** **removeChildren**
- struct **Multi\_Node** **\_\_sibAffectors**
- struct **SFVec3f** **center**
- struct **Multi\_Node** **children**
- struct **X3D\_Node** \* **metadata**
- struct **SFRotation** **rotation**
- struct **SFVec3f** **scale**
- struct **SFRotation** **scaleOrientation**
- struct **SFVec3f** **translation**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**
- int **\_\_do\_center**
- int **\_\_do\_trans**
- int **\_\_do\_rotation**
- int **\_\_do\_scaleO**
- int **\_\_do\_scale**
- int **\_\_do\_anything**
- struct **Multi\_Node** **\_sortedChildren**

### 4.1346.1 Detailed Description

Definition at line 10451 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1347 X3D\_TransformSensor Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFVec3f** **center**
- struct **SFVec3f** **size**
- int **enabled**
- int **isActive**
- struct **SFVec3f** **position\_changed**
- struct **SFRotation** **orientation\_changed**
- double **enterTime**
- double **exitTime**
- struct **X3D\_Node** \* **targetObject**
- struct **X3D\_Node** \* **metadata**
- int **\_\_hit**
- struct **SFVec3f** **\_\_t1**
- struct **SFRotation** **\_\_t2**
- int **\_\_oldEnabled**

### 4.1347.1 Detailed Description

Definition at line 10488 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1348 X3D\_TransmitterPdu Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**

- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- int **isActive**
- double **timestamp**
- struct **Uni\_String** \* **address**
- int **port**
- struct **Uni\_String** \* **multicastRelayHost**
- int **multicastRelayPort**
- struct **Uni\_String** \* **networkMode**
- int **isNetworkReader**
- int **isNetworkWriter**
- int **isStandAlone**
- double **readInterval**
- double **writeInterval**
- int **rtpHeaderExpected**
- int **isRtpHeaderHeard**
- int **\_registered**
- struct **X3D\_Node** \* **\_dsock**
- double **\_lasttime**
- int **\_pduchange\_networksensor**
- struct **X3D\_Node** \* **\_oldState**
- int **entityID**
- int **applicationID**
- int **siteID**
- struct **Multi\_String** **geoSystem**
- struct **SFVec3d** **geoCoords**
- struct **X3D\_Node** \* **\_\_geoSystem**
- int **radioID**
- int **whichGeometry**
- int **radioEntityTypeKind**
- int **radioEntityTypeDomain**
- int **radioEntityTypeCountry**
- int **radioEntityTypeCategory**
- int **radioEntityTypeNomenclature**
- int **radioEntityTypeNomenclatureVersion**
- struct **SFVec3f** **antennaLocation**
- int **antennaPatternLength**
- int **antennaPatternType**
- struct **SFVec3f** **relativeAntennaLocation**
- int **inputSource**
- int **transmitState**
- float **power**
- int **frequency**
- float **transmitFrequencyBandwidth**
- int **lengthOfModulationParameters**
- int **modulationTypeDetail**
- int **modulationTypeMajor**
- int **modulationTypeSpreadSpectrum**
- int **modulationTypeSystem**
- int **cryptoSystem**
- int **cryptoKeyID**
- int **\_pduchange\_transmitter**

### 4.1348.1 Detailed Description

Definition at line 10520 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1349 X3D\_TriangleFanSet Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **attrib**
- struct **X3D\_Node** \* **color**
- struct **X3D\_Node** \* **coord**
- struct **Multi\_Int32** **fanCount**
- struct **X3D\_Node** \* **fogCoord**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **normal**
- struct **X3D\_Node** \* **texCoord**
- int **ccw**
- int **colorPerVertex**
- int **normalPerVertex**
- int **solid**
- struct **Multi\_Int32** **\_coordIndex**

### 4.1349.1 Detailed Description

Definition at line 10589 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1350 X3D\_TriangleSet Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **attrib**
- struct **X3D\_Node** \* **color**
- struct **X3D\_Node** \* **coord**
- struct **X3D\_Node** \* **fogCoord**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **normal**
- struct **X3D\_Node** \* **texCoord**
- int **ccw**
- int **colorPerVertex**
- int **normalPerVertex**
- int **solid**
- struct **Multi\_Int32** **\_coordIndex**

### 4.1350.1 Detailed Description

Definition at line 10620 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1351 X3D\_TriangleSet2D Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]

- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Vec2f** **vertices**
- int **solid**
- struct **Multi\_Vec2f** **\_\_texCoords**
- void \* **\_\_wireindices**

#### 4.1351.1 Detailed Description

Definition at line 10650 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1352 X3D\_TriangleStripSet Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **attrib**
- struct **X3D\_Node** \* **color**
- struct **X3D\_Node** \* **coord**
- struct **X3D\_Node** \* **fogCoord**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **normal**
- struct **Multi\_Int32** **stripCount**
- struct **X3D\_Node** \* **texCoord**
- int **ccw**
- int **colorPerVertex**
- int **normalPerVertex**
- int **solid**
- struct **Multi\_Int32** **\_coordIndex**

### 4.1352.1 Detailed Description

Definition at line 10673 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1353 X3D\_TwoSidedMaterial Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- float **ambientIntensity**
- float **backAmbientIntensity**
- struct **SFColor** **backDiffuseColor**
- struct **SFColor** **backEmissiveColor**
- float **backShininess**
- struct **SFColor** **backSpecularColor**
- float **backTransparency**
- struct **SFColor** **diffuseColor**
- struct **SFColor** **emissiveColor**
- struct **X3D\_Node** \* **metadata**
- float **shininess**
- int **separateBackColor**
- struct **SFColor** **specularColor**
- float **transparency**
- struct **Multi\_Float** **\_verifiedFrontColor**
- struct **Multi\_Float** **\_verifiedBackColor**

### 4.1353.1 Detailed Description

Definition at line 10704 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h



## 4.1354 X3D\_UniversalJoint Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFVec3f** **anchorPoint**
- struct **SFVec3f** **axis1**
- struct **SFVec3f** **axis2**
- struct **X3D\_Node** \* **body1**
- struct **X3D\_Node** \* **body2**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_String** **forceOutput**
- float **stop1Bounce**
- float **stop1ErrorCorrection**
- float **stop2Bounce**
- float **stop2ErrorCorrection**
- struct **SFVec3f** **body1AnchorPoint**
- struct **SFVec3f** **body1Axis**
- struct **SFVec3f** **body2AnchorPoint**
- struct **SFVec3f** **body2Axis**
- void \* **\_joint**
- int **\_forceout**
- struct **SFVec3f** **\_\_old\_anchorPoint**
- struct **SFVec3f** **\_\_old\_axis1**
- struct **SFVec3f** **\_\_old\_axis2**
- struct **X3D\_Node** \* **\_\_old\_body1**
- struct **X3D\_Node** \* **\_\_old\_body2**

### 4.1354.1 Detailed Description

Definition at line 10738 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1355 X3D\_Viewpoint Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **\_layerId**
- int **\_donethispass**
- int **set\_bind**
- double **bindTime**
- int **isBound**
- struct **Uni\_String** \* **description**
- int **jump**
- float **fieldOfView**
- struct **X3D\_Node** \* **metadata**
- struct **SFRotation** **orientation**
- struct **SFVec3f** **position**
- struct **SFVec3f** **centerOfRotation**
- int **retainUserOffsets**
- struct **Uni\_String** \* **fovMode**
- float **aspectRatio**
- int **\_initializedOnce**
- struct **SFRotation** **\_orientation**
- struct **SFVec3f** **\_position**

### 4.1355.1 Detailed Description

Definition at line 10778 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1356 X3D\_ViewpointGroup Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFVec3f** **center**
- struct **Multi\_Node** **children**
- struct **Uni\_String** \* **description**
- int **displayed**
- struct **X3D\_Node** \* **metadata**
- int **retainUserOffsets**
- struct **SFVec3f** **size**
- struct **X3D\_Node** \* **\_\_proxNode**

### 4.1356.1 Detailed Description

Definition at line 10814 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1357 X3D\_Viewport Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**

- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Node** **addChildren**
- struct **Multi\_Node** **removeChildren**
- struct **Multi\_Node** **\_\_sibAffectors**
- struct **Multi\_Node** **children**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_Float** **clipBoundary**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**

#### 4.1357.1 Detailed Description

Definition at line 10840 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1358 X3D\_Virt Struct Reference

#### Data Fields

- void(\* **prep** )(void \*)
- void(\* **rend** )(void \*)
- void(\* **children** )(void \*)
- void(\* **fin** )(void \*)
- void(\* **rendray** )(void \*)
- void(\* **mkpolyrep** )(void \*)
- void(\* **proximity** )(void \*)
- void(\* **other** )(void \*)
- void(\* **collision** )(void \*)
- void(\* **compile** )(void \*, void \*, void \*, void \*, void \*, void \*)

#### 4.1358.1 Detailed Description

Definition at line 37 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1359 X3D\_VisibilitySensor Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFVec3f** **center**
- int **enabled**
- struct **SFVec3f** **size**
- double **enterTime**
- double **exitTime**
- int **isActive**
- struct **X3D\_Node** \* **metadata**
- int **\_\_visible**
- int **\_\_occludeCheckCount**
- struct **Multi\_Vec3f** **\_\_points**
- int **\_\_Samples**
- int **\_\_oldEnabled**

### 4.1359.1 Detailed Description

Definition at line 10866 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1360 X3D\_VolumeData Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]

- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFVec3f** **dimensions**
- struct **X3D\_Node** \* **metadata**
- struct **X3D\_Node** \* **voxels**
- struct **SFVec3f** **bboxCenter**
- struct **SFVec3f** **bboxSize**
- void \* **\_boxtris**
- struct **X3D\_Node** \* **renderStyle**

#### 4.1360.1 Detailed Description

Definition at line 10896 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

### 4.1361 X3D\_VolumeEmitter Struct Reference

#### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_Int32** **set\_coordIndex**
- int **set\_coordinate**
- struct **X3D\_Node** \* **coord**
- struct **SFVec3f** **direction**
- struct **X3D\_Node** \* **metadata**
- float **speed**
- float **variation**
- struct **Multi\_Int32** **coordIndex**
- int **internal**
- float **mass**
- float **surfaceArea**
- void \* **\_ifs**

### 4.1361.1 Detailed Description

Definition at line 10921 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1362 X3D\_VolumePickSensor Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- int **enabled**
- struct **X3D\_Node** \* **metadata**
- struct **Multi\_String** **objectType**
- struct **X3D\_Node** \* **pickingGeometry**
- struct **Multi\_Node** **pickTarget**
- int **isActive**
- struct **Multi\_Node** **pickedGeometry**
- struct **Uni\_String** \* **intersectionType**
- struct **Uni\_String** \* **sortOrder**
- struct **Uni\_String** \* **matchCriterion**
- int **\_\_oldEnabled**

### 4.1362.1 Detailed Description

Definition at line 10951 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1363 X3D\_WindPhysicsModel Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **SFVec3f** **direction**
- int **enabled**
- float **gustiness**
- struct **X3D\_Node** \* **metadata**
- float **speed**
- float **turbulence**
- float **\_frameSpeed**

### 4.1363.1 Detailed Description

Definition at line 10980 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1364 X3D\_WorldInfo Struct Reference

### Data Fields

- int **\_nodeType**
- int **\_renderFlags**
- int **\_hit**
- int **\_change**
- int **\_ichange**
- struct **Vector** \* **\_parentVector**
- double **\_dist**
- float **\_extent** [6]
- struct **X3D\_PolyRep** \* **\_intern**
- int **referenceCount**
- int **\_defaultContainer**
- void \* **\_gc**
- struct **X3D\_Node** \* **\_executionContext**
- struct **Multi\_String** **info**
- struct **Uni\_String** \* **title**
- struct **X3D\_Node** \* **metadata**



### 4.1364.1 Detailed Description

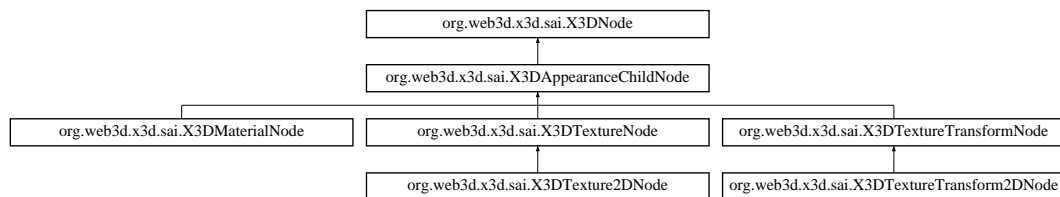
Definition at line 11005 of file Structs.h.

The documentation for this struct was generated from the following file:

- src/lib/vrml\_parser/Structs.h

## 4.1365 org.web3d.x3d.sai.X3DAppearanceChildNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DAppearanceChildNode:



### Additional Inherited Members

### 4.1365.1 Detailed Description

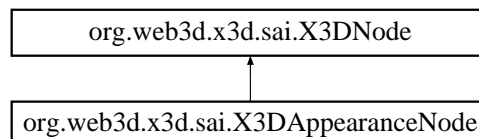
Definition at line 3 of file X3DAppearanceChildNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DAppearanceChildNode.java

## 4.1366 org.web3d.x3d.sai.X3DAppearanceNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DAppearanceNode:



### Additional Inherited Members

### 4.1366.1 Detailed Description

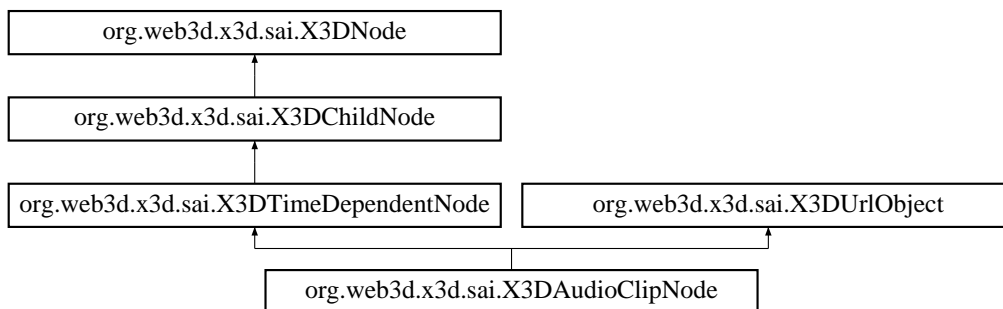
Definition at line 3 of file X3DAppearanceNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DAppearanceNode.java

## 4.1367 org.web3d.x3d.sai.X3DAudioClipNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DAudioClipNode:



### Public Member Functions

- String **getDescription** ()
- void **setDescription** ()
- float **getPitch** ()
- void **setPitch** (float pitch) throws `InvalidFieldValueException`
- double **getDuration** ()
- void **setDuration** (double time)

### 4.1367.1 Detailed Description

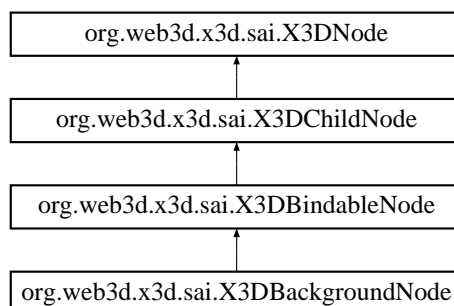
Definition at line 3 of file `X3DAudioClipNode.java`.

The documentation for this interface was generated from the following file:

- `src/java/org/web3d/x3d/sai/X3DAudioClipNode.java`

## 4.1368 org.web3d.x3d.sai.X3DBackgroundNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DBackgroundNode:



## Public Member Functions

- int **getNumSkyAngle** ()
- void **getSkyAngle** (float[] angles)
- void **setSkyAngle** (float[] angles)
- int **getNumGroundAngle** ()
- void **getGroundAngle** (float[] angle)
- void **setGroundAngle** (float[] angle)
- int **getNumSkyColor** ()
- void **getSkyColor** (float[] colors)
- void **setSkyColor** (float[] colors)
- int **getNumGroundColor** ()
- void **getGroundColor** (float[] color)
- void **setGroundColor** (float[] color)

### 4.1368.1 Detailed Description

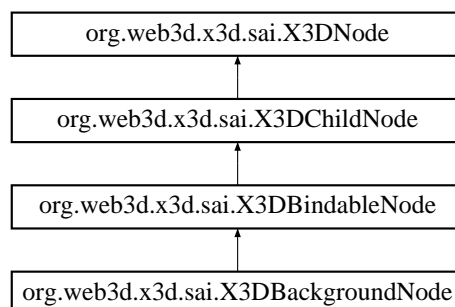
Definition at line 3 of file X3DBackgroundNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DBackgroundNode.java

## 4.1369 org.web3d.x3d.sai.X3DBindableNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DBindableNode:



## Public Member Functions

- void **setBind** (boolean enable)
- boolean **isBound** ()
- double **getBindTime** ()

### 4.1369.1 Detailed Description

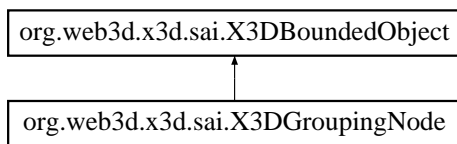
Definition at line 3 of file X3DBindableNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DBindableNode.java

## 4.1370 org.web3d.x3d.sai.X3DBoundedObject Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DBoundedObject:



### 4.1370.1 Detailed Description

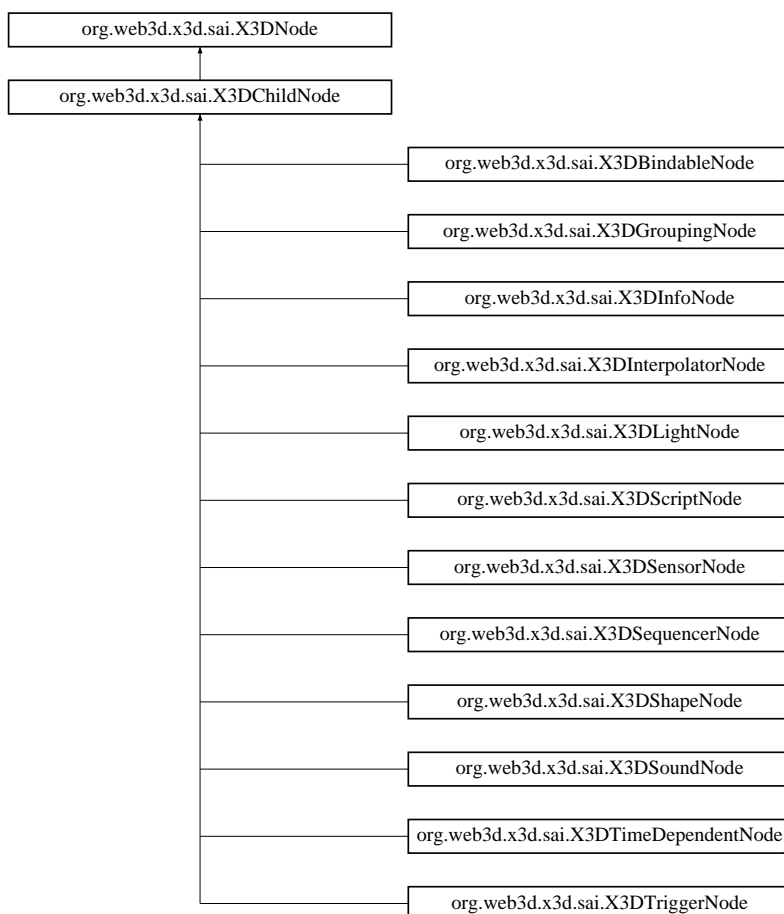
Definition at line 3 of file `X3DBoundedObject.java`.

The documentation for this interface was generated from the following file:

- `src/java/org/web3d/x3d/sai/X3DBoundedObject.java`

## 4.1371 org.web3d.x3d.sai.X3DChildNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DChildNode:



## Additional Inherited Members

### 4.1371.1 Detailed Description

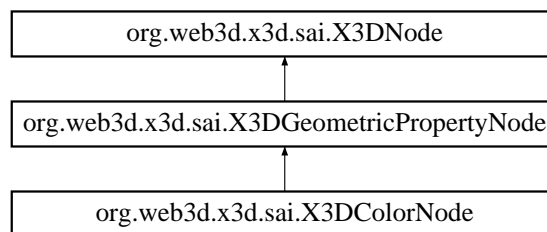
Definition at line 3 of file X3DChildNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DChildNode.java

## 4.1372 org.web3d.x3d.sai.X3DColorNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DColorNode:



## Public Member Functions

- int **getNumColors** ()
- int **getNumComponents** ()
- void **setColor** (float[] colors)
- void **getColor** (float[] color)

### 4.1372.1 Detailed Description

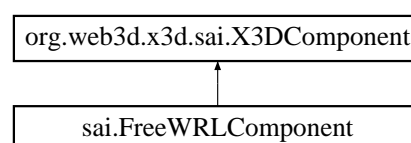
Definition at line 3 of file X3DColorNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DColorNode.java

## 4.1373 org.web3d.x3d.sai.X3DComponent Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DComponent:



## Public Member Functions

- **ExternalBrowser** `getBrowser ()`
- **Object** `getImplementation ()`
- **void** `shutdown ()`

### 4.1373.1 Detailed Description

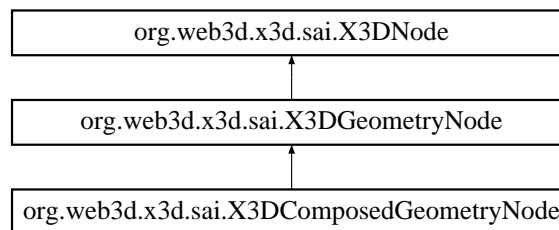
Definition at line 3 of file X3DComponent.java.

The documentation for this interface was generated from the following file:

- `src/java/org/web3d/x3d/sai/X3DComponent.java`

## 4.1374 **org.web3d.x3d.sai.X3DComposedGeometryNode** Interface Reference

Inheritance diagram for `org.web3d.x3d.sai.X3DComposedGeometryNode`:



## Public Member Functions

- **X3DNode** `getColor ()`
- **void** `setColor ( X3DColorNode node)`
- **void** `setColor ( X3DProtoInstance comp)`
- **X3DNode** `getCoord ()`
- **void** `setCoord ( X3DCoordinateNode node)`
- **void** `setCoord ( X3DProtoInstance node)`
- **X3DNode** `getTexCoord ()`
- **void** `setTexCoord ( X3DTextureCoordinateNode node)`
- **void** `setTexCoord ( X3DProtoInstance node)`
- **X3DNode** `getNormal ()`
- **void** `setNormal ( X3DNormalNode node)`
- **void** `setNormal ( X3DProtoInstance node)`
- **boolean** `getIsSolid ()`
- **void** `setIsSolid (boolean solid)`
- **boolean** `getIsCCW ()`
- **void** `setIsCCW (boolean ccw)`
- **boolean** `getColorPerVertex ()`
- **void** `setColorPerVertex (boolean perVertex)`
- **boolean** `getNormalPerVertex ()`
- **void** `setNormalPerVertex (boolean perVertex)`

### 4.1374.1 Detailed Description

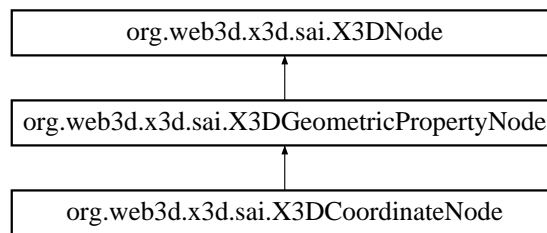
Definition at line 3 of file X3DComposedGeometryNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DComposedGeometryNode.java

## 4.1375 org.web3d.x3d.sai.X3DCoordinateNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DCoordinateNode:



### Public Member Functions

- int **getNumCoordinates** ()
- void **setPoint** (float[] points)
- void **getPoint** (float[] points)

### 4.1375.1 Detailed Description

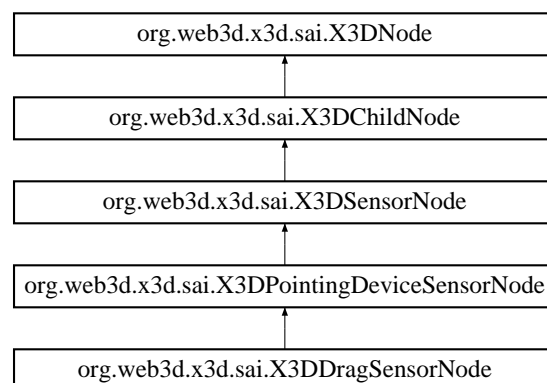
Definition at line 3 of file X3DCoordinateNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DCoordinateNode.java

## 4.1376 org.web3d.x3d.sai.X3DDragSensorNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DDragSensorNode:



## Public Member Functions

- void **setAutoOffset** (boolean newAutoOffset)
- boolean **getAutoOffset** ()
- void **getTrackPoint** (float[] points)

### 4.1376.1 Detailed Description

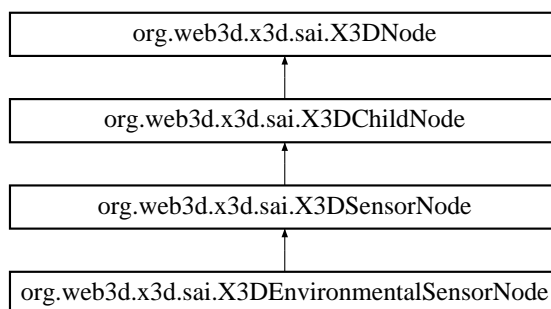
Definition at line 3 of file X3DDragSensorNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DDragSensorNode.java

## 4.1377 org.web3d.x3d.sai.X3DEnvironmentalSensorNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DEnvironmentalSensorNode:



## Public Member Functions

- double **getEnterTime** ()
- double **getExitTime** ()
- void **getCenter** (float[] pos)
- void **setCenter** (float[] pos)
- void **getSize** (float[] size)
- void **setSize** (float[] size)

### 4.1377.1 Detailed Description

Definition at line 3 of file X3DEnvironmentalSensorNode.java.

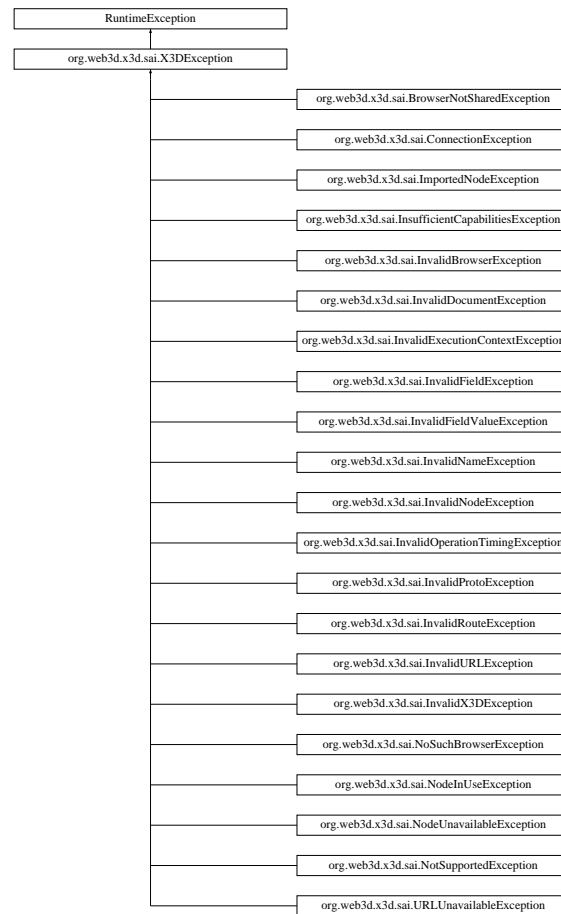
The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DEnvironmentalSensorNode.java



## 4.1378 org.web3d.x3d.sai.X3DException Class Reference

Inheritance diagram for org.web3d.x3d.sai.X3DException:



### Public Member Functions

- **X3DException** (String msg)

#### 4.1378.1 Detailed Description

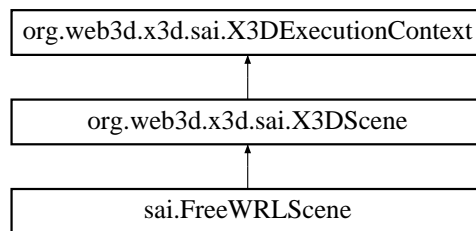
Definition at line 3 of file `X3DException.java`.

The documentation for this class was generated from the following file:

- `src/java/org/web3d/x3d/sai/X3DException.java`

## 4.1379 org.web3d.x3d.sai.X3DExecutionContext Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DExecutionContext:



### Public Member Functions

- String **getSpecificationVersion** () throws InvalidExecutionContextException
- int **getEncoding** () throws InvalidExecutionContextException
- **ProfileInfo** **getProfile** () throws InvalidExecutionContextException
- **ComponentInfo[]** **getComponents** () throws InvalidExecutionContextException
- String **getWorldURL** () throws InvalidExecutionContextException
- **X3DNode** **getNamedNode** (String nodeName) throws InvalidExecutionContextException, Node←UnavailableException, InvalidNameException
- **X3DNode** **getImportedNode** (String nodeName) throws InvalidExecutionContextException, Node←UnavailableException, InvalidNameException
- **X3DNode** **createNode** (String nodeName) throws InvalidExecutionContextException, InvalidName←Exception
- **X3DProtoInstance** **createProto** (String protoName) throws InvalidExecutionContextException, Invalid←NameException
- void **updateNamedNode** (String nodeName, **X3DNode** nodeRef) throws InvalidExecutionContextException, InvalidNameException, ImportedNodeException
- void **updateImportedNode** (String nodeName, String importedName, **X3DNode** nodeRef) throws Invalid←ExecutionContextException, InvalidNameException, ImportedNodeException
- void **removeNamedNode** (String nodeName) throws InvalidExecutionContextException, InvalidName←Exception
- void **removeImportedNode** (String nodeName) throws InvalidExecutionContextException, InvalidName←Exception
- **X3DProtoDeclaration** **getProtoDeclaration** (String protoName) throws InvalidExecutionContextException, InvalidNameException
- void **updateProtoDeclaration** (String protoName, **X3DProtoDeclaration** newDeclaration) throws Invalid←ExecutionContextException, InvalidNameException
- void **removeProtoDeclaration** (String protoName) throws InvalidExecutionContextException, Invalid←NameException
- **X3DExternProtoDeclaration** **getExternProtoDeclaration** (String protoName) throws InvalidExecution←ContextException, InvalidNameException, URLUnavailableException
- void **updateExternProtoDeclaration** (String protoName, **X3DExternProtoDeclaration** newDeclaration) throws InvalidExecutionContextException
- void **removeExternProtoDeclaration** (String protoName) throws InvalidExecutionContextException
- **X3DNode[]** **getRootNodes** () throws InvalidExecutionContextException
- **X3DRoute[]** **getRoutes** () throws InvalidExecutionContextException
- **X3DRoute** **addRoute** ( **X3DNode** startNode, String starttName, **X3DNode** endNode, String endEvent) throws InvalidExecutionContextException, InvalidNodeException, InvalidFieldException
- void **removeRoute** ( **X3DRoute** route) throws InvalidExecutionContextException

### 4.1379.1 Detailed Description

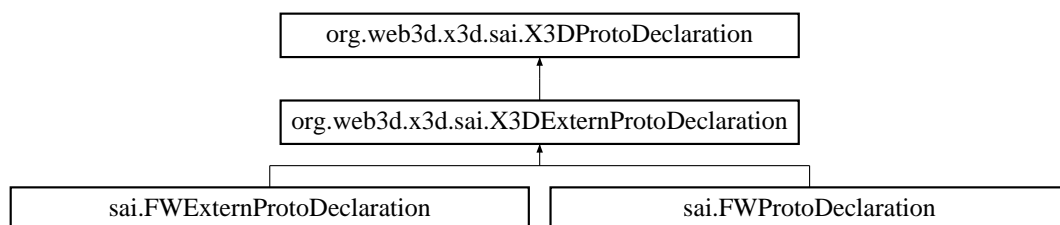
Definition at line 3 of file X3DExecutionContext.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DExecutionContext.java

## 4.1380 org.web3d.x3d.sai.X3DExternProtoDeclaration Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DExternProtoDeclaration:



### Public Member Functions

- `int getLoadState ()` throws `InvalidOperationTimingException`, `InvalidProtoException`
- `void loadNow ()` throws `InvalidOperationTimingException`, `InvalidProtoException`

### 4.1380.1 Detailed Description

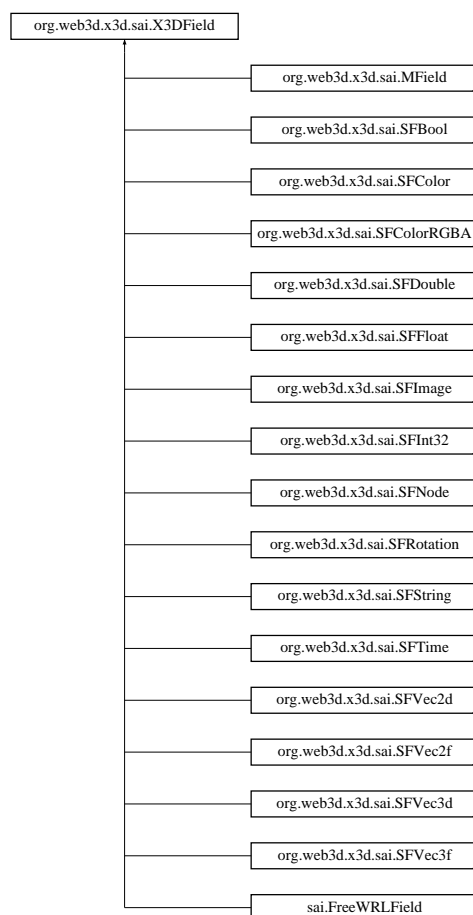
Definition at line 3 of file X3DExternProtoDeclaration.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DExternProtoDeclaration.java

## 4.1381 org.web3d.x3d.sai.X3DField Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DField:



## Public Member Functions

- **X3DFieldDefinition** **getDefinition** () throws InvalidFieldException, ConnectionException
- boolean **isReadable** () throws InvalidFieldException, ConnectionException
- boolean **isWritable** () throws InvalidFieldException, ConnectionException
- void **addX3DEventListener** ( **X3DFieldEventListener** l) throws InvalidFieldException, ConnectionException
- void **removeX3DEventListener** ( **X3DFieldEventListener** l) throws InvalidFieldException, ConnectionException
- void **setUserData** (Object data) throws InvalidFieldException, ConnectionException
- Object **getUserData** () throws InvalidFieldException, ConnectionException
- void **dispose** ()

### 4.1381.1 Detailed Description

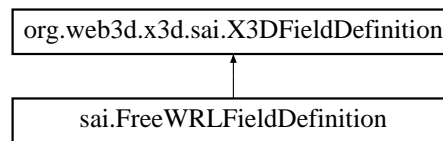
Definition at line 3 of file X3DField.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DField.java

## 4.1382 org.web3d.x3d.sai.X3DFieldDefinition Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DFieldDefinition:



### Public Member Functions

- String **getName** ()
- int **getAccessType** ()
- int **getFieldType** ()
- String **getFieldTypeString** ()

### 4.1382.1 Detailed Description

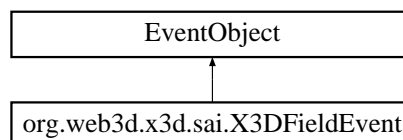
Definition at line 3 of file X3DFieldDefinition.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DFieldDefinition.java

## 4.1383 org.web3d.x3d.sai.X3DFieldEvent Class Reference

Inheritance diagram for org.web3d.x3d.sai.X3DFieldEvent:



### Public Member Functions

- **X3DFieldEvent** (Object src, double t, Object d)
- double **getTime** ()
- Object **getData** ()

### 4.1383.1 Detailed Description

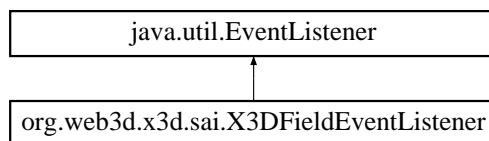
Definition at line 4 of file X3DFieldEvent.java.

The documentation for this class was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DFieldEvent.java

## 4.1384 org.web3d.x3d.sai.X3DFieldEventListener Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DFieldEventListener:



### Public Member Functions

- void **readableFieldChanged** ( X3DFieldEvent evt)

### 4.1384.1 Detailed Description

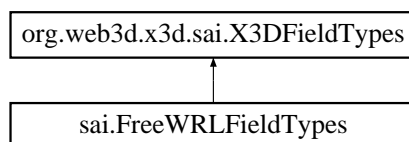
Definition at line 3 of file X3DFieldEventListener.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DFieldEventListener.java

## 4.1385 org.web3d.x3d.sai.X3DFieldTypes Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DFieldTypes:



### Data Fields

- int **INPUT\_ONLY** = 1
- int **INITIALIZE\_ONLY** = 2
- int **INPUT\_OUTPUT** = 3
- int **OUTPUT\_ONLY** = 4
- int **SFBOOL** = 1
- int **MFBOOL** = 2
- int **SFCOLOR** = 21
- int **MFCOLOR** = 22
- int **SFCOLORRGBA** = 23
- int **MFCOLORRGBA** = 24
- int **SFDOUBLE** = 7
- int **MFDOUBLE** = 8
- int **SFFLOAT** = 5

- int **MFFLOAT** = 6
- int **SFIMAGE** = 25
- int **MFIMAGE** = 26
- int **SFINT32** = 3
- int **MFINT32** = 4
- int **SFNODE** = 11
- int **MFNODE** = 12
- int **SFROTATION** = 19
- int **MFROTATION** = 20
- int **SFSTRING** = 27
- int **MFSTRING** = 28
- int **SFTIME** = 9
- int **MFTIME** = 10
- int **SFVEC2F** = 13
- int **MFVEC2F** = 14
- int **SFVEC3F** = 15
- int **MFVEC3F** = 16
- int **SFVEC3D** = 17
- int **MFVEC3D** = 18
- int **SFVEC2D** = 29
- int **MFVEC2D** = 30

#### 4.1385.1 Detailed Description

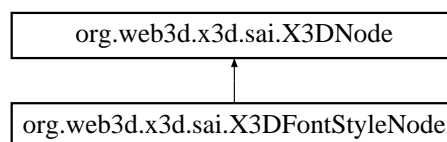
Definition at line 3 of file X3DFieldTypes.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DFieldTypes.java

### 4.1386 org.web3d.x3d.sai.X3DFontStyleNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DFontStyleNode:



#### Public Member Functions

- Font **getFont** ()
- int **getHorizontalJustification** ()
- int **getVerticalJustification** ()
- float **getSpacing** ()
- float **getSize** ()
- boolean **isTopToBottom** ()
- boolean **isLeftToRight** ()

## Data Fields

- int **PLAIN\_STYLE** = java.awt.Font.PLAIN
- int **ITALIC\_STYLE** = java.awt.Font.ITALIC
- int **BOLD\_STYLE** = java.awt.Font.BOLD
- int **BOLDITALIC\_STYLE** = java.awt.Font.BOLD + java.awt.Font.ITALIC
- int **BEGIN\_JUSTIFY** = 1
- int **END\_JUSTIFY** = 2
- int **MIDDLE\_JUSTIFY** = 3
- int **FIRST\_JUSTIFY** = 4

### 4.1386.1 Detailed Description

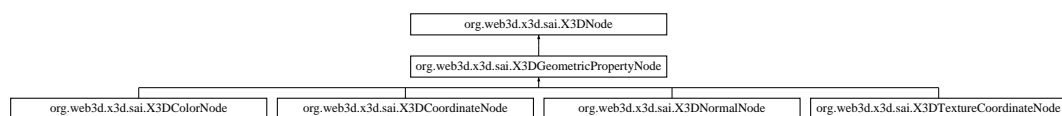
Definition at line 4 of file X3DFontStyleNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DFontStyleNode.java

## 4.1387 org.web3d.x3d.sai.X3DGeometricPropertyNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DGeometricPropertyNode:



## Additional Inherited Members

### 4.1387.1 Detailed Description

Definition at line 3 of file X3DGeometricPropertyNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DGeometricPropertyNode.java

## 4.1388 org.web3d.x3d.sai.X3DGeometryNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DGeometryNode:





## Additional Inherited Members

### 4.1388.1 Detailed Description

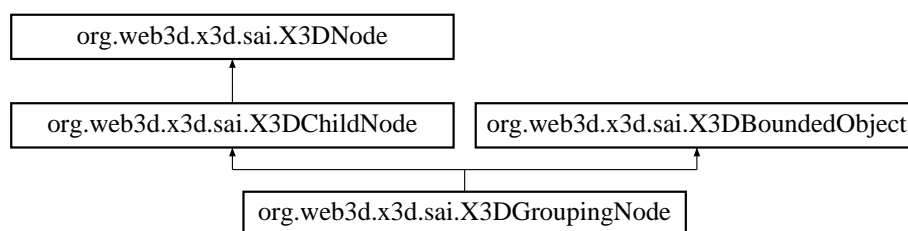
Definition at line 3 of file X3DGeometryNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DGeometryNode.java

## 4.1389 org.web3d.x3d.sai.X3DGroupingNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DGroupingNode:



## Public Member Functions

- void **getChildren** ( `X3DNode[]` nodes)
- void **setChildren** ( `X3DNode[]` kids) throws `InvalidNodeException`
- void **addChildren** ( `X3DNode[]` added) throws `InvalidNodeException`
- void **removeChildren** ( `X3DNode[]` removed) throws `InvalidNodeException`
- void **removeChild** ( `X3DNode` removed) throws `InvalidNodeException`
- int **getNumChildren** ()

### 4.1389.1 Detailed Description

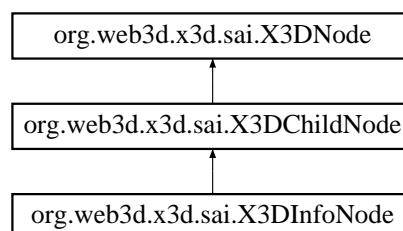
Definition at line 3 of file X3DGroupingNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DGroupingNode.java

## 4.1390 org.web3d.x3d.sai.X3DInfoNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DInfoNode:



## Additional Inherited Members

### 4.1390.1 Detailed Description

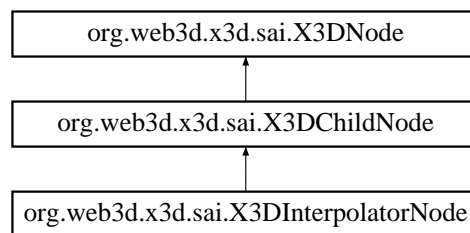
Definition at line 3 of file X3DInfoNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DInfoNode.java

## 4.1391 org.web3d.x3d.sai.X3DInterpolatorNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DInterpolatorNode:



## Public Member Functions

- void **setFraction** (float value)
- int **getNumKeys** ()
- void **setKey** (float[] keys)
- void **getKey** (float[] keys)

### 4.1391.1 Detailed Description

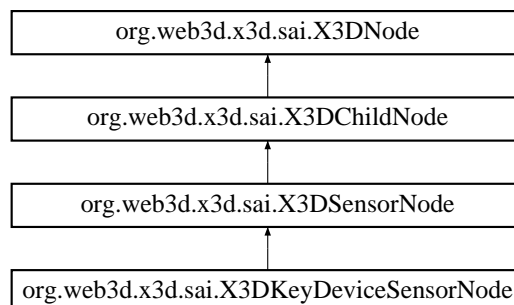
Definition at line 3 of file X3DInterpolatorNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DInterpolatorNode.java

## 4.1392 org.web3d.x3d.sai.X3DKeyDeviceSensorNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DKeyDeviceSensorNode:



## Additional Inherited Members

### 4.1392.1 Detailed Description

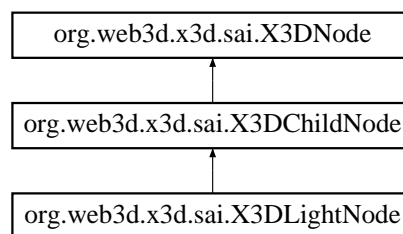
Definition at line 3 of file X3DKeyDeviceSensorNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DKeyDeviceSensorNode.java

## 4.1393 org.web3d.x3d.sai.X3DLightNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DLightNode:



## Public Member Functions

- boolean **getOn** ()
- void **setOn** (boolean state)
- float **getAmbientIntensity** ()
- void **setAmbientIntensity** (float intensity) throws InvalidFieldValueException
- void **getColor** (float[] color)
- void **setColor** (float[] color) throws InvalidFieldValueException
- void **getIntensity** ()
- void **setIntensity** (float newIntensity) throws InvalidFieldValueException

### 4.1393.1 Detailed Description

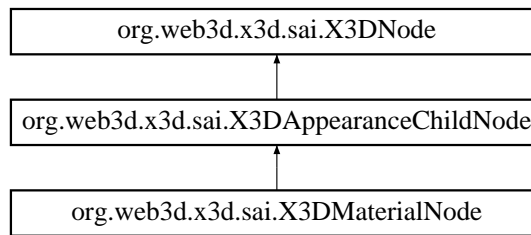
Definition at line 3 of file X3DLightNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DLightNode.java

## 4.1394 org.web3d.x3d.sai.X3DMaterialNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DMaterialNode:



### Additional Inherited Members

#### 4.1394.1 Detailed Description

Definition at line 3 of file X3DMaterialNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DMaterialNode.java

## 4.1395 org.web3d.x3d.sai.X3DMetadataObject Interface Reference

### Public Member Functions

- void **setStandard** (String std)
- String **getStandard** ()
- void **setName** (String name)
- String **getName** ()

#### 4.1395.1 Detailed Description

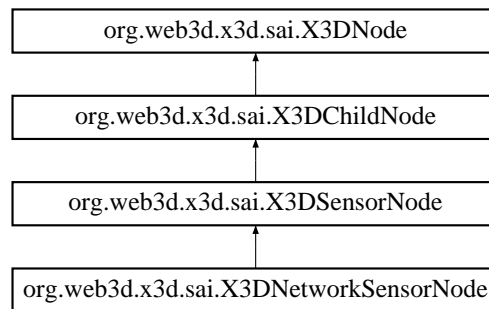
Definition at line 3 of file X3DMetadataObject.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DMetadataObject.java

## 4.1396 org.web3d.x3d.sai.X3DNetworkSensorNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DNetworkSensorNode:



### Additional Inherited Members

#### 4.1396.1 Detailed Description

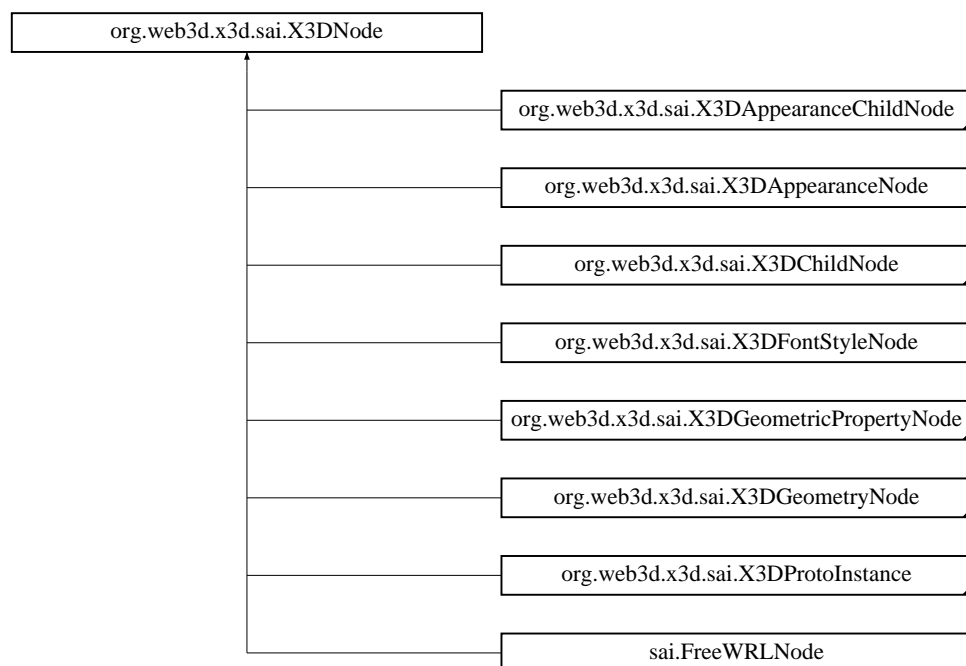
Definition at line 3 of file X3DNetworkSensorNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DNetworkSensorNode.java

## 4.1397 org.web3d.x3d.sai.X3DNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DNode:



## Public Member Functions

- void **setMetadata** ( **X3DMetadataObject** data) throws `InvalidNodeException`, `ConnectionException`
- **X3DMetadataObject** **getMetadata** () throws `InvalidNodeException`, `ConnectionException`
- String **getNodeName** () throws `InvalidNodeException`, `ConnectionException`
- **X3DFieldDefinition**[] **getFieldDefinitions** () throws `InvalidNodeException`, `ConnectionException`
- int[] **getNodeTypes** () throws `InvalidNodeException`, `ConnectionException`
- **X3DField** **getField** (String name) throws `InvalidNameException`, `InvalidNodeException`, `ConnectionException`
- void **dispose** ()

### 4.1397.1 Detailed Description

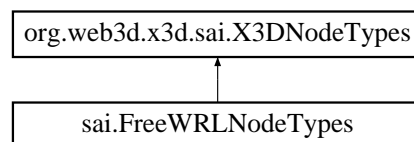
Definition at line 3 of file `X3DNode.java`.

The documentation for this interface was generated from the following file:

- `src/java/org/web3d/x3d/sai/X3DNode.java`

## 4.1398 org.web3d.x3d.sai.X3DNodeTypes Interface Reference

Inheritance diagram for `org.web3d.x3d.sai.X3DNodeTypes`:



## Data Fields

- int **X3DBoundedObject** = 1
- int **X3DBounded2DObject** = 2
- int **X3DURLObject** = 3
- int **X3DAppearanceNode** = 10
- int **X3DAppearanceChildNode** = 11
- int **X3DMaterialNode** = 12
- int **X3DTextureNode** = 13
- int **X3DTexture2DNode** = 14
- int **X3DTexture3DNode** = 15
- int **X3DTextureTransformNode** = 16
- int **X3DTextureTransform2DNode** = 17
- int **X3DGeometryNode** = 18
- int **X3DTextNode** = 19
- int **X3DParametricGeometryNode** = 20
- int **X3DGeometricPropertyNode** = 21
- int **X3DColorNode** = 22
- int **X3DCoordinateNode** = 23
- int **X3DNormalNode** = 24

- int **X3DTextureCoordinateNode** = 25
- int **X3DFontStyleNode** = 26
- int **X3DProtoInstance** = 27
- int **X3DChildNode** = 28
- int **X3DBindableNode** = 29
- int **X3DBackgroundNode** = 30
- int **X3DGroupingNode** = 31
- int **X3DShapeNode** = 32
- int **X3DInterpolatorNode** = 33
- int **X3DLightNode** = 34
- int **X3DScriptNode** = 35
- int **X3DSensorNode** = 36
- int **X3DEnvironmentalSensorNode** = 37
- int **X3DKeyDeviceSensorNode** = 38
- int **X3DNetworkSensorNode** = 39
- int **X3DPointingDeviceSensorNode** = 40
- int **X3DDragSensorNode** = 41
- int **X3DTouchSensorNode** = 42
- int **X3DSequencerNode** = 43
- int **X3DTimeDependentNode** = 44
- int **X3DSoundSourceNode** = 45
- int **X3DTriggerNode** = 46
- int **X3DInfoNode** = 47

#### 4.1398.1 Detailed Description

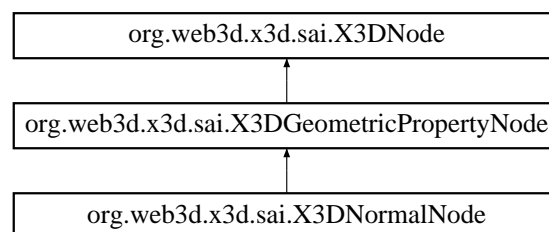
Definition at line 3 of file X3DNodeTypes.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DNodeTypes.java

## 4.1399 org.web3d.x3d.sai.X3DNormalNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DNormalNode:



### Public Member Functions

- int **getNumNormals** ()
- void **setVector** (float[] value)
- void **getVector** (float[] value)

### 4.1399.1 Detailed Description

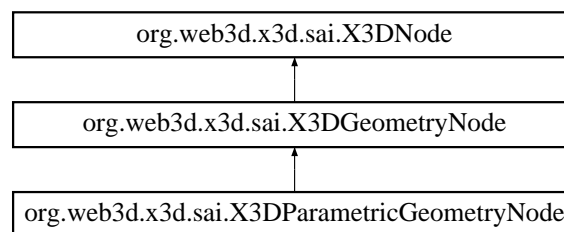
Definition at line 3 of file X3DNormalNode.java.

The documentation for this interface was generated from the following file:

- `src/java/org/web3d/x3d/sai/X3DNormalNode.java`

## 4.1400 `org.web3d.x3d.sai.X3DParametricGeometryNode` Interface Reference

Inheritance diagram for `org.web3d.x3d.sai.X3DParametricGeometryNode`:



### Additional Inherited Members

#### 4.1400.1 Detailed Description

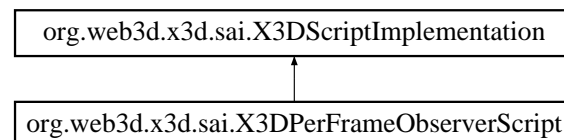
Definition at line 3 of file X3DParametricGeometryNode.java.

The documentation for this interface was generated from the following file:

- `src/java/org/web3d/x3d/sai/X3DParametricGeometryNode.java`

## 4.1401 `org.web3d.x3d.sai.X3DPerFrameObserverScript` Interface Reference

Inheritance diagram for `org.web3d.x3d.sai.X3DPerFrameObserverScript`:



### Public Member Functions

- `void prepareEvents ()`



### 4.1401.1 Detailed Description

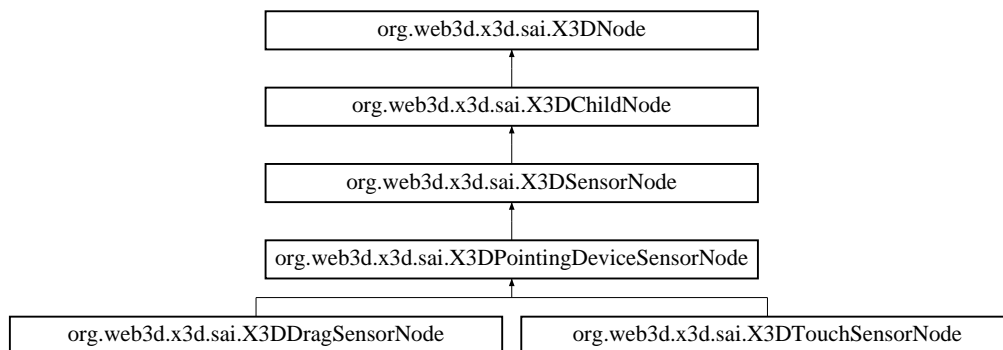
Definition at line 3 of file X3DPerFrameObserverScript.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DPerFrameObserverScript.java

## 4.1402 org.web3d.x3d.sai.X3DPointingDeviceSensorNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DPointingDeviceSensorNode:



### Additional Inherited Members

### 4.1402.1 Detailed Description

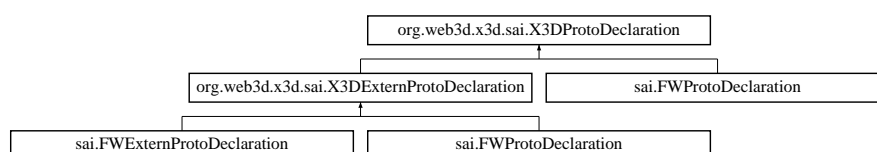
Definition at line 3 of file X3DPointingDeviceSensorNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DPointingDeviceSensorNode.java

## 4.1403 org.web3d.x3d.sai.X3DProtoDeclaration Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DProtoDeclaration:



## Public Member Functions

- **X3DProtoInstance** **createInstance** () throws `InvalidOperationTimingException`, `InvalidProtoException`
- **X3DFieldDefinition[]** **getFieldDefinitions** () throws `InvalidOperationTimingException`, `InvalidProtoException`
- void **dispose** ()

### 4.1403.1 Detailed Description

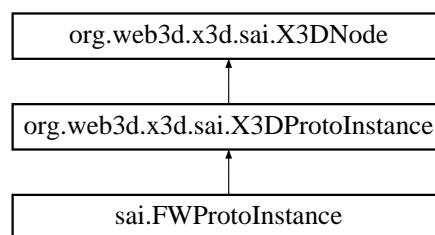
Definition at line 3 of file `X3DProtoDeclaration.java`.

The documentation for this interface was generated from the following file:

- `src/java/org/web3d/x3d/sai/X3DProtoDeclaration.java`

## 4.1404 org.web3d.x3d.sai.X3DProtoInstance Interface Reference

Inheritance diagram for `org.web3d.x3d.sai.X3DProtoInstance`:



## Public Member Functions

- `int[]` **getImplementationTypes** ()

### 4.1404.1 Detailed Description

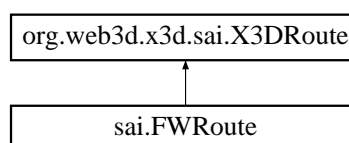
Definition at line 3 of file `X3DProtoInstance.java`.

The documentation for this interface was generated from the following file:

- `src/java/org/web3d/x3d/sai/X3DProtoInstance.java`

## 4.1405 org.web3d.x3d.sai.X3DRoute Interface Reference

Inheritance diagram for `org.web3d.x3d.sai.X3DRoute`:



## Public Member Functions

- **X3DNode getSourceNode** () throws InvalidOperationTimingException, InvalidRouteException
- String **getSourceField** () throws InvalidOperationTimingException, InvalidRouteException
- **X3DNode getDestinationNode** () throws InvalidOperationTimingException, InvalidRouteException
- String **getDestinationField** () throws InvalidOperationTimingException, InvalidRouteException
- void **dispose** () throws InvalidOperationTimingException

### 4.1405.1 Detailed Description

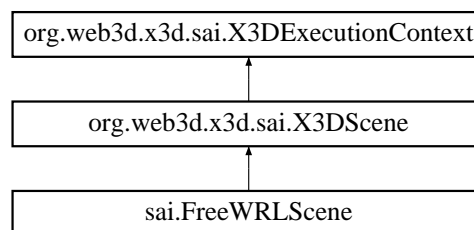
Definition at line 3 of file X3DRoute.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DRoute.java

## 4.1406 org.web3d.x3d.sai.X3DScene Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DScene:



## Public Member Functions

- String **getMetaData** (String **key**) throws InvalidExecutionContextException
- void **setMetaData** (String **key**, String value) throws InvalidExecutionContextException
- **X3DNode getExportedNode** (String nodeName) throws InvalidExecutionContextException, Node↔UnavailableException, InvalidNameException
- void **updateExportedNode** (String nodeName, String newName) throws InvalidExecutionContextException, InvalidNameException
- void **removeExportedNode** (String nodeName) throws InvalidExecutionContextException, InvalidName↔Exception
- void **addRootNode** ( **X3DNode** rootNode) throws InvalidExecutionContextException, NodeInUseException, InsufficientCapabilitiesException
- void **removeRootNode** ( **X3DNode** rootNode) throws InvalidExecutionContextException
- void **dispose** ()

### 4.1406.1 Detailed Description

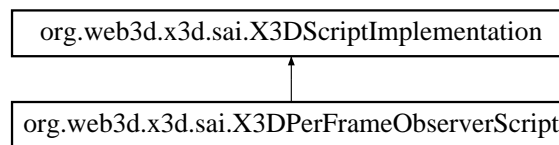
Definition at line 3 of file X3DScene.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DScene.java

## 4.1407 org.web3d.x3d.sai.X3DScriptImplementation Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DScriptImplementation:



### Public Member Functions

- void **setBrowser** ( **Browser** browser)
- void **setFields** ( **X3DScriptNode** externalView, java.util.Map fields)
- void **initialize** ()
- void **eventsProcessed** ()
- void **shutdown** ()

### 4.1407.1 Detailed Description

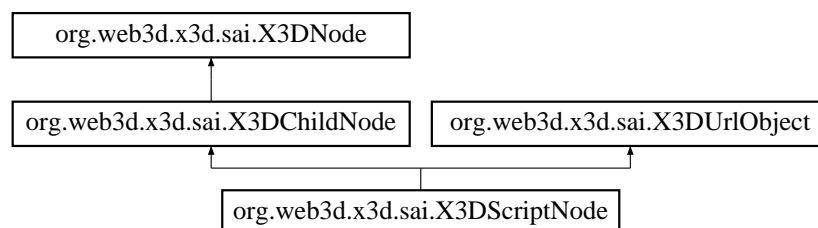
Definition at line 3 of file `X3DScriptImplementation.java`.

The documentation for this interface was generated from the following file:

- `src/java/org/web3d/x3d/sai/X3DScriptImplementation.java`

## 4.1408 org.web3d.x3d.sai.X3DScriptNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DScriptNode:



### Additional Inherited Members

### 4.1408.1 Detailed Description

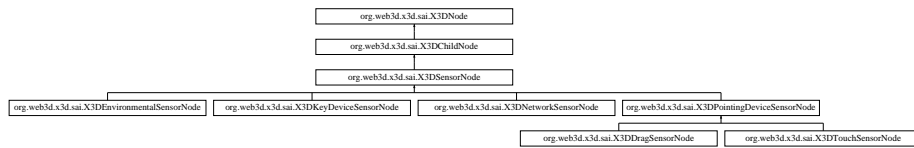
Definition at line 3 of file `X3DScriptNode.java`.

The documentation for this interface was generated from the following file:

- `src/java/org/web3d/x3d/sai/X3DScriptNode.java`

## 4.1409 org.web3d.x3d.sai.X3DSensorNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DSensorNode:



### Public Member Functions

- void **setEnabled** (boolean state)
- boolean **getEnabled** ()
- boolean **getIsActive** ()

### 4.1409.1 Detailed Description

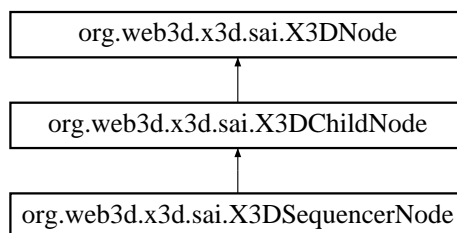
Definition at line 3 of file X3DSensorNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DSensorNode.java

## 4.1410 org.web3d.x3d.sai.X3DSequencerNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DSequencerNode:



### Public Member Functions

- void **setFraction** (float fraction)
- int **getNumKey** ()
- void **getKey** (float[] keys)
- void **setKey** (float[] keys)
- int **getNumKeyValue** ()

#### 4.1410.1 Detailed Description

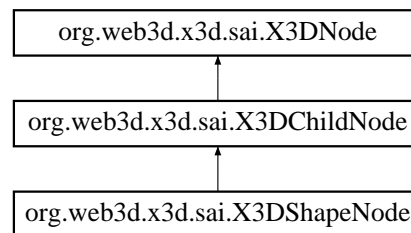
Definition at line 3 of file X3DSequencerNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DSequencerNode.java

### 4.1411 org.web3d.x3d.sai.X3DShapeNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DShapeNode:



#### Public Member Functions

- **X3DNode** **getAppearance** ()
- void **setAppearance** ( **X3DAppearanceNode** app)
- void **setAppearance** ( **X3DProtolInstance** app)
- **X3DNode** **getGeometry** ()
- void **setGeometry** ( **X3DGeometryNode** geom)
- void **setGeometry** ( **X3DProtolInstance** geom)

#### 4.1411.1 Detailed Description

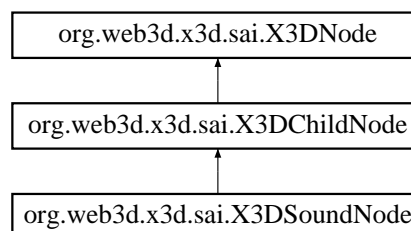
Definition at line 3 of file X3DShapeNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DShapeNode.java

### 4.1412 org.web3d.x3d.sai.X3DSoundNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DSoundNode:



## Additional Inherited Members

### 4.1412.1 Detailed Description

Definition at line 3 of file X3DSoundNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DSoundNode.java

## 4.1413 org.web3d.x3d.sai.X3DSoundSourceNode Interface Reference

### Public Member Functions

- float **getPitch** ()
- void **setPitch** (float pitch) throws InvalidFieldValueException
- void **setDescription** (String text)
- String **getDescription** (String text)

### 4.1413.1 Detailed Description

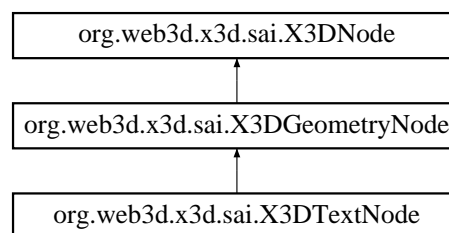
Definition at line 3 of file X3DSoundSourceNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DSoundSourceNode.java

## 4.1414 org.web3d.x3d.sai.X3DTextNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DTextNode:



### Public Member Functions

- void **setFontStyle** ( X3DFontStyleNode fs)
- void **setFontStyle** ( X3DProtoInstance fs)
- X3DNode **getFontStyle** ()
- int **getNumText** ()
- void **setText** (String[] text)
- void **getText** (String[] text)

#### 4.1414.1 Detailed Description

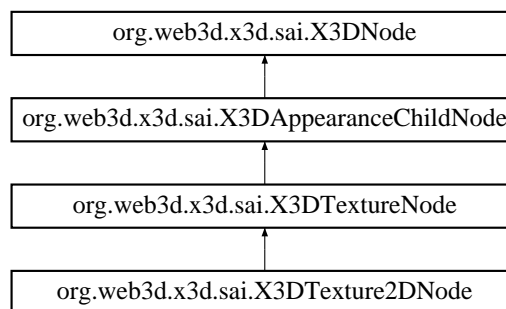
Definition at line 3 of file X3DTextNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DTextNode.java

### 4.1415 org.web3d.x3d.sai.X3DTexture2DNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DTexture2DNode:



#### Public Member Functions

- void **setRepeatS** (boolean state)
- boolean **getRepeatS** ()
- void **setRepeatT** (boolean state)
- boolean **getRepeatT** ()

#### 4.1415.1 Detailed Description

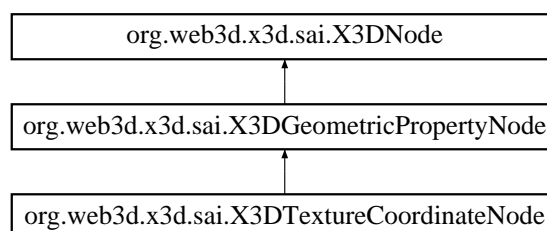
Definition at line 3 of file X3DTexture2DNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DTexture2DNode.java

### 4.1416 org.web3d.x3d.sai.X3DTextureCoordinateNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DTextureCoordinateNode:





## Public Member Functions

- int **getNumCoordinates** ()
- int **getNumComponents** ()
- void **setPoint** (float[] points)
- void **getPoint** (float[] points)

### 4.1416.1 Detailed Description

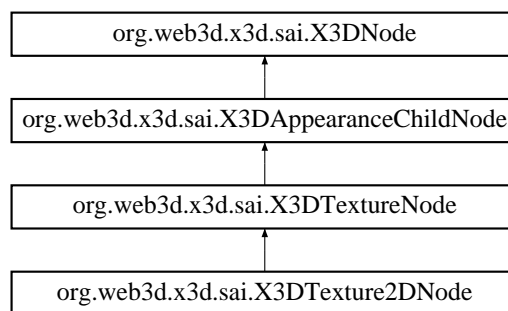
Definition at line 3 of file X3DTextureCoordinateNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DTextureCoordinateNode.java

## 4.1417 org.web3d.x3d.sai.X3DTextureNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DTextureNode:



## Additional Inherited Members

### 4.1417.1 Detailed Description

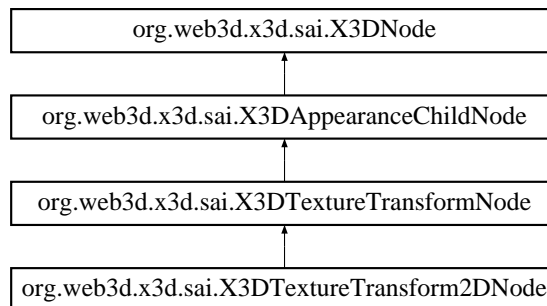
Definition at line 3 of file X3DTextureNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DTextureNode.java

## 4.1418 org.web3d.x3d.sai.X3DTextureTransform2DNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DTextureTransform2DNode:



### Public Member Functions

- void **getCenter** (float[] position)
- void **setCenter** (float[] position)
- float **getRotation** ()
- void **setRotation** (float angle)
- void **getScale** (float[] scale)
- void **setScale** (float[] scale)
- void **getTranslation** (float[] trans)
- void **setTranslation** (float[] trans)

### 4.1418.1 Detailed Description

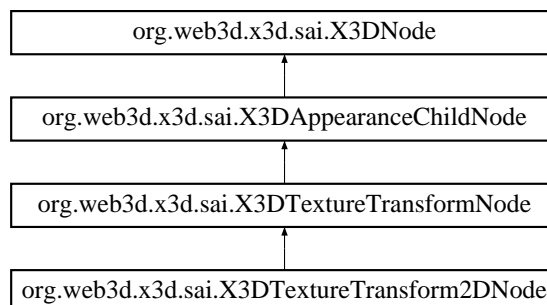
Definition at line 3 of file X3DTextureTransform2DNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DTextureTransform2DNode.java

## 4.1419 org.web3d.x3d.sai.X3DTextureTransformNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DTextureTransformNode:



## Additional Inherited Members

### 4.1419.1 Detailed Description

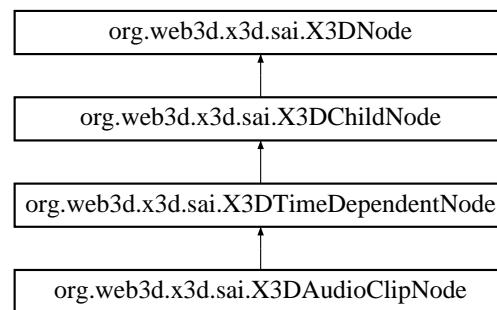
Definition at line 3 of file X3DTextureTransformNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DTextureTransformNode.java

## 4.1420 org.web3d.x3d.sai.X3DTimeDependentNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DTimeDependentNode:



## Public Member Functions

- boolean **getIsActive** ()
- boolean **getIsPaused** ()
- double **getElapsedTime** ()
- void **setNumLoops** (float count)
- float **getNumLoops** ()
- void **setLoop** (boolean loop)
- boolean **getLoop** ()
- void **setStartTime** (double time)
- double **getStartTime** ()
- void **setStopTime** (double time)
- double **getStopTime** ()
- void **setPauseTime** (double time)
- double **getPauseTime** ()
- void **setUnPauseTime** (double time)
- double **getUnPauseTime** ()

### 4.1420.1 Detailed Description

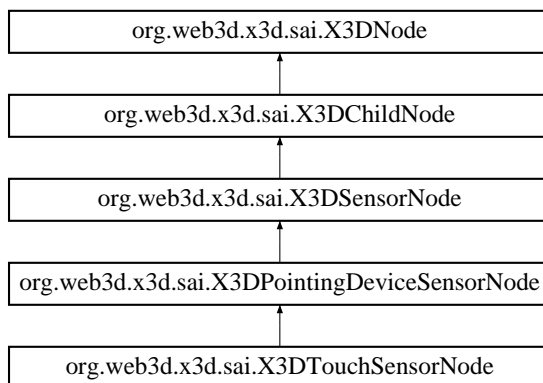
Definition at line 3 of file X3DTimeDependentNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DTimeDependentNode.java

## 4.1421 org.web3d.x3d.sai.X3DTouchSensorNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DTouchSensorNode:



### Public Member Functions

- boolean **getIsOver** ()
- double **getEnterTime** ()
- double **getTouchTime** ()

### 4.1421.1 Detailed Description

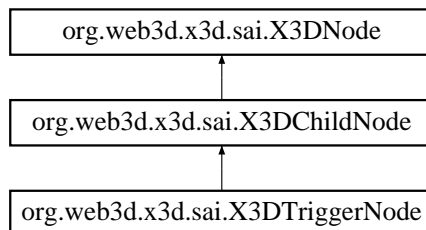
Definition at line 3 of file X3DTouchSensorNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DTouchSensorNode.java

## 4.1422 org.web3d.x3d.sai.X3DTriggerNode Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DTriggerNode:



## Additional Inherited Members

### 4.1422.1 Detailed Description

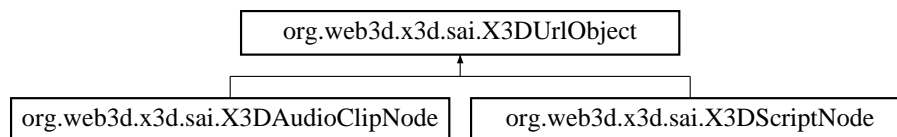
Definition at line 3 of file X3DTriggerNode.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DTriggerNode.java

## 4.1423 org.web3d.x3d.sai.X3DUrlObject Interface Reference

Inheritance diagram for org.web3d.x3d.sai.X3DUrlObject:



## Public Member Functions

- int **getNumUrls** ()
- void **geturl** (String[] urls)
- void **setUrl** (String[] urls)

### 4.1423.1 Detailed Description

Definition at line 3 of file X3DUrlObject.java.

The documentation for this interface was generated from the following file:

- src/java/org/web3d/x3d/sai/X3DUrlObject.java

## 4.1424 xml\_user\_data Struct Reference

## Data Fields

- Stack \* **context**
- Stack \* **nodes**
- Stack \* **atts**
- Stack \* **modes**
- Stack \* **fields**

#### 4.1424.1 Detailed Description

Definition at line 89 of file X3DParser.c.

The documentation for this struct was generated from the following file:

- `src/lib/x3d_parser/X3DParser.c`

### 4.1425 XY Struct Reference

#### Data Fields

- `int x`
- `int y`

#### 4.1425.1 Detailed Description

Definition at line 212 of file CursorDraw.c.

The documentation for this struct was generated from the following file:

- `src/lib/ui/CursorDraw.c`

### 4.1426 zip64\_internal Struct Reference

#### Data Fields

- `zlib_filefunc64_32_def z_filefunc`
- `voidpf filestream`
- `linkedlist_data central_dir`
- `int in_opened_file_inzip`
- `curfile64_info ci`
- `ZPOS64_T begin_pos`
- `ZPOS64_T add_position_when_writing_offset`
- `ZPOS64_T number_entry`
- `char * globalcomment`

#### 4.1426.1 Detailed Description

Definition at line 165 of file zip.c.

The documentation for this struct was generated from the following file:

- `src/libminizip/zip.c`

## 4.1427 zip\_fileinfo Struct Reference

### Data Fields

- **tm\_zip** **tmz\_date**
- uLong **dosDate**
- uLong **internal\_fa**
- uLong **external\_fa**

### 4.1427.1 Detailed Description

Definition at line 99 of file zip.h.

The documentation for this struct was generated from the following file:

- src/libminizip/zip.h

## 4.1428 zlib\_filefunc64\_32\_def\_s Struct Reference

### Data Fields

- **zlib\_filefunc64\_def** **zfile\_func64**
- open\_file\_func **zopen32\_file**
- tell\_file\_func **ztell32\_file**
- seek\_file\_func **zseek32\_file**

### 4.1428.1 Detailed Description

Definition at line 170 of file ioapi.h.

The documentation for this struct was generated from the following file:

- src/libminizip/ioapi.h

## 4.1429 zlib\_filefunc64\_def\_s Struct Reference

### Data Fields

- open64\_file\_func **zopen64\_file**
- read\_file\_func **zread\_file**
- write\_file\_func **zwrite\_file**
- tell64\_file\_func **ztell64\_file**
- seek64\_file\_func **zseek64\_file**
- close\_file\_func **zclose\_file**
- testerror\_file\_func **zerror\_file**
- voidpf **opaque**

### 4.1429.1 Detailed Description

Definition at line 154 of file ioapi.h.

The documentation for this struct was generated from the following file:

- src/libminizip/ioapi.h

## 4.1430 zlib\_filefunc\_def\_s Struct Reference

### Data Fields

- open\_file\_func **zopen\_file**
- read\_file\_func **zread\_file**
- write\_file\_func **zwrite\_file**
- tell\_file\_func **ztell\_file**
- seek\_file\_func **zseek\_file**
- close\_file\_func **zclose\_file**
- testerror\_file\_func **zerror\_file**
- voidpf **opaque**

### 4.1430.1 Detailed Description

Definition at line 138 of file ioapi.h.

The documentation for this struct was generated from the following file:

- src/libminizip/ioapi.h

## 4.1431 zone Struct Reference

### Data Fields

- char \* **name**
- **Point** center
- **Point** \* **poly**
- int **n**
- char \* **ssrname**
- void \* **ssr**
- void \* **next**

### 4.1431.1 Detailed Description

Definition at line 543 of file SSRServer.c.

The documentation for this struct was generated from the following file:

- src/SSR/SSRServer.c



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