



OpenSceneGraph Version 2.9.6

osgWidget::

Reference Manual

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Main Page

The OpenSceneGraph exists as a number of modules, each sitting in its own library, enclosed within its own namespace. At the very core lies the osg library. This contains the OpenSceneGraph's central classes and, at the bare minimum, it is all users need to write an OpenSceneGraph program in C++.

Around and alongside this sit other supporting libraries, such as osgUtil (containing visitors for app traversals, cull traversals, scene graph optimizers and so on), osgDB (for handling plug-ins, shared library loading, database reading and writing and the like), osgText, osgParticle, etc.

Extensive online documentation is available from the OSG Support section to help in using Open Scene Graph.

The project's original reference guides generated by Doxygen from the source code may be downloaded as a single file from the OSG Reference Guides section.

To download source code, binaries, dependencies and sample datasets visit the OSG Download page.

For more about dependencies see the OSG Dependencies page.

The documentation you are looking at can be downloaded from www.3draum.ch.

Enjoy!

Directory Documentation

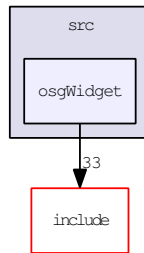
2.1 include/ Directory Reference



Directories

- directory **osgWidget**

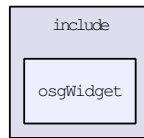
2.2 src/osgWidget/ Directory Reference



Files

- file **Box.cpp**
- file **Browser.cpp**
- file **Canvas.cpp**
- file **Frame.cpp**
- file **Input.cpp**
- file **Label.cpp**
- file **Lua.cpp**
- file **PdfReader.cpp**
- file **Python.cpp**
- file **StyleManager.cpp**
- file **Table.cpp**
- file **Util.cpp**
- file **Version.cpp**
- file **ViewerEventHandlers.cpp**
- file **VncClient.cpp**
- file **Widget.cpp**
- file **Window.cpp**
- file **WindowManager.cpp**

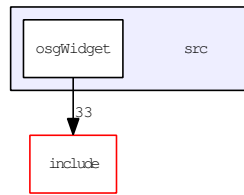
2.3 include/osgWidget/ Directory Reference



Files

- file **Box**
- file **Browser**
- file **Canvas**
- file **EventInterface**
- file **Export**
- file **Frame**
- file **Input**
- file **Label**
- file **Lua**
- file **mainpage.h**
- file **PdfReader**
- file **Python**
- file **ScriptEngine**
- file **StyleInterface**
- file **StyleManager**
- file **Table**
- file **Types**
- file **UIObjectParent**
- file **Util**
- file **Version**
- file **ViewerEventHandlers**
- file **VncClient**
- file **Widget**
- file **Window**
- file **WindowManager**

2.4 src/ Directory Reference



Directories

- directory **osgWidget**

Namespace Documentation

3.1 osgWidget Namespace Reference

The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.

Namespaces

- namespace **lua**
- namespace **py**

Classes

- class **Box**
*The **Box** (p. 17) object is a **Window** (p. 92) subclass that can be configured to uniformly (or non-uniformly) position it's children either vertically or horizontally.*
- class **Browser**
Convenience class that provides a interactive quad that can be placed directly in the scene.
- class **BrowserImage**
Pure virtual base class for that provides the browser inteface for integration with 3rd party implementations.
- class **BrowserManager**
- class **Callback**
- struct **CallbackInterface**
- class **CameraSwitchHandler**
- class **Canvas**
- class **Event**
- class **EventInterface**
- class **Frame**
- class **FunctionCallback**
- struct **GeometryHints**
*Hints structure that can be passed to **PdfReader** (p. 62) and **VncClient** (p. 81) classes to help guide them on what geometry to build.*
- class **Input**
- class **KeyboardHandler**
- class **Label**
- class **LuaEngine**
- struct **LuaEngineData**
- class **MouseHandler**
- struct **NotifyWidget**
- struct **NullWidget**
- class **ObjectCallback**

- class **PdfImage**
Pure virtual base class for interfacing with implementation of PDF reader.
- class **PdfReader**
Convenience class that provides a interactive quad that can be placed directly in the scene.
- class **PythonEngine**
- struct **PythonEngineData**
- class **ResizeHandler**
- class **ScriptEngine**
- class **Style**
- class **StyleInterface**
- class **StyleManager**
- class **Table**
- class **UIObjectParent**
- class **VncClient**
Convenience Vnc Client class that provides a interactive quad that can be placed directly in the scene.
- class **Vnclmage**
*Pure virtual base class for **Vnclmage** (p. 82) that is subclassed by vnc plugin to provide the actual implementation.*
- class **Widget**
- class **Window**
- class **WindowManager**

Typedefs

- typedef ColorArray::value_type **Color**
- typedef Color::value_type **color_type**
- typedef osg::Vec4Array **ColorArray**
- typedef osgUtil::LineSegmentIntersector::Intersections **Intersections**
- typedef osg::Matrix::value_type **matrix_type**
- typedef PointArray::value_type **Point**
- typedef Point::value_type **point_type**
- typedef osg::Vec3Array **PointArray**
- typedef osg::Vec4 **Quad**
- typedef osgDB::FieldReaderIterator & **Reader**
- typedef TexCoordArray::value_type **TexCoord**
- typedef TexCoord::value_type **texcoord_type**
- typedef osg::Vec2Array **TexCoordArray**
- typedef std::list< osg::observer_ptr< **Widget** > > **WidgetList**
- typedef **Window::WindowList** **WindowList**
- typedef osg::Vec2 **XYCoord**

Enumerations

- enum **EventMask** {
EVENT_MASK_FOCUS = EVENT_FOCUS | EVENT_UNFOCUS, **EVENT_MASK_MOUSE_MOVE**
= EVENT_MOUSE_ENTER | EVENT_MOUSE_OVER | EVENT_MOUSE_LEAVE, **EVENT_MASK_MOUSE_CLICK** = EVENT_MOUSE_PUSH | EVENT_MOUSE_RELEASE, **EVENT_MASK_MOUSE_DRAG** = EVENT_MASK_MOUSE_MOVE | EVENT_MASK_MOUSE_CLICK | EVENT_MOUSE_DRAG,
EVENT_MASK_KEY = EVENT_KEY_UP | EVENT_KEY_DOWN }

- enum **EventType** {
EVENT_NONE = 0x0000, **EVENT_FOCUS** = 0x0001, **EVENT_UNFOCUS** = 0x0002, **EVENT_MOUSE_ENTER** = 0x0004,
EVENT_MOUSE_OVER = 0x0008, **EVENT_MOUSE_LEAVE** = 0x0010, **EVENT_MOUSE_DRAG** = 0x0020, **EVENT_MOUSE_PUSH** = 0x0040,
EVENT_MOUSE_RELEASE = 0x0080, **EVENT_MOUSE_SCROLL** = 0x0100, **EVENT_KEY_DOWN** = 0x0200, **EVENT_KEY_UP** = 0x0400,
EVENT_ALL = 0xFFFF }

Functions

- `std::ostream & _notify` (osg::NotifySeverity ns=osg::INFO)
- bool **callbackWindowMove** (Event &ev)
- bool **callbackWindowRotate** (Event &ev)
- bool **callbackWindowScale** (Event &ev)
- bool **callbackWindowTabFocus** (Event &ev)
- void **copyData** (const osg::Image *source, const unsigned int x1, const unsigned int y1, const unsigned int x2, const unsigned int y2, osg::Image *destination, const unsigned int xd, const unsigned int yd)
Copies a rectangle of corners (x1, y1), (x2, y2) from an image into another image starting at position (xd, yd).
- `template<typename T >`
void **copyDataImpl** (const osg::Image *source, const unsigned int x1, const unsigned int y1, const unsigned int x2, const unsigned int y2, osg::Image *destination, const unsigned int xd=0, const unsigned int yd=0)
Implementation of copyImage.
- int **createExample** (osgViewer::Viewer &viewer, **WindowManager** *wm, osg::Node *node)
- osg::Image * **createNatifEdgelImageFromTheme** (osg::Image *theme)
- osg::Camera * **createOrthoCamera** (**matrix_type** width, **matrix_type** height)
- const std::string **DESCENT_STRING** ("qpl")
- std::string **generateRandomName** (const std::string &base)
- std::string **getFilePath** (const std::string &filename)
- `template<typename T >`
bool **hasDecimal** (T v)
- std::ostream & **info** ()
- std::string **lowerCase** (const std::string &str)
- bool **noLuaFail** (const std::string &err)
- bool **noPythonFail** (const std::string &err)
- osg::Image * **rotatImage** (osg::Image *image)
Rotates an osg::Image by 90 degrees.
- `template<typename T >`
osg::Image * **rotatImageImpl** (osg::Image *image)
Implementation of rotatImage.
- std::ostream & **warn** ()
- bool **writeWindowManagerNode** (**WindowManager** *wm)

Variables

- const int **OSGWIDGET_RENDERBIN_MOD** = 5000

3.1.1 Detailed Description

The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.

3.1.2 Typedef Documentation

3.1.2.1 typedef ColorArray::value_type Color

3.1.2.2 typedef Color::value_type color_type

3.1.2.3 typedef osg::Vec4Array ColorArray

3.1.2.4 typedef osgUtil::LineSegmentIntersector::Intersections Intersections

3.1.2.5 typedef osg::Matrix::value_type matrix_type

3.1.2.6 typedef PointArray::value_type Point

3.1.2.7 typedef Point::value_type point_type

3.1.2.8 typedef osg::Vec3Array PointArray

3.1.2.9 typedef osg::Vec4 Quad

3.1.2.10 typedef osgDB::FieldReaderIterator& Reader

3.1.2.11 typedef TexCoordArray::value_type TexCoord

3.1.2.12 typedef TexCoord::value_type texcoord_type

3.1.2.13 typedef osg::Vec2Array TexCoordArray

3.1.2.14 typedef std::list<osg::observer_ptr<Widget> > WidgetList

3.1.2.15 typedef Window::WindowList WindowList

3.1.2.16 typedef osg::Vec2 XYCoord

3.1.3 Enumeration Type Documentation

3.1.3.1 enum EventMask

Enumerator:

EVENT_MASK_FOCUS

EVENT_MASK_MOUSE_MOVE

EVENT_MASK_MOUSE_CLICK

EVENT_MASK_MOUSE_DRAG

EVENT_MASK_KEY

3.1.3.2 enum EventType

Enumerator:

EVENT_NONE

EVENT_FOCUS

EVENT_UNFOCUS

EVENT_MOUSE_ENTER

EVENT_MOUSE_OVER

EVENT_MOUSE_LEAVE

EVENT_MOUSE_DRAG

EVENT_MOUSE_PUSH

EVENT_MOUSE_RELEASE

EVENT_MOUSE_SCROLL

EVENT_KEY_DOWN

EVENT_KEY_UP

EVENT_ALL

3.1.4 Function Documentation

3.1.4.1 `std::ostream& osgWidget::_notify (osg::NotifySeverity ns = osg::INF0) [inline]`

3.1.4.2 `bool OSGWIDGET_EXPORT callbackWindowMove (Event & ev)`

3.1.4.3 `bool OSGWIDGET_EXPORT callbackWindowRotate (Event & ev)`

3.1.4.4 `bool OSGWIDGET_EXPORT callbackWindowScale (Event & ev)`

3.1.4.5 `bool OSGWIDGET_EXPORT callbackWindowTabFocus (Event & ev)`

3.1.4.6 `void osgWidget::copyData (const osg::Image * source, const unsigned int x1, const unsigned int y1, const unsigned int x2, const unsigned int y2, osg::Image * destination, const unsigned int xd, const unsigned int yd)`

Copies a rectangle of corners (*x1*, *y1*), (*x2*, *y2*) from an image into another image starting at position (*xd*, *yd*). No scaling is done, the pixels are just copied, so the destination image must be at least (*xd* + (*x2* - *x1*)) by (*yd* + (*y2* - *y1*)) pixels.

3.1.4.7 `void osgWidget::copyDataImpl (const osg::Image * source, const unsigned int x1, const unsigned int y1, const unsigned int x2, const unsigned int y2, osg::Image * destination, const unsigned int xd = 0, const unsigned int yd = 0) [inline]`

Implementation of copyImage.

3.1.4.8 `OSGWIDGET_EXPORT int createExample (osgViewer::Viewer & viewer, WindowManager * wm, osg::Node * node)`

3.1.4.9 `osg::Image * createNatifEdgeImageFromTheme (osg::Image * theme)`

3.1.4.10 `OSGWIDGET_EXPORT osg::Camera * createOrthoCamera (matrix_type width, matrix_type height)`

3.1.4.11 `const std::string osgWidget::DESCENT_STRING ("qpl")`

3.1.4.12 `OSGWIDGET_EXPORT std::string generateRandomName (const std::string & base)`

3.1.4.13 `OSGWIDGET_EXPORT std::string getFilePath (const std::string & filename)`

3.1.4.14 `bool osgWidget::hasDecimal (T v) [inline]`

3.1.4.15 `std::ostream& osgWidget::info () [inline]`

3.1.4.16 `std::string osgWidget::lowerCase (const std::string & str) [inline]`

3.1.4.17 `bool osgWidget::noLuaFail (const std::string & err)`

3.1.4.18 `bool osgWidget::noPythonFail (const std::string & err)`

3.1.4.19 `osg::Image* osgWidget::rotatImage (osg::Image * image)`

Rotates an osg::Image by 90 degrees. Returns a new osg::Image, be sure to store it in a ref_ptr so it will be freed correctly.

3.1.4.20 `osg::Image* osgWidget::rotatImageImpl (osg::Image * image) [inline]`

Implementation of rotatImage.

3.1.4.21 `std::ostream& osgWidget::warn () [inline]`

3.1.4.22 `OSGWIDGET_EXPORT bool writeWindowManagerNode (WindowManager * wm)`

3.1.5 Variable Documentation

3.1.5.1 `const int OSGWIDGET_RENDERBIN_MOD = 5000`

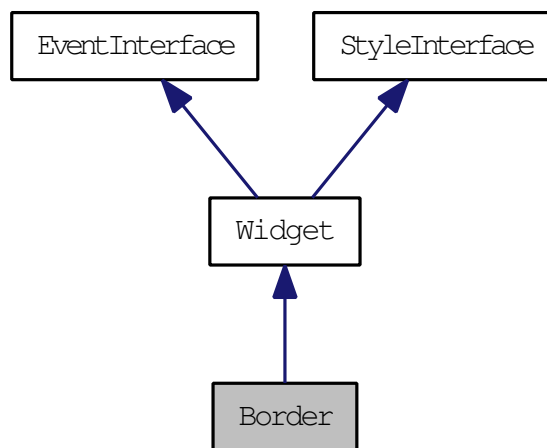
3.2 osgWidget::lua Namespace Reference

3.3 osgWidget::py Namespace Reference

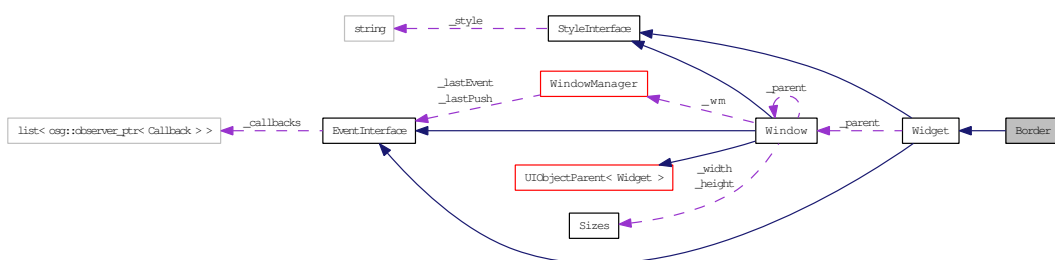
Class Documentation

4.1 Border Class Reference

Inheritance diagram for Border:



Collaboration diagram for Border:



Public Member Functions

- `Border` (const `Border` &, const `osg::CopyOp` &)
- `Border` (`BorderType`=`BORDER_LEFT`, `point_type`=0.0f, `point_type`=0.0f)
- `BorderType` `getBorderType` () const
- `META_Object` (`osgWidget`, `Border`)
- virtual bool `mouseDrag` (double, double, `WindowManager` *)
- virtual void `parented` (`Window` *)
- virtual void `positioned` ()
- void `setBorderType` (`BorderType` border)
- void `setBorderTypeAndName` (`BorderType` border)

Protected Attributes

- `BorderType _border`

4.1.1 Constructor & Destructor Documentation

4.1.1.1 `Border (BorderType border = BORDER_LEFT, point_type width = 0.0f, point_type height = 0.0f)`

4.1.1.2 `Border (const Border & border, const osg::CopyOp & co)`

4.1.2 Member Function Documentation

4.1.2.1 `BorderType getBorderType () const [inline]`

4.1.2.2 `META_Object (osgWidget, Border)`

4.1.2.3 `bool mouseDrag (double x, double y, WindowManager * wm) [virtual]`

4.1.2.4 `void parented (Window * window) [virtual]`

Reimplemented from `Widget` (p. 89).

4.1.2.5 `void positioned () [virtual]`

Reimplemented from `Widget` (p. 89).

4.1.2.6 `void setBorderType (BorderType border) [inline]`

4.1.2.7 `void setBorderTypeAndName (BorderType border) [inline]`

4.1.3 Member Data Documentation

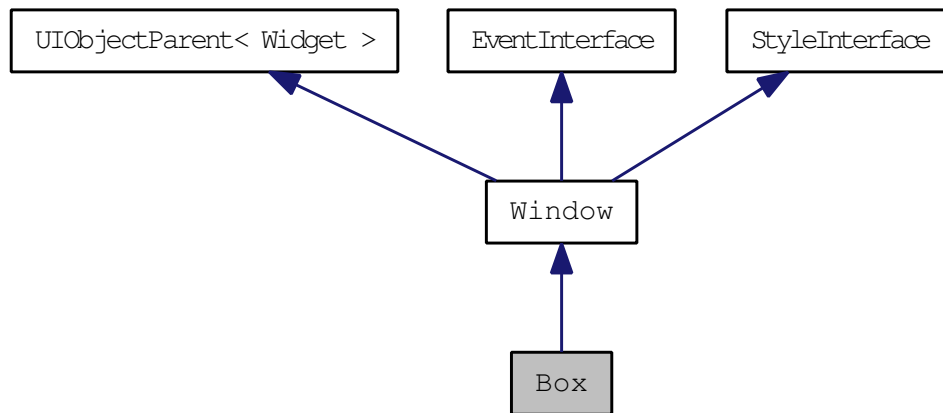
4.1.3.1 `BorderType _border [protected]`

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

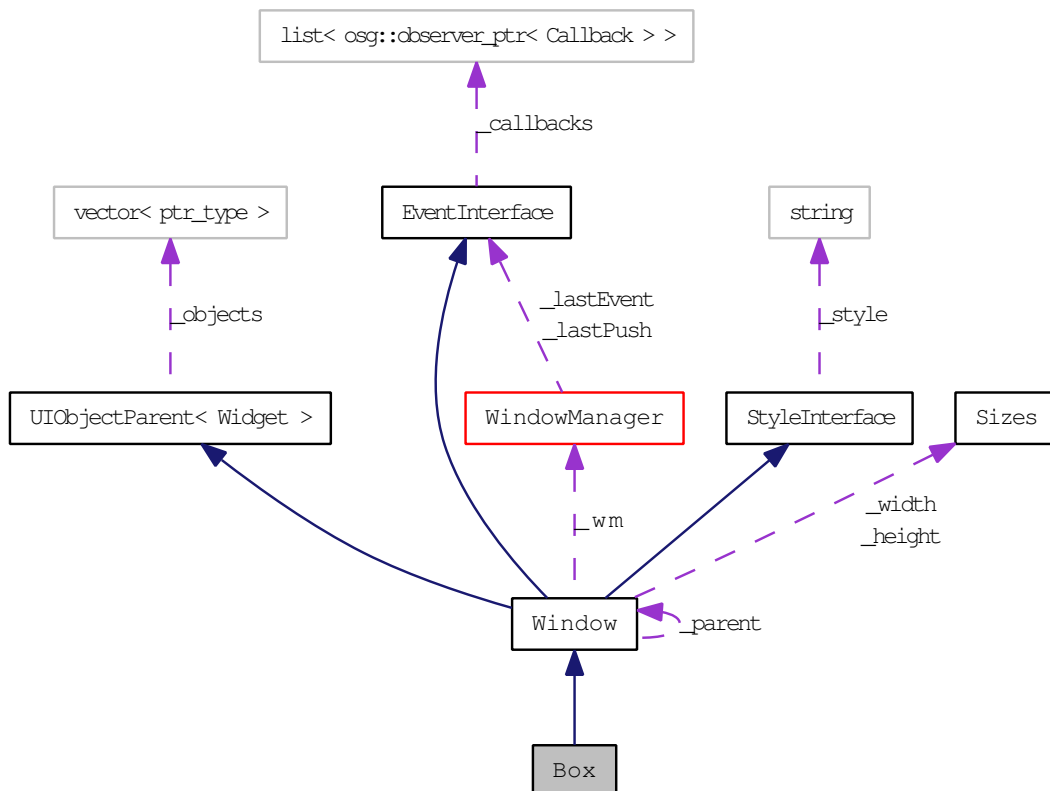
- `Frame`
- `Frame.cpp`

4.2 Box Class Reference

The **Box** (p. 17) object is a **Window** (p. 92) subclass that can be configured to uniformly (or non-uniformly) position it's children either vertically or horizontally. Inheritance diagram for Box:



Collaboration diagram for Box:



Public Types

- enum **BoxType** { **VERTICAL**, **HORIZONTAL** }
An enum corresponding to the type of **Box** (p. 17) alignment.

Public Member Functions

- **Box** (const **Box** &, const osg::CopyOp &)

- **Box** (const std::string &="", **BoxType**=HORIZONTAL, bool=false)
*The main constructor; takes the string name, the BoxType orientation, and a boolean indicating whether or not all of the **Box** (p. 17) regions should be uniformly sized.*
- **META_Object** (osgWidget, **Box**)

Protected Member Functions

- virtual **Sizes _getHeightImplementation** () const
- virtual **Sizes _getWidthImplementation** () const
- virtual void **_resizeImplementation** (point_type, point_type)

4.2.1 Detailed Description

The **Box** (p. 17) object is a **Window** (p. 92) subclass that can be configured to uniformly (or non-uniformly) position it's children either vertically or horizontally. It is the most basic **Window** (p. 92) implementation, though there is some difficulty when positioning children such that each child object ends up pixel-aligned.

4.2.2 Member Enumeration Documentation

4.2.2.1 enum BoxType

An enum corresponding to the type of **Box** (p. 17) alignment.

Enumerator:

VERTICAL
HORIZONTAL

4.2.3 Constructor & Destructor Documentation

4.2.3.1 **Box** (const std::string & name = "", **BoxType** bt = HORIZONTAL, bool uniform = false)

The main constructor; takes the string name, the BoxType orientation, and a boolean indicating whether or not all of the **Box** (p. 17) regions should be uniformly sized.

4.2.3.2 **Box** (const **Box** & box, const osg::CopyOp & co)

4.2.4 Member Function Documentation

4.2.4.1 **Window::Sizes _getHeightImplementation** () const [protected, virtual]

Reimplemented from **Window** (p. 97).

4.2.4.2 **Window::Sizes _getWidthImplementation** () const [protected, virtual]

Reimplemented from **Window** (p. 98).

4.2.4.3 void **_resizeImplementation** (point_type w, point_type h) [protected, virtual]

Implements **Window** (p. 98).

4.2.4.4 **META_Object** (osgWidget, **Box**)

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

- **Box**
- **Box.cpp**

4.3 Browser Class Reference

Convenience class that provides a interactive quad that can be placed directly in the scene.

Public Member Functions

- **Browser** (const std::string &url, const **GeometryHints** &hints=**GeometryHints**())
- **Browser** ()
- bool **assign** (**BrowserImage** *browserImage, const **GeometryHints** &hints=**GeometryHints**())
- void **navigateTo** (const std::string &url)
- bool **open** (const std::string &url, const **GeometryHints** &hints=**GeometryHints**())

Protected Attributes

- osg::ref_ptr< **BrowserImage** > **_browserImage**

4.3.1 Detailed Description

Convenience class that provides a interactive quad that can be placed directly in the scene.

4.3.2 Constructor & Destructor Documentation

4.3.2.1 **Browser** () [inline]

4.3.2.2 **Browser** (const std::string & *url*, const **GeometryHints** & *hints* = **GeometryHints** ())

4.3.3 Member Function Documentation

4.3.3.1 bool **assign** (**BrowserImage** * *browserImage*, const **GeometryHints** & *hints* = **GeometryHints** ())

4.3.3.2 void **navigateTo** (const std::string & *url*)

4.3.3.3 bool **open** (const std::string & *url*, const **GeometryHints** & *hints* = **GeometryHints** ())

4.3.4 Member Data Documentation

4.3.4.1 osg::ref_ptr<**BrowserImage**> **_browserImage** [protected]

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

- **Browser**
- **Browser.cpp**

4.4 BrowserImage Class Reference

Pure virtual base class for that provides the browser interface for integration with 3rd party implementations.

Public Member Functions

- **BrowserImage** ()
- virtual void **navigateTo** (const std::string &url)=0

Protected Member Functions

- virtual ~**BrowserImage** ()

4.4.1 Detailed Description

Pure virtual base class for that provides the browser interface for integration with 3rd party implementations. Implementation of **BrowserImage** (p. 20) are provide via the gecko plugin.

4.4.2 Constructor & Destructor Documentation

4.4.2.1 **BrowserImage** () [inline]

4.4.2.2 virtual ~**BrowserImage** () [inline, protected, virtual]

4.4.3 Member Function Documentation

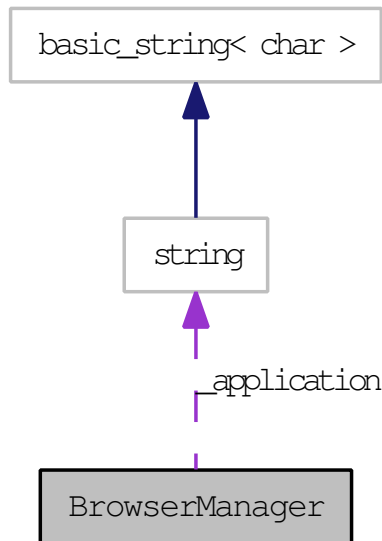
4.4.3.1 virtual void **navigateTo** (const std::string & *url*) [pure virtual]

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

- **Browser**

4.5 BrowserManager Class Reference

Collaboration diagram for BrowserManager:



Public Member Functions

- virtual **BrowserImage** * **createBrowserImage** (const std::string &url, int width, int height)
- const std::string & **getApplication** () const
- virtual void **init** (const std::string &application)
- void **setApplication** (const std::string &application)

Static Public Member Functions

- static osg::ref_ptr< **BrowserManager** > & **instance** ()

Protected Member Functions

- **BrowserManager** (const **BrowserManager** &rhs, const osg::CopyOp ©op=osg::CopyOp::SHALLOW_COPY)
- **BrowserManager** ()
- virtual ~**BrowserManager** ()
- **META_Object** (osgWidget, **BrowserManager**)

Protected Attributes

- std::string **_application**

4.5.1 Constructor & Destructor Documentation

4.5.1.1 `BrowserManager()` [protected]

4.5.1.2 `BrowserManager(const BrowserManager & rhs, const osg::CopyOp & copyop = osg::CopyOp::SHALLOW_COPY)` [inline, protected]

4.5.1.3 `~BrowserManager()` [protected, virtual]

4.5.2 Member Function Documentation

4.5.2.1 `BrowserImage * createBrowserImage(const std::string & url, int width, int height)` [virtual]

4.5.2.2 `const std::string& getApplication()` const [inline]

4.5.2.3 `void init(const std::string & application)` [virtual]

4.5.2.4 `osg::ref_ptr< BrowserManager > & instance()` [static]

4.5.2.5 `META_Object(osgWidget, BrowserManager)` [protected]

4.5.2.6 `void setApplication(const std::string & application)` [inline]

4.5.3 Member Data Documentation

4.5.3.1 `std::string _application` [protected]

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

- `Browser`
- `Browser.cpp`

4.6 Callback Class Reference

Public Member Functions

- `template<typename T >`
Callback (T *functor, **EventType** type, void *data=0)
- `template<typename T >`
Callback (bool(T::*function)(**Event** &), T *obj, **EventType** type, void *data=0)
- **Callback** (**EventType** type, void *data=0)
- **Callback** (const **Callback** &rhs)
- **Callback** ()
- virtual `~Callback ()`
- const void * **getData** () const
- void * **getData** ()
- **EventType** **getType** () const
- virtual bool **operator**() (**Event** &ev)

Protected Attributes

- `osg::ref_ptr< CallbackInterface > _callback`
- void * **_data**
- **EventType** **_type**

4.6.1 Constructor & Destructor Documentation

4.6.1.1 **Callback** () [inline]

4.6.1.2 **Callback** (const **Callback** & rhs) [inline]

4.6.1.3 **Callback** (**EventType** type, void * data = 0) [inline]

4.6.1.4 **Callback** (bool(T::*)(**Event** &) function, T * obj, **EventType** type, void * data = 0) [inline]

4.6.1.5 **Callback** (T * functor, **EventType** type, void * data = 0) [inline]

4.6.1.6 virtual `~Callback ()` [inline, virtual]

4.6.2 Member Function Documentation

4.6.2.1 const void* **getData** () const [inline]

4.6.2.2 void* **getData** () [inline]

4.6.2.3 **EventType** **getType** () const [inline]

4.6.2.4 virtual bool **operator**() (**Event** & ev) [inline, virtual]

4.6.3 Member Data Documentation

4.6.3.1 `osg::ref_ptr<CallbackInterface> _callback` [protected]

4.6.3.2 void* **_data** [protected]

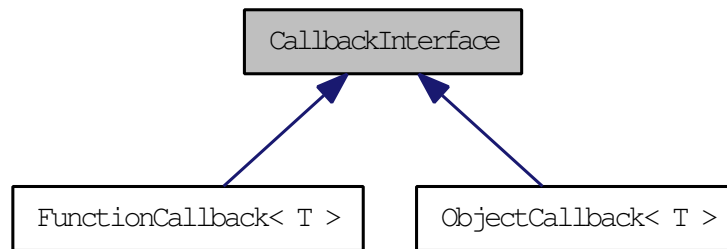
4.6.3.3 **EventType** **_type** [protected]

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

- **EventInterface**

4.7 CallbackInterface Struct Reference

Inheritance diagram for CallbackInterface:



Public Member Functions

- virtual `~CallbackInterface()`
- virtual `bool operator()(Event &)=0`

4.7.1 Constructor & Destructor Documentation

4.7.1.1 `virtual ~CallbackInterface()` [`inline`, `virtual`]

4.7.2 Member Function Documentation

4.7.2.1 `virtual bool operator()(Event &)` [`pure virtual`]

Implemented in `ObjectCallback< T >` (p. 59), and `FunctionCallback< T >` (p. 41).

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

- `EventInterface`

4.8 CameraSwitchHandler Class Reference

Public Member Functions

- **CameraSwitchHandler** (**WindowManager** *, osg::Camera *)
- virtual bool **handle** (const osgGA::GUIEventAdapter &, osgGA::GUIActionAdapter &, osg::Object *, osg::NodeVisitor *)

Protected Attributes

- osg::observer_ptr< osg::Camera > **_camera**
- osg::ref_ptr< osg::Node > **_oldNode**
- osg::observer_ptr< **WindowManager** > **_wm**

4.8.1 Constructor & Destructor Documentation

4.8.1.1 CameraSwitchHandler (WindowManager * *wm*, osg::Camera * *camera*)

4.8.2 Member Function Documentation

4.8.2.1 bool handle (const osgGA::GUIEventAdapter & *gea*, osgGA::GUIActionAdapter & *gaa*, osg::Object * *obj*, osg::NodeVisitor * *nv*) [virtual]

4.8.3 Member Data Documentation

4.8.3.1 osg::observer_ptr<osg::Camera> **_camera** [protected]

4.8.3.2 osg::ref_ptr<osg::Node> **_oldNode** [protected]

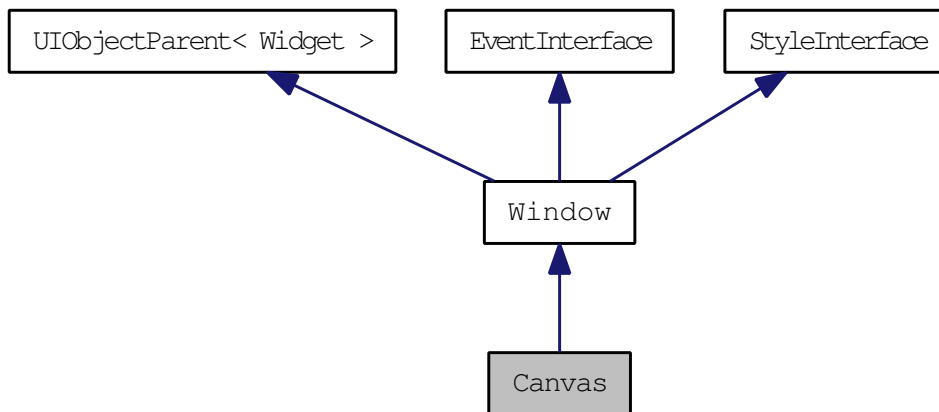
4.8.3.3 osg::observer_ptr<WindowManager> **_wm** [protected]

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

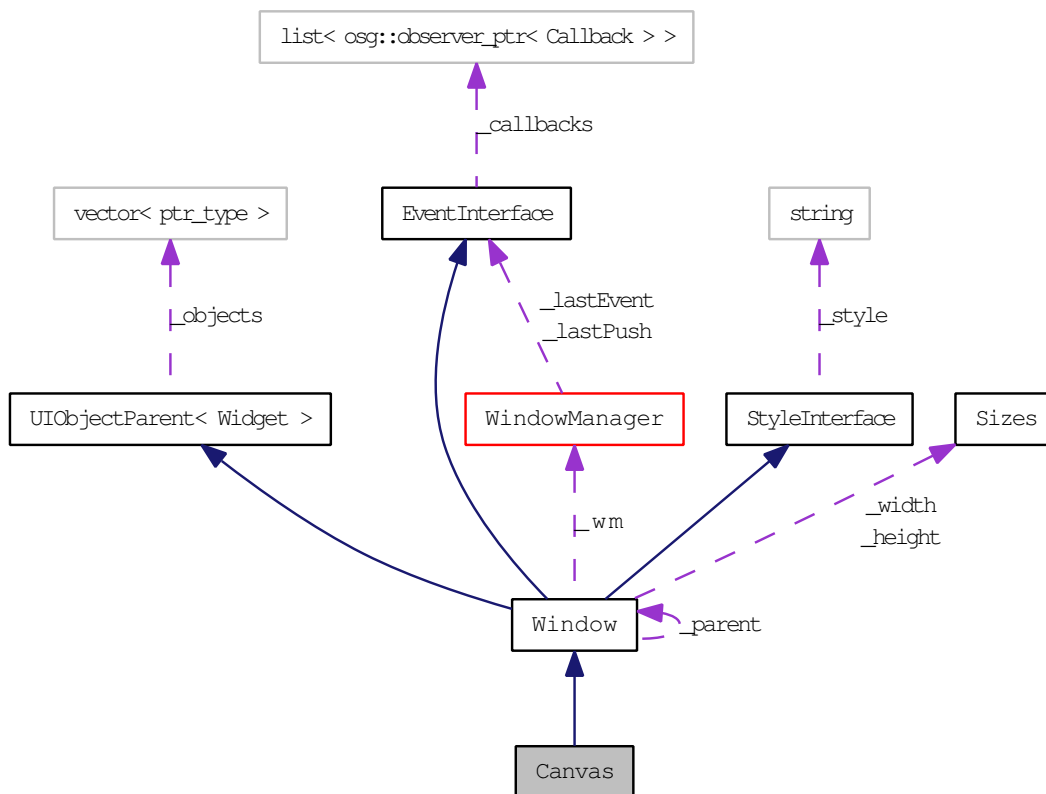
- **ViewerEventHandlers**
- **ViewerEventHandlers.cpp**

4.9 Canvas Class Reference

Inheritance diagram for Canvas:



Collaboration diagram for Canvas:



Public Member Functions

- **Canvas** (const **Canvas** &, const osg::CopyOp &)
- **Canvas** (const std::string &= "")
- virtual bool **addWidget** (**Widget** *, **point_type**, **point_type**)
*Adds a **Widget** (p. 83) at the given XY coordinate.*
- **META_Object** (osgWidget, **Canvas**)

Protected Member Functions

- virtual void `_resizeImplementation (point_type, point_type)`

4.9.1 Constructor & Destructor Documentation

4.9.1.1 `Canvas (const std::string & name = "")`

4.9.1.2 `Canvas (const Canvas & canvas, const osg::CopyOp & co)`

4.9.2 Member Function Documentation

4.9.2.1 `void _resizeImplementation (point_type w, point_type h) [protected, virtual]`

Implements `Window` (p. 98).

4.9.2.2 `bool addWidget (Widget * widget, point_type x, point_type y) [virtual]`

Adds a `Widget` (p. 83) at the given XY coordinate.

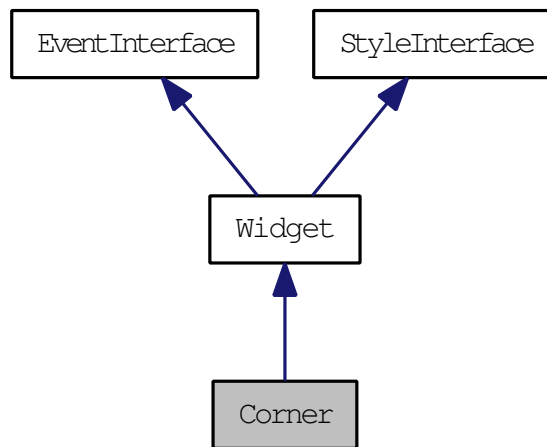
4.9.2.3 `META_Object (osgWidget, Canvas)`

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

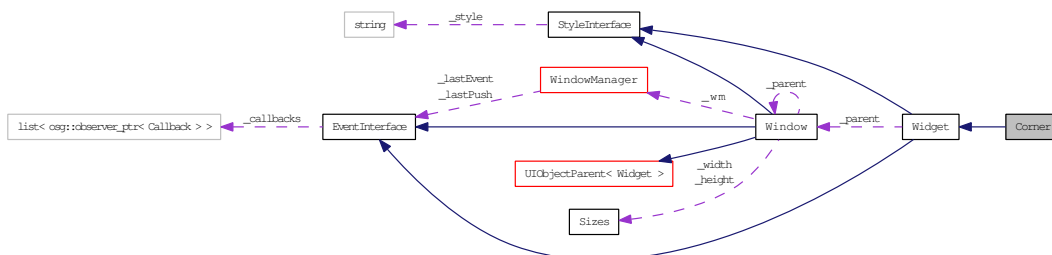
- `Canvas`
- `Canvas.cpp`

4.10 Corner Class Reference

Inheritance diagram for Corner:



Collaboration diagram for Corner:



Public Member Functions

- **Corner** (const **Corner** &, const osg::CopyOp &)
- **Corner** (**CornerType**=CORNER_LOWER_LEFT, **point_type**=0.0f, **point_type**=0.0f)
- **CornerType** **getCornerType** () const
- **META_Object** (osgWidget, **Corner**)
- virtual bool **mouseDrag** (double, double, **WindowManager** *)
- virtual void **parented** (**Window** *)
- void **setCornerType** (**CornerType** corner)
- void **setCornerTypeAndName** (**CornerType** corner)

Protected Attributes

- **CornerType** **_corner**

4.10.1 Constructor & Destructor Documentation

4.10.1.1 **Corner** (*CornerType* *corner* = CORNER_LOWER_LEFT, *point_type* *width* = 0.0f, *point_type* *height* = 0.0f)

4.10.1.2 **Corner** (const *Corner* & *corner*, const osg::CopyOp & *co*)

4.10.2 Member Function Documentation

4.10.2.1 **CornerType** getCornerType () const [inline]

4.10.2.2 **META_Object** (osgWidget, *Corner*)

4.10.2.3 **bool** mouseDrag (double *x*, double *y*, *WindowManager* * *wm*) [virtual]

4.10.2.4 **void** parented (*Window* * *window*) [virtual]

Reimplemented from **Widget** (p. 89).

4.10.2.5 **void** setCornerType (*CornerType* *corner*) [inline]

4.10.2.6 **void** setCornerTypeAndName (*CornerType* *corner*) [inline]

4.10.3 Member Data Documentation

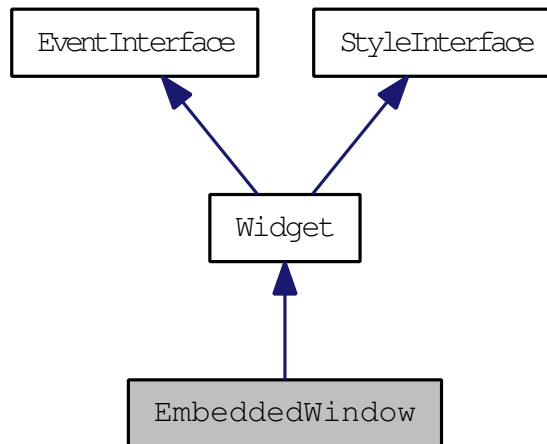
4.10.3.1 **CornerType** *_corner* [protected]

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

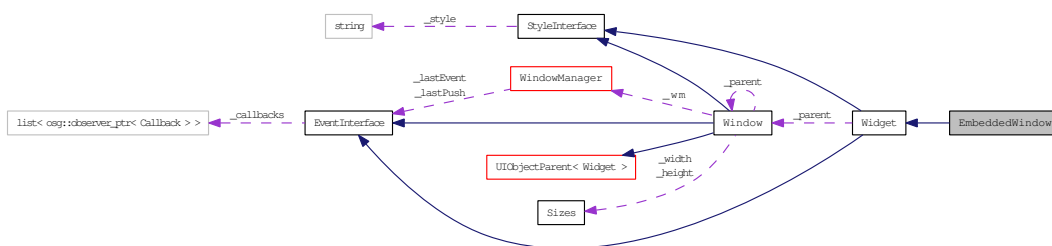
- **Frame**
- **Frame.cpp**

4.11 EmbeddedWindow Class Reference

Inheritance diagram for EmbeddedWindow:



Collaboration diagram for EmbeddedWindow:



Public Member Functions

- **EmbeddedWindow** (const **EmbeddedWindow** &, const osg::CopyOp &)
- **EmbeddedWindow** (const std::string &name = "", point_type w = 0.0f, point_type h = 0.0f)
- const **Window** * **getWindow** () const
- **Window** * **getWindow** ()
- virtual void **managed** (**WindowManager** *)
- **META_Object** (osgWidget::Window, EmbeddedWindow)
- virtual void **parented** (**Window** *)
- virtual void **positioned** ()
- bool **setWindow** (**Window** *)
- virtual void **unmanaged** (**WindowManager** *)
- virtual void **unparented** (**Window** *)
- void **updateSizeFromWindow** ()

4.11.1 Constructor & Destructor Documentation

4.11.1.1 **EmbeddedWindow** (const std::string &name = "", point_type w = 0.0f, point_type h = 0.0f)

4.11.1.2 **EmbeddedWindow** (const EmbeddedWindow &wiw, const osg::CopyOp &co)

4.11.2 Member Function Documentation

4.11.2.1 const **Window*** **getWindow** () const [inline]

4.11.2.2 **Window*** **getWindow** () [inline]

4.11.2.3 void **managed** (**WindowManager** *wm) [virtual]

Reimplemented from **Widget** (p. 88).

4.11.2.4 META_Object (osgWidget::Window, EmbeddedWindow)**4.11.2.5 void parented (Window * *parent*) [virtual]**

Reimplemented from **Widget** (p. 89).

4.11.2.6 void positioned () [virtual]

Reimplemented from **Widget** (p. 89).

4.11.2.7 bool setWindow (Window * *win*)**4.11.2.8 void unmanaged (WindowManager * *wm*) [virtual]**

Reimplemented from **Widget** (p. 90).

4.11.2.9 void unparented (Window *) [virtual]

Reimplemented from **Widget** (p. 91).

4.11.2.10 void updateSizeFromWindow ()

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

- **Window**
- **Window.cpp**

Protected Attributes

- void * **_data**
- **Widget** * **_widget**
- **Window** * **_window**
- **WindowManager** * **_wm**

Friends

- class **Window**
- class **WindowManager**

4.12.1 Constructor & Destructor Documentation

4.12.1.1 **Event** (**WindowManager** * *wm*, **EventType** *_type* = **EVENT_NONE**) [**inline**]

4.12.2 Member Function Documentation

4.12.2.1 **const void*** **getData** () **const** [**inline**]

4.12.2.2 **void*** **getData** () [**inline**]

4.12.2.3 **const Widget*** **getWidget** () **const** [**inline**]

4.12.2.4 **Widget*** **getWidget** () [**inline**]

4.12.2.5 **const Window*** **getWindow** () **const** [**inline**]

4.12.2.6 **Window*** **getWindow** () [**inline**]

4.12.2.7 **const WindowManager*** **getWindowManager** () **const** [**inline**]

4.12.2.8 **WindowManager*** **getWindowManager** () [**inline**]

4.12.2.9 **Event&** **makeKey** (**int** *_key*, **int** *_keyMask*, **EventType** *_type* = **EVENT_NONE**) [**inline**]

4.12.2.10 **Event&** **makeMouse** (**double** *_x*, **double** *_y*, **EventType** *_type* = **EVENT_NONE**) [**inline**]

4.12.2.11 **Event&** **makeType** (**EventType** *_type*) [**inline**]

4.12.2.12 **void** **setData** (**void** * *data*) [**inline**]

4.12.3 Friends And Related Function Documentation

4.12.3.1 **friend class** **Window** [**friend**]

4.12.3.2 **friend class** **WindowManager** [**friend**]

4.12.4 Member Data Documentation

4.12.4.1 **void*** **_data** [**protected**]

4.12.4.2 **Widget*** **_widget** [**protected**]

4.12.4.3 **Window*** **_window** [**protected**]

4.12.4.4 **WindowManager*** **_wm** [**protected**]

4.12.4.5 **int** **key**

4.12.4.6 **int** **keyMask**

4.12.4.7 **EventType** **type**

4.12.4.8 **double** **x**

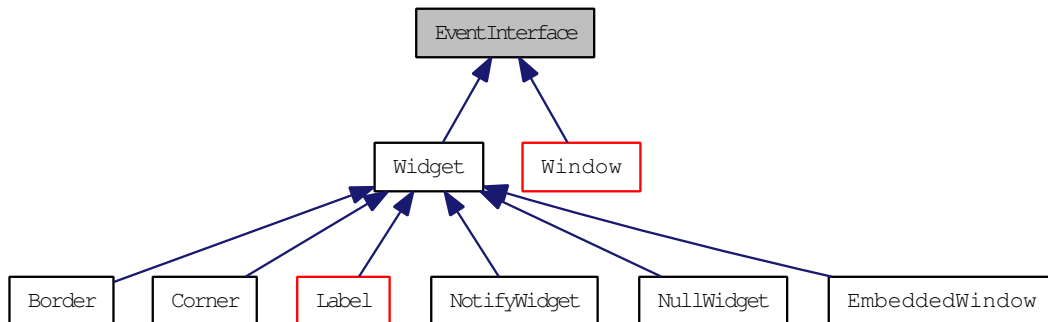
4.12.4.9 **double** **y**

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

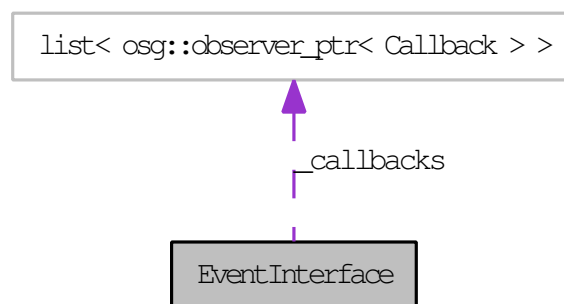
- **EventInterface**

4.13 EventInterface Class Reference

Inheritance diagram for EventInterface:



Collaboration diagram for EventInterface:



Public Member Functions

- **EventInterface** (const **EventInterface** &ei)
- **EventInterface** ()
- virtual ~**EventInterface** ()
- void **addCallback** (**Callback** *cb)
- void **addEventMask** (unsigned int mask)
- bool **callCallbacks** (**Event** &ev)
- bool **callMethodAndCallbacks** (**Event** &ev)
- bool **canFocus** () const
- bool **canKeyDown** () const
- bool **canKeyUp** () const
- bool **canMouseDown** () const
- bool **canMouseEnter** () const
- bool **canMouseLeave** () const
- bool **canMouseOver** () const
- bool **canMousePush** () const
- bool **canMouseRelease** () const
- bool **canMouseScroll** () const
- bool **canUnfocus** () const
- virtual bool **focus** (const **WindowManager** *)
- unsigned int **getEventMask** () const
- virtual bool **keyDown** (int, int, const **WindowManager** *)
- virtual bool **keyUp** (int, int, const **WindowManager** *)
- virtual bool **mouseDrag** (double, double, const **WindowManager** *)
- virtual bool **mouseEnter** (double, double, const **WindowManager** *)
- virtual bool **mouseLeave** (double, double, const **WindowManager** *)

- virtual bool **mouseOver** (double, double, const **WindowManager** *)
- virtual bool **mousePush** (double, double, const **WindowManager** *)
- virtual bool **mouseRelease** (double, double, const **WindowManager** *)
- virtual bool **mouseScroll** (double, double, const **WindowManager** *)
- void **removeEventMask** (unsigned int mask)
- void **setEventMask** (unsigned int mask)
- virtual bool **unfocus** (const **WindowManager** *)

4.13.1 Constructor & Destructor Documentation

4.13.1.1 **EventInterface** () [inline]

4.13.1.2 **EventInterface** (const **EventInterface** & *e*) [inline]

4.13.1.3 virtual **~EventInterface** () [inline, virtual]

4.13.2 Member Function Documentation

4.13.2.1 void **addCallback** (**Callback** * *cb*) [inline]

4.13.2.2 void **addEventMask** (unsigned int *mask*) [inline]

4.13.2.3 bool **callCallbacks** (**Event** & *ev*) [inline]

4.13.2.4 bool **callMethodAndCallbacks** (**Event** & *ev*) [inline]

4.13.2.5 bool **canFocus** () const [inline]

4.13.2.6 bool **canKeyDown** () const [inline]

4.13.2.7 bool **canKeyUp** () const [inline]

4.13.2.8 bool **canMouseDrag** () const [inline]

4.13.2.9 bool **canMouseEnter** () const [inline]

4.13.2.10 bool **canMouseLeave** () const [inline]

4.13.2.11 bool **canMouseOver** () const [inline]

4.13.2.12 bool **canMousePush** () const [inline]

4.13.2.13 bool **canMouseRelease** () const [inline]

4.13.2.14 bool **canMouseScroll** () const [inline]

4.13.2.15 bool **canUnfocus** () const [inline]

4.13.2.16 virtual bool **focus** (const **WindowManager** *) [inline, virtual]

Reimplemented in **NotifyWidget** (p. 55), and **NullWidget** (p. 57).

4.13.2.17 unsigned int **getEventMask** () const [inline]

4.13.2.18 virtual bool **keyDown** (int, int, const **WindowManager** *) [inline, virtual]

4.13.2.19 virtual bool **keyUp** (int, int, const **WindowManager** *) [inline, virtual]

4.13.2.20 virtual bool **mouseDrag** (double, double, const **WindowManager** *) [inline, virtual]

Reimplemented in **NotifyWidget** (p. 56), and **NullWidget** (p. 58).

4.13.2.21 virtual bool **mouseEnter** (double, double, const **WindowManager** *) [inline, virtual]

Reimplemented in **NotifyWidget** (p. 56), and **NullWidget** (p. 58).

4.13.2.22 virtual bool **mouseLeave** (double, double, const **WindowManager** *) [inline, virtual]

Reimplemented in **NotifyWidget** (p. 56), and **NullWidget** (p. 58).

4.13.2.23 virtual bool **mouseOver** (double, double, const **WindowManager** *) [inline, virtual]

Reimplemented in **NotifyWidget** (p. 56), and **NullWidget** (p. 58).

4.13.2.24 virtual bool mousePush (double, double, const WindowManager *) [inline, virtual]

Reimplemented in **NotifyWidget** (p. 56), and **NullWidget** (p. 58).

4.13.2.25 virtual bool mouseRelease (double, double, const WindowManager *) [inline, virtual]

Reimplemented in **NotifyWidget** (p. 56), and **NullWidget** (p. 58).

4.13.2.26 virtual bool mouseScroll (double, double, const WindowManager *) [inline, virtual]

Reimplemented in **NotifyWidget** (p. 56), and **NullWidget** (p. 58).

4.13.2.27 void removeEventMask (unsigned int *mask*) [inline]

4.13.2.28 void setEventMask (unsigned int *mask*) [inline]

4.13.2.29 virtual bool unfocus (const WindowManager *) [inline, virtual]

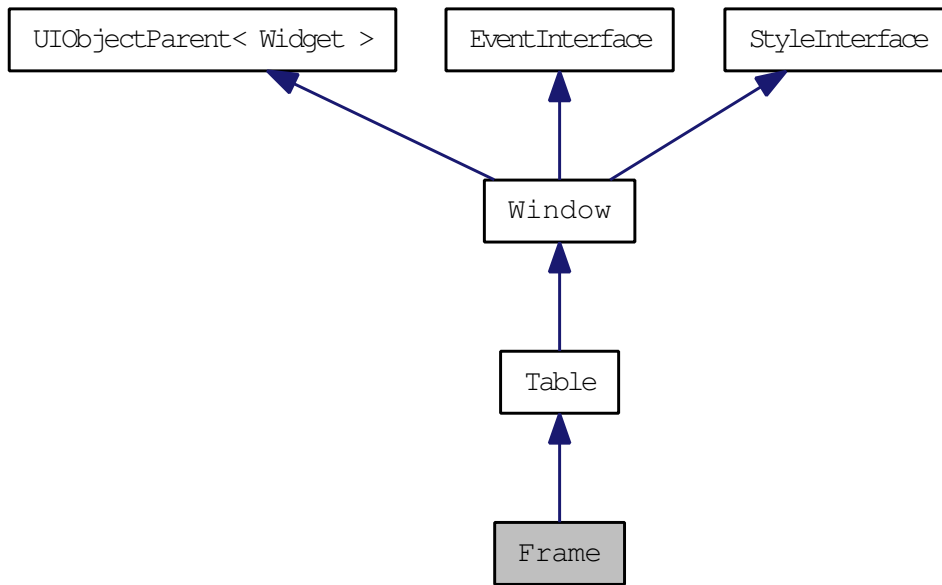
Reimplemented in **NotifyWidget** (p. 56), and **NullWidget** (p. 58).

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

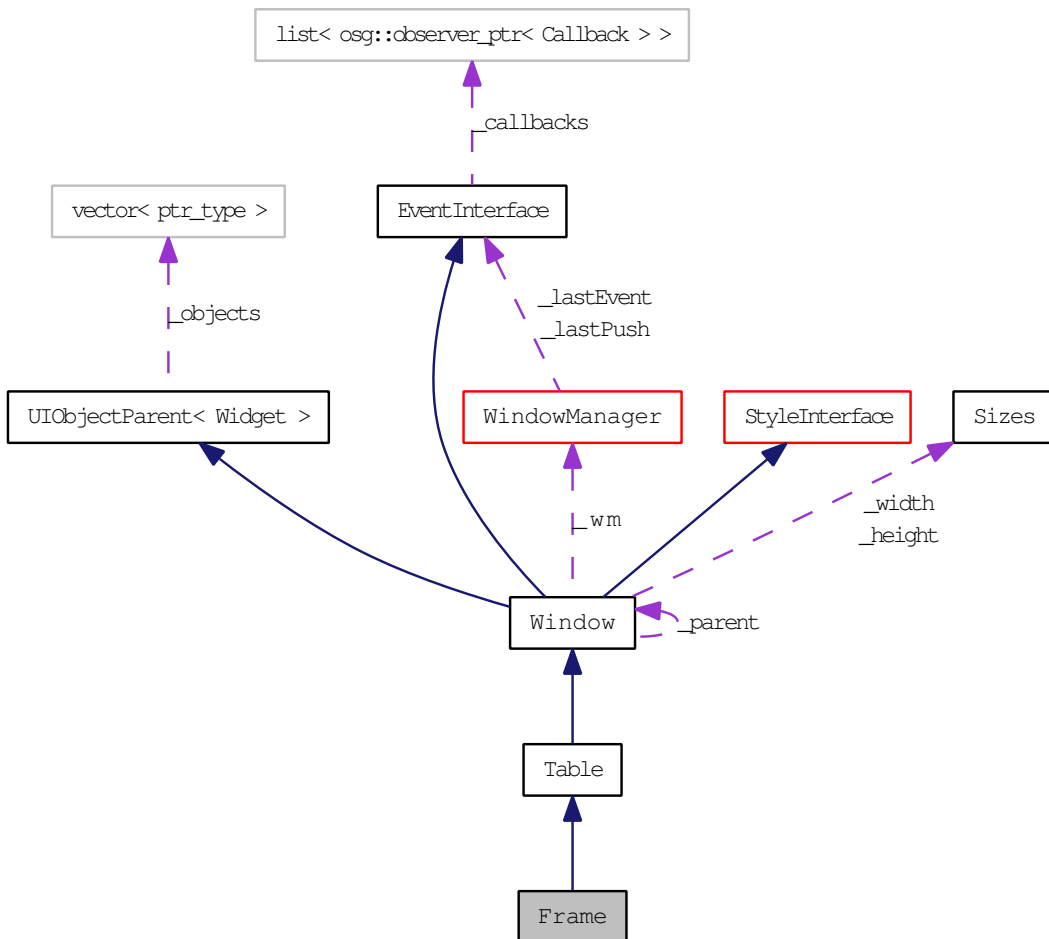
- **EventInterface**

4.14 Frame Class Reference

Inheritance diagram for Frame:



Collaboration diagram for Frame:



Classes

- class **Border**
- class **Corner**

Public Types

- enum **BorderType** { **BORDER_LEFT**, **BORDER_RIGHT**, **BORDER_TOP**, **BORDER_BOTTOM** }
- enum **CornerType** { **CORNER_LOWER_LEFT**, **CORNER_LOWER_RIGHT**, **CORNER_UPPER_LEFT**, **CORNER_UPPER_RIGHT** }
- enum **FrameOptions** { **FRAME_RESIZE** = 1, **FRAME_MOVE** = 2, **FRAME_TEXTURE** = 4, **FRAME_ALL** = **FRAME_RESIZE** | **FRAME_MOVE** | **FRAME_TEXTURE** }

Public Member Functions

- **Frame** (const **Frame** &, const osg::CopyOp &)
- **Frame** (const std::string &="", unsigned int=0)
- bool **canMove** () const
- bool **canResize** () const
- bool **canTexture** () const
- void **createSimpleFrame** (**point_type** cw, **point_type** ch, **point_type** w, **point_type** h)
- void **createSimpleFrameWithSingleTexture** (osg::Image *image, **point_type** w, **point_type** h)
- const **Border** * **getBorder** (**BorderType** b) const
- **Border** * **getBorder** (**BorderType** b)
- const **Corner** * **getCorner** (**CornerType** c) const
- **Corner** * **getCorner** (**CornerType** c)
- const **EmbeddedWindow** * **getEmbeddedWindow** () const
- **EmbeddedWindow** * **getEmbeddedWindow** ()
- unsigned int **getFlags** () const
- **META_Object** (osgWidget, **Frame**)
- bool **resizeFrame** (**point_type**, **point_type**)
- void **setFlags** (unsigned int flags)
- bool **setWindow** (**Window** *)

Static Public Member Functions

- static std::string **borderTypeToString** (**BorderType**)
- static std::string **cornerTypeToString** (**CornerType**)
- static **Frame** * **createSimpleFrame** (const std::string &, **point_type**, **point_type**, **point_type**, **point_type**, unsigned int=0, **Frame** *=0)
- static **Frame** * **createSimpleFrameFromTheme** (const std::string &, osg::Image *, **point_type**, **point_type**, unsigned int=0, **Frame** *=0)
- static **Frame** * **createSimpleFrameWithSingleTexture** (const std::string &, osg::Image *, **point_type**, **point_type**, unsigned int=0, **Frame** *=0)

Protected Member Functions

- **Widget** * **_getBorder** (**BorderType**) const
- **Widget** * **_getCorner** (**CornerType**) const

Protected Attributes

- unsigned int **_flags**

4.14.1 Member Enumeration Documentation

4.14.1.1 enum BorderType

Enumerator:

BORDER_LEFT

BORDER_RIGHT

BORDER_TOP

BORDER_BOTTOM

4.14.1.2 enum CornerType

Enumerator:

CORNER_LOWER_LEFT

CORNER_LOWER_RIGHT

CORNER_UPPER_LEFT

CORNER_UPPER_RIGHT

4.14.1.3 enum FrameOptions

Enumerator:

FRAME_RESIZE

FRAME_MOVE

FRAME_TEXTURE

FRAME_ALL

4.14.2 Constructor & Destructor Documentation

4.14.2.1 `Frame (const std::string & name = "", unsigned int flags = 0)`

4.14.2.2 `Frame (const Frame & frame, const osg::CopyOp & co)`

4.14.3 Member Function Documentation

4.14.3.1 `Widget * _getBorder (BorderType b) const [protected]`

4.14.3.2 `Widget * _getCorner (CornerType c) const [protected]`

4.14.3.3 `std::string borderTypeToString (BorderType b) [static]`

4.14.3.4 `bool canMove () const [inline]`

4.14.3.5 `bool canResize () const [inline]`

4.14.3.6 `bool canTexture () const [inline]`

4.14.3.7 `std::string cornerTypeToString (CornerType c) [static]`

4.14.3.8 `void createSimpleFrame (point_type cw, point_type ch, point_type w, point_type h) [inline]`

4.14.3.9 `Frame * createSimpleFrame (const std::string & name, point_type cw, point_type ch, point_type w, point_type h, unsigned int flags = 0, Frame * exFrame = 0) [static]`

4.14.3.10 `Frame * createSimpleFrameFromTheme (const std::string & name, osg::Image * image, point_type width, point_type height, unsigned int flags = 0, Frame * exFrame = 0) [static]`

4.14.3.11 `void createSimpleFrameWithSingleTexture (osg::Image * image, point_type w, point_type h) [inline]`

4.14.3.12 `Frame * createSimpleFrameWithSingleTexture (const std::string & name, osg::Image * image, point_type width, point_type height, unsigned int flags = 0, Frame * exFrame = 0) [static]`

4.14.3.13 `const Border* getBorder (BorderType b) const [inline]`

4.14.3.14 `Border* getBorder (BorderType b) [inline]`

4.14.3.15 `const Corner* getCorner (CornerType c) const [inline]`

4.14.3.16 `Corner* getCorner (CornerType c) [inline]`

4.14.3.17 `const EmbeddedWindow* getEmbeddedWindow () const [inline]`

4.14.3.18 `EmbeddedWindow* getEmbeddedWindow () [inline]`

4.14.3.19 `unsigned int getFlags () const [inline]`

4.14.3.20 `META_Object (osgWidget, Frame)`

4.14.3.21 `bool resizeFrame (point_type w, point_type h)`

4.14.3.22 `void setFlags (unsigned int flags) [inline]`

4.14.3.23 `bool setWindow (Window * window)`

4.14.4 Member Data Documentation

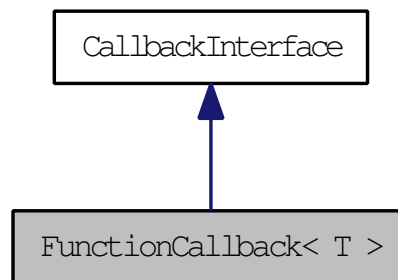
4.14.4.1 `unsigned int _flags [protected]`

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

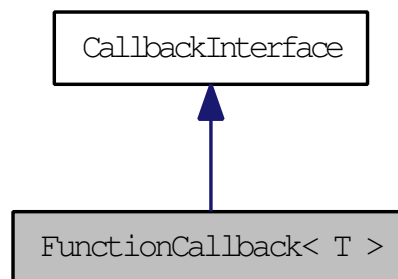
- `Frame`
- `Frame.cpp`

4.15 FunctionCallback< T > Class Template Reference

Inheritance diagram for FunctionCallback< T >:



Collaboration diagram for FunctionCallback< T >:



Public Member Functions

- **FunctionCallback** (T *callback)
- virtual bool **operator()** (Event &ev)

Protected Attributes

- T * **_callback**

```
template<typename T> class osgWidget::FunctionCallback< T >
```

4.15.1 Constructor & Destructor Documentation

4.15.1.1 **FunctionCallback** (T * *callback*) [inline]

4.15.2 Member Function Documentation

4.15.2.1 **virtual bool operator()** (Event & *ev*) [inline, virtual]

Implements **CallbackInterface** (p. 24).

4.15.3 Member Data Documentation

4.15.3.1 T* **_callback** [protected]

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

- **EventInterface**

4.16 GeometryHints Struct Reference

Hints structure that can be passed to **PdfReader** (p. 62) and **VncClient** (p. 81) classes to help guide them on what geometry to build.

Public Types

- enum **AspectRatioPolicy** { **RESIZE_HEIGHT_TO_MAINTAINCE_ASPECT_RATIO**, **RESIZE_WIDTH_TO_MAINTAINCE_ASPECT_RATIO**, **IGNORE_DOCUMENT_ASPECT_RATIO** }

Public Member Functions

- **GeometryHints** (const osg::Vec3 &pos, const osg::Vec3 &wVec, const osg::Vec3 &hVec, const osg::Vec4 &bColor, **AspectRatioPolicy** asp=RESIZE_HEIGHT_TO_MAINTAINCE_ASPECT_RATIO, unsigned int wRes=1024, unsigned int hRes=1024)
- **GeometryHints** ()

Public Attributes

- **AspectRatioPolicy** aspectRatioPolicy
- osg::Vec4 **backgroundColor**
- unsigned int **heightResolution**
- osg::Vec3 **heightVec**
- osg::Vec3 **position**
- unsigned int **widthResolution**
- osg::Vec3 **widthVec**

4.16.1 Detailed Description

Hints structure that can be passed to **PdfReader** (p. 62) and **VncClient** (p. 81) classes to help guide them on what geometry to build.

4.16.2 Member Enumeration Documentation

4.16.2.1 enum AspectRatioPolicy

Enumerator:

```
RESIZE_HEIGHT_TO_MAINTAINCE_ASPECT_RATIO
RESIZE_WIDTH_TO_MAINTAINCE_ASPECT_RATIO
IGNORE_DOCUMENT_ASPECT_RATIO
```

4.16.3 Constructor & Destructor Documentation

4.16.3.1 GeometryHints () [inline]

4.16.3.2 **GeometryHints** (const osg::Vec3 & *pos*, const osg::Vec3 & *wVec*, const osg::Vec3 & *hVec*, const osg::Vec4 & *bColor*, **AspectRatioPolicy** *asp* = RESIZE_HEIGHT_TO_MAINTAINCE_ASPECT_RATIO, unsigned int *wRes* = 1024, unsigned int *hRes* = 1024) [inline]

4.16.4 Member Data Documentation

4.16.4.1 AspectRatioPolicy aspectRatioPolicy

4.16.4.2 osg::Vec4 backgroundColor

4.16.4.3 unsigned int heightResolution

4.16.4.4 osg::Vec3 heightVec

4.16.4.5 osg::Vec3 position

4.16.4.6 unsigned int widthResolution

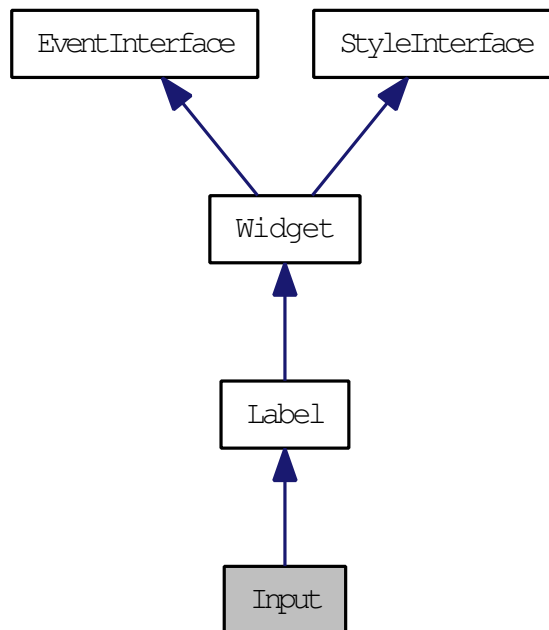
4.16.4.7 osg::Vec3 widthVec

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

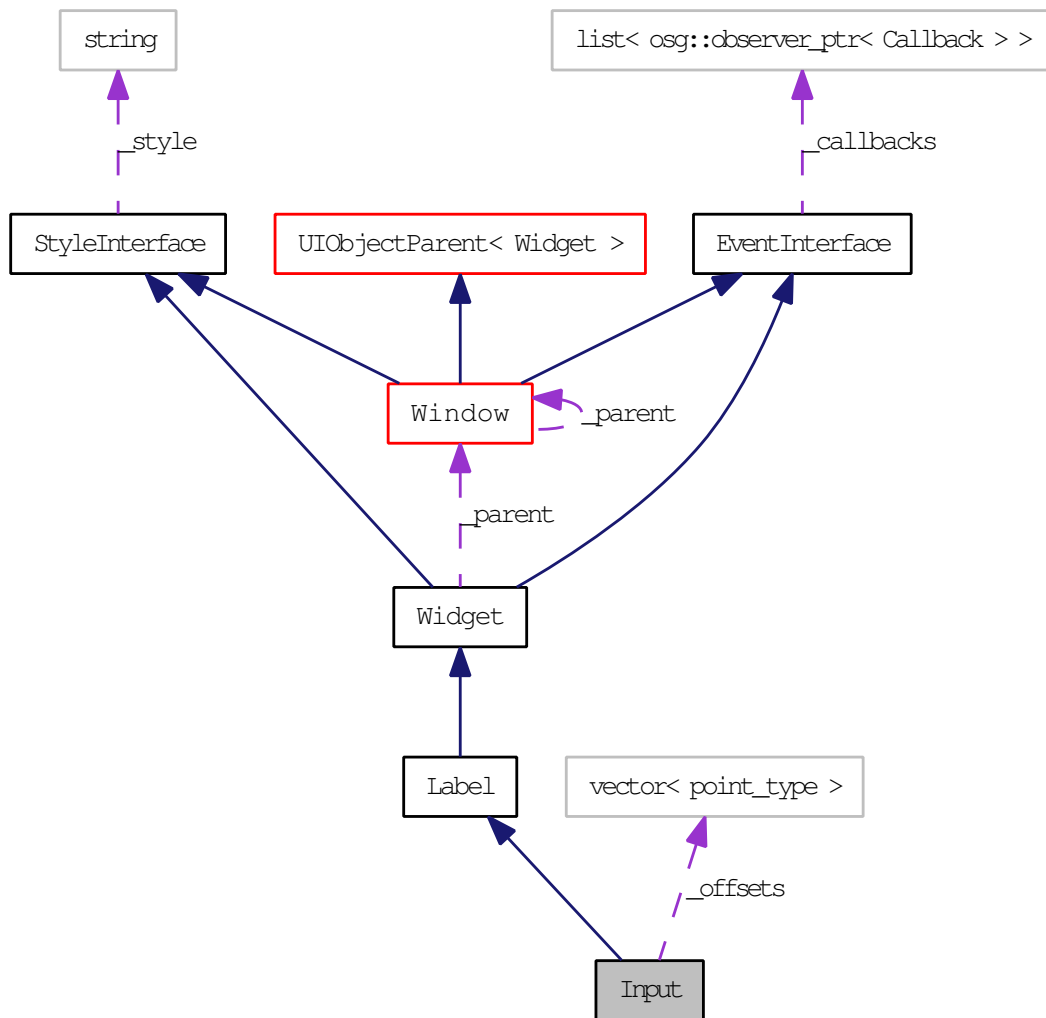
- PdfReader

4.17 Input Class Reference

Inheritance diagram for Input:



Collaboration diagram for Input:



Public Member Functions

- **Input** (const std::string &="", const std::string &="", unsigned int=20)
- unsigned int **calculateBestYOffset** (const std::string &="qgl")
- virtual bool **focus** (**WindowManager** *)
- const osg::Drawable * **getCursor** () const
- osg::Drawable * **getCursor** ()
- **point_type** **getXOffset** () const
- **XYCoord** **getXOffset** () const
- **point_type** **getYOffset** () const
- virtual bool **keyDown** (int, int, **WindowManager** *)
- virtual bool **keyUp** (int, int, **WindowManager** *)
- virtual void **parented** (**Window** *)
- virtual void **positioned** ()
- void **setCursor** (**Widget** *)
- void **setXOffset** (**point_type** xo)
- void **setXYOffset** (**point_type** xo, **point_type** yo)
- void **setYOffset** (**point_type** yo)
- virtual bool **unfocus** (**WindowManager** *)

Protected Member Functions

- void **_calculateCursorOffsets** ()
- virtual void **_calculateSize** (const **XYCoord** &)

Protected Attributes

- `osg::ref_ptr< Widget > _cursor`
- `unsigned int _cursorIndex`
- `unsigned int _index`
- `unsigned int _maxSize`
- `std::vector< point_type > _offsets`
- `unsigned int _size`
- `point_type _xoff`
- `point_type _yoff`

4.17.1 Constructor & Destructor Documentation

4.17.1.1 `Input (const std::string & name = "", const std::string & label = "", unsigned int size = 20)`

4.17.2 Member Function Documentation

4.17.2.1 `void _calculateCursorOffsets () [protected]`

4.17.2.2 `void _calculateSize (const XYCoord & size) [protected, virtual]`

Reimplemented from `Label` (p. 50).

4.17.2.3 `unsigned int calculateBestYOffset (const std::string & s = "qgl")`

4.17.2.4 `bool focus (WindowManager *) [virtual]`

4.17.2.5 `const osg::Drawable* getCursor () const [inline]`

4.17.2.6 `osg::Drawable* getCursor () [inline]`

4.17.2.7 `point_type getXOffset () const [inline]`

4.17.2.8 `XYCoord getXYOffset () const [inline]`

4.17.2.9 `point_type getYOffset () const [inline]`

4.17.2.10 `bool keyDown (int key, int mask, WindowManager *) [virtual]`

4.17.2.11 `bool keyUp (int key, int mask, WindowManager *) [virtual]`

4.17.2.12 `void parented (Window * parent) [virtual]`

Reimplemented from `Label` (p. 50).

4.17.2.13 `void positioned () [virtual]`

Reimplemented from `Label` (p. 50).

4.17.2.14 `void setCursor (Widget *)`

4.17.2.15 `void setXOffset (point_type xo) [inline]`

4.17.2.16 `void setXYOffset (point_type xo, point_type yo) [inline]`

4.17.2.17 `void setYOffset (point_type yo) [inline]`

4.17.2.18 `bool unfocus (WindowManager *) [virtual]`

4.17.3 Member Data Documentation

4.17.3.1 `osg::ref_ptr<Widget> _cursor [protected]`

4.17.3.2 `unsigned int _cursorIndex [protected]`

4.17.3.3 `unsigned int _index [protected]`

Reimplemented from `Widget` (p. 91).

4.17.3.4 `unsigned int _maxSize` [protected]

4.17.3.5 `std::vector<point_type> _offsets` [protected]

4.17.3.6 `unsigned int _size` [protected]

4.17.3.7 `point_type _xoff` [protected]

4.17.3.8 `point_type _yoff` [protected]

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

- `Input`
- `Input.cpp`

4.18 KeyboardHandler Class Reference

Public Member Functions

- **KeyboardHandler** (**WindowManager** *)
- virtual bool **handle** (const osgGA::GUIEventAdapter &, osgGA::GUIActionAdapter &, osg::Object *, osg::NodeVisitor *)

Protected Attributes

- osg::observer_ptr< **WindowManager** > **_wm**

4.18.1 Constructor & Destructor Documentation

4.18.1.1 KeyboardHandler (WindowManager * *wm*)

4.18.2 Member Function Documentation

4.18.2.1 bool handle (const osgGA::GUIEventAdapter & *gea*, osgGA::GUIActionAdapter & *gaa*, osg::Object * *obj*, osg::NodeVisitor * *nv*) [virtual]

4.18.3 Member Data Documentation

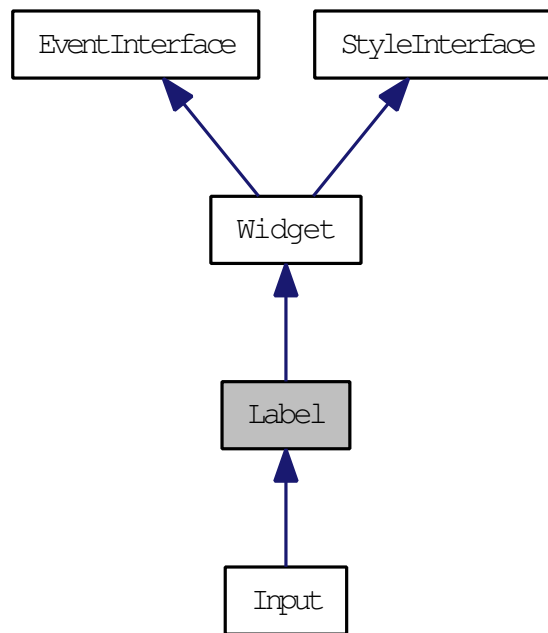
4.18.3.1 osg::observer_ptr<WindowManager> **_wm** [protected]

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

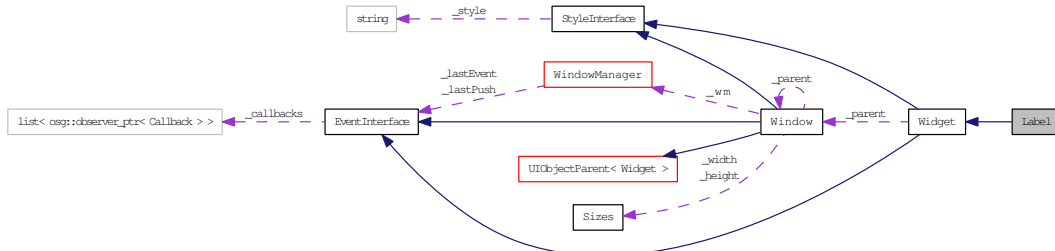
- **ViewerEventHandlers**
- **ViewerEventHandlers.cpp**

4.19 Label Class Reference

Inheritance diagram for Label:



Collaboration diagram for Label:



Public Member Functions

- **Label** (const **Label** &, const osg::CopyOp &)
- **Label** (const std::string &="", const std::string &="")
- std::string **getLabel** () const
- const osgText::Text * **getText** () const
- osgText::Text * **getText** ()
- **XYCoord** **getTextSize** () const
- **META_Object** (osgWidget, **Label**)
- virtual void **parented** (**Window** *)
- virtual void **positioned** ()
- void **setFont** (const std::string &)
- void **setFontColor** (point_type r, point_type g, point_type b, point_type a)
- void **setFontColor** (const **Color** &)
- void **setFontSize** (unsigned int)
- void **setLabel** (const osgText::String &)
- void **setLabel** (const std::string &)
- void **setShadow** (point_type)
- virtual void **unparented** (**Window** *)

Protected Member Functions

- virtual void `_calculateSize` (const `XYCoord` &)

Protected Attributes

- `osg::ref_ptr< osgText::Text > _text`
- unsigned int `_textIndex`

4.19.1 Constructor & Destructor Documentation

4.19.1.1 `Label` (const std::string & *name* = "", const std::string & *label* = "")

4.19.1.2 `Label` (const `Label` & *label*, const `osg::CopyOp` & *co*)

4.19.2 Member Function Documentation

4.19.2.1 void `_calculateSize` (const `XYCoord` & *size*) [protected, virtual]

Reimplemented in `Input` (p. 46).

4.19.2.2 std::string `getLabel` () const [inline]

4.19.2.3 const `osgText::Text*` `getText` () const [inline]

4.19.2.4 `osgText::Text*` `getText` () [inline]

4.19.2.5 `XYCoord` `getTextSize` () const

4.19.2.6 `META_Object` (`osgWidget`, `Label`)

4.19.2.7 void `parented` (`Window * parent`) [virtual]

Reimplemented from `Widget` (p. 89).

Reimplemented in `Input` (p. 46).

4.19.2.8 void `positioned` () [virtual]

Reimplemented from `Widget` (p. 89).

Reimplemented in `Input` (p. 46).

4.19.2.9 void `setFont` (const std::string & *font*)

4.19.2.10 void `setFontColor` (point_type *r*, point_type *g*, point_type *b*, point_type *a*) [inline]

4.19.2.11 void `setFontColor` (const `Color` & *c*)

4.19.2.12 void `setFontSize` (unsigned int *size*)

4.19.2.13 void `setLabel` (const `osgText::String` & *label*)

4.19.2.14 void `setLabel` (const std::string & *label*)

4.19.2.15 void `setShadow` (point_type *offset*)

4.19.2.16 void `unparented` (`Window * parent`) [virtual]

Reimplemented from `Widget` (p. 91).

4.19.3 Member Data Documentation

4.19.3.1 `osg::ref_ptr<osgText::Text> _text` [protected]

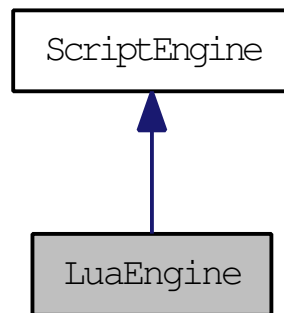
4.19.3.2 unsigned int `_textIndex` [protected]

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

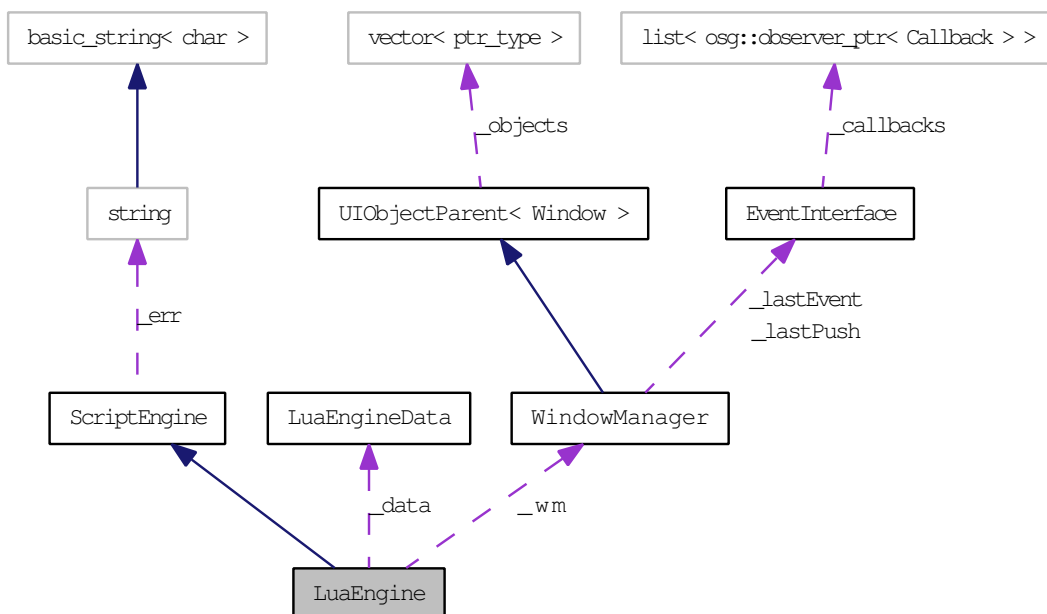
- `Label`
- `Label.cpp`

4.20 LuaEngine Class Reference

Inheritance diagram for LuaEngine:



Collaboration diagram for LuaEngine:



Public Member Functions

- `LuaEngine (WindowManager *w=0)`
- `bool close ()`
- `bool eval (const std::string &)`
- `bool initialize ()`
- `bool runFile (const std::string &)`

Protected Attributes

- `LuaEngineData * _data`
- `WindowManager * _wm`

4.20.1 Constructor & Destructor Documentation

4.20.1.1 LuaEngine (WindowManager * *wm* = 0)

4.20.2 Member Function Documentation

4.20.2.1 bool close () [virtual]

Reimplemented from **ScriptEngine** (p. 67).

4.20.2.2 bool eval (const std::string & *code*) [virtual]

Reimplemented from **ScriptEngine** (p. 67).

4.20.2.3 bool initialize () [virtual]

Reimplemented from **ScriptEngine** (p. 68).

4.20.2.4 bool runFile (const std::string & *filePath*) [virtual]

Reimplemented from **ScriptEngine** (p. 68).

4.20.3 Member Data Documentation

4.20.3.1 LuaEngineData* *_data* [protected]

4.20.3.2 WindowManager* *_wm* [protected]

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

- **Lua**
- **Lua.cpp**

4.21 LuaEngineData Struct Reference

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

- **Lua.cpp**

4.22 MouseHandler Class Reference

Public Types

- typedef bool(MouseHandler::* **MouseButton**)(float, float, int)
- typedef bool(WindowManager::* **MouseEvent**)(float, float)

Public Member Functions

- **MouseHandler**(WindowManager *)
- virtual bool **handle**(const osgGA::GUIEventAdapter &, osgGA::GUIActionAdapter &, osg::Object *, osg::NodeVisitor *)

Protected Member Functions

- bool **_doMouseEvent**(float, float, **MouseEvent**)
- bool **_handleMouseDoubleClick**(float, float, int)
- bool **_handleMouseDown**(float, float, int)
- bool **_handleMouseMove**(float, float, int)
- bool **_handleMousePush**(float, float, int)
- bool **_handleMouseRelease**(float, float, int)
- bool **_handleMouseScroll**(float, float, int)
- **MouseButton** **_isMouseEvent**(osgGA::GUIEventAdapter::EventType) const

Protected Attributes

- osg::observer_ptr< **WindowManager** > **_wm**

4.22.1 Member Typedef Documentation

4.22.1.1 typedef bool(MouseHandler::* **MouseButton**)(float, float, int)

4.22.1.2 typedef bool(WindowManager::* **MouseEvent**)(float, float)

4.22.2 Constructor & Destructor Documentation

4.22.2.1 **MouseHandler**(WindowManager * *wm*)

4.22.3 Member Function Documentation

4.22.3.1 bool **_doMouseEvent**(float *x*, float *y*, **MouseEvent** *me*) [protected]

4.22.3.2 bool **_handleMouseDoubleClick**(float *x*, float *y*, int *button*) [protected]

4.22.3.3 bool **_handleMouseDown**(float *x*, float *y*, int *button*) [protected]

4.22.3.4 bool **_handleMouseMove**(float *x*, float *y*, int *button*) [protected]

4.22.3.5 bool **_handleMousePush**(float *x*, float *y*, int *button*) [protected]

4.22.3.6 bool **_handleMouseRelease**(float *x*, float *y*, int *button*) [protected]

4.22.3.7 bool **_handleMouseScroll**(float *x*, float *y*, int) [protected]

4.22.3.8 **MouseButton** **_isMouseEvent**(osgGA::GUIEventAdapter::EventType *ev*) const [protected]

4.22.3.9 bool **handle**(const osgGA::GUIEventAdapter & *gea*, osgGA::GUIActionAdapter & *gaa*, osg::Object * *obj*, osg::NodeVisitor * *nv*) [virtual]

4.22.4 Member Data Documentation

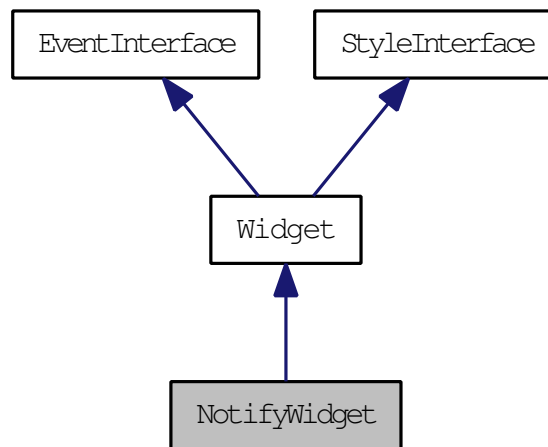
4.22.4.1 osg::observer_ptr< **WindowManager** > **_wm** [protected]

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

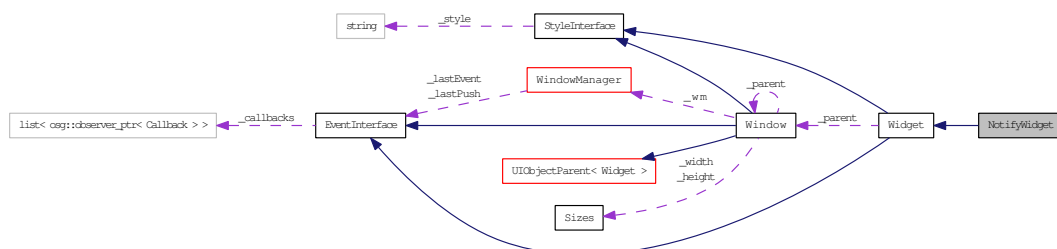
- **ViewerEventHandlers**
- **ViewerEventHandlers.cpp**

4.23 NotifyWidget Struct Reference

Inheritance diagram for NotifyWidget:



Collaboration diagram for NotifyWidget:



Public Member Functions

- **NotifyWidget** (const **NotifyWidget** &widget, const osg::CopyOp &co)
- **NotifyWidget** (const std::string &n="", point_type w=0.0f, point_type h=0.0f)
- bool **focus** (const **WindowManager** *)
- bool **keyPress** (int, int, const **WindowManager** *)
- bool **keyRelease** (int, int, const **WindowManager** *)
- **META_Object** (osgWidget, **NotifyWidget**)
- bool **mouseDrag** (double, double, const **WindowManager** *)
- bool **mouseEnter** (double, double, const **WindowManager** *)
- bool **mouseLeave** (double, double, const **WindowManager** *)
- bool **mouseOver** (double, double, const **WindowManager** *)
- bool **mousePush** (double, double, const **WindowManager** *)
- bool **mouseRelease** (double, double, const **WindowManager** *)
- bool **mouseScroll** (double, double, const **WindowManager** *)
- bool **unfocus** (const **WindowManager** *)

4.23.1 Constructor & Destructor Documentation

4.23.1.1 **NotifyWidget** (const std::string &n = "", point_type w = 0.0f, point_type h = 0.0f) [inline]

4.23.1.2 **NotifyWidget** (const **NotifyWidget** &widget, const osg::CopyOp &co) [inline]

4.23.2 Member Function Documentation

4.23.2.1 bool **focus** (const **WindowManager** *) [inline, virtual]

Reimplemented from **EventInterface** (p. 35).

4.23.2.2 `bool keyPress (int, int, const WindowManager *) [inline]`

4.23.2.3 `bool keyRelease (int, int, const WindowManager *) [inline]`

4.23.2.4 `META_Object (osgWidget, NotifyWidget)`

4.23.2.5 `bool mouseDrag (double, double, const WindowManager *) [inline, virtual]`

Reimplemented from `EventInterface` (p. 35).

4.23.2.6 `bool mouseEnter (double, double, const WindowManager *) [inline, virtual]`

Reimplemented from `EventInterface` (p. 35).

4.23.2.7 `bool mouseLeave (double, double, const WindowManager *) [inline, virtual]`

Reimplemented from `EventInterface` (p. 35).

4.23.2.8 `bool mouseOver (double, double, const WindowManager *) [inline, virtual]`

Reimplemented from `EventInterface` (p. 35).

4.23.2.9 `bool mousePush (double, double, const WindowManager *) [inline, virtual]`

Reimplemented from `EventInterface` (p. 36).

4.23.2.10 `bool mouseRelease (double, double, const WindowManager *) [inline, virtual]`

Reimplemented from `EventInterface` (p. 36).

4.23.2.11 `bool mouseScroll (double, double, const WindowManager *) [inline, virtual]`

Reimplemented from `EventInterface` (p. 36).

4.23.2.12 `bool unfocus (const WindowManager *) [inline, virtual]`

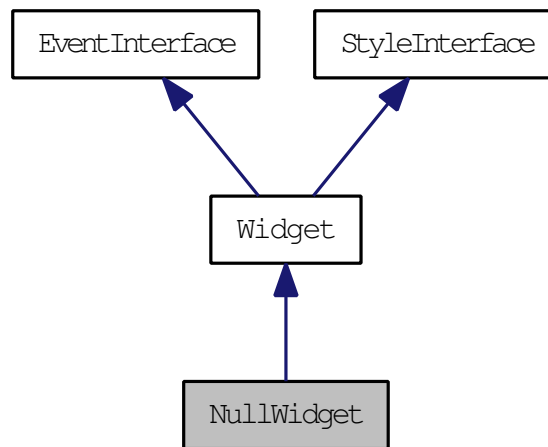
Reimplemented from `EventInterface` (p. 36).

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

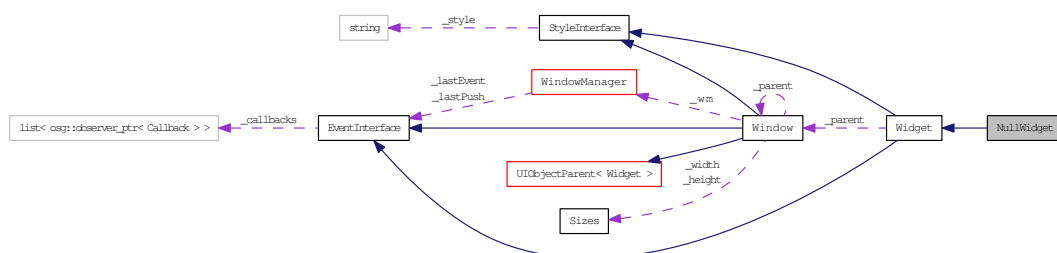
- **Widget**

4.24 NullWidget Struct Reference

Inheritance diagram for NullWidget:



Collaboration diagram for NullWidget:



Public Member Functions

- **NullWidget** (const **NullWidget** &widget, const osg::CopyOp &co)
- **NullWidget** (const std::string &n="", point_type w=0.0f, point_type h=0.0f)
- bool **focus** (const **WindowManager** *)
- bool **keyPress** (int, int, const **WindowManager** *)
- bool **keyRelease** (int, int, const **WindowManager** *)
- **META_Object** (osgWidget, **NullWidget**)
- bool **mouseDrag** (double, double, const **WindowManager** *)
- bool **mouseEnter** (double, double, const **WindowManager** *)
- bool **mouseLeave** (double, double, const **WindowManager** *)
- bool **mouseOver** (double, double, const **WindowManager** *)
- bool **mousePush** (double, double, const **WindowManager** *)
- bool **mouseRelease** (double, double, const **WindowManager** *)
- bool **mouseScroll** (double, double, const **WindowManager** *)
- bool **unfocus** (const **WindowManager** *)

4.24.1 Constructor & Destructor Documentation

4.24.1.1 **NullWidget** (const std::string &n = "", point_type w = 0.0f, point_type h = 0.0f) [inline]

4.24.1.2 **NullWidget** (const **NullWidget** &widget, const osg::CopyOp &co) [inline]

4.24.2 Member Function Documentation

4.24.2.1 **bool focus** (const **WindowManager** *) [inline, virtual]

Reimplemented from **EventInterface** (p. 35).

4.24.2.2 `bool keyPress (int, int, const WindowManager *) [inline]`

4.24.2.3 `bool keyRelease (int, int, const WindowManager *) [inline]`

4.24.2.4 `META_Object (osgWidget, NullWidget)`

4.24.2.5 `bool mouseDrag (double, double, const WindowManager *) [inline, virtual]`

Reimplemented from `EventInterface` (p. 35).

4.24.2.6 `bool mouseEnter (double, double, const WindowManager *) [inline, virtual]`

Reimplemented from `EventInterface` (p. 35).

4.24.2.7 `bool mouseLeave (double, double, const WindowManager *) [inline, virtual]`

Reimplemented from `EventInterface` (p. 35).

4.24.2.8 `bool mouseOver (double, double, const WindowManager *) [inline, virtual]`

Reimplemented from `EventInterface` (p. 35).

4.24.2.9 `bool mousePush (double, double, const WindowManager *) [inline, virtual]`

Reimplemented from `EventInterface` (p. 36).

4.24.2.10 `bool mouseRelease (double, double, const WindowManager *) [inline, virtual]`

Reimplemented from `EventInterface` (p. 36).

4.24.2.11 `bool mouseScroll (double, double, const WindowManager *) [inline, virtual]`

Reimplemented from `EventInterface` (p. 36).

4.24.2.12 `bool unfocus (const WindowManager *) [inline, virtual]`

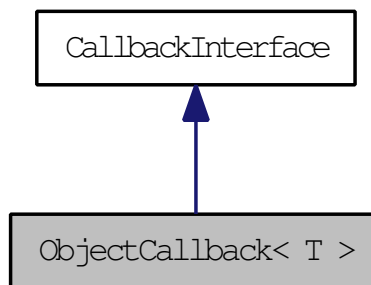
Reimplemented from `EventInterface` (p. 36).

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

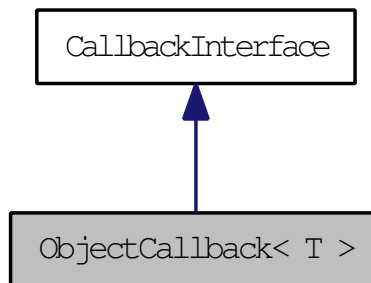
- **Widget**

4.25 ObjectCallback< T > Class Template Reference

Inheritance diagram for ObjectCallback< T >:



Collaboration diagram for ObjectCallback< T >:



Public Types

- `typedef bool(T::* ObjectCallbackType)(Event &)`

Public Member Functions

- `ObjectCallback(ObjectCallbackType callback, T *obj)`
- `virtual bool operator()(Event &ev)`

```
template<typename T> class osgWidget::ObjectCallback< T >
```

4.25.1 Member Typedef Documentation

4.25.1.1 `typedef bool(T::* ObjectCallbackType)(Event &)`

4.25.2 Constructor & Destructor Documentation

4.25.2.1 `ObjectCallback(ObjectCallbackType callback, T * obj)` [inline]

4.25.3 Member Function Documentation

4.25.3.1 `virtual bool operator()(Event & ev)` [inline, virtual]

Implements `CallbackInterface` (p. 24).

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

- `EventInterface`

4.26 PdfImage Class Reference

Pure virtual base class for interfacing with implementation of PDF reader.

Public Member Functions

- **PdfImage** ()
- const osg::Vec4 & **getBackgroundColor** () const
- int **getNextPageKeyEvent** () const
- virtual int **getNumOfPages** ()=0
- int **getPageNum** () const
- int **getPreviousPageKeyEvent** () const
- bool **next** ()
- virtual bool **page** (int pageNum)=0
- bool **previous** ()
- void **setBackgroundColor** (const osg::Vec4 &backgroundColor)
- void **setNextPageKeyEvent** (int key)
- void **setPreviousPageKeyEvent** (int key)

Protected Member Functions

- virtual ~**PdfImage** ()

Protected Attributes

- osg::Vec4 **_backgroundColor**
- int **_nextPageKeyEvent**
- int **_pageNum**
- int **_previousPageKeyEvent**

4.26.1 Detailed Description

Pure virtual base class for interfacing with implementation of PDF reader.

4.26.2 Constructor & Destructor Documentation

4.26.2.1 PdfImage () [inline]

4.26.2.2 virtual ~PdfImage () [inline, protected, virtual]

4.26.3 Member Function Documentation

4.26.3.1 const osg::Vec4& getBackgroundColor () const [inline]

4.26.3.2 int getNextPageKeyEvent () const [inline]

4.26.3.3 virtual int getNumOfPages () [pure virtual]

4.26.3.4 int getPageNum () const [inline]

4.26.3.5 int getPreviousPageKeyEvent () const [inline]

4.26.3.6 bool next () [inline]

4.26.3.7 virtual bool page (int *pageNum*) [pure virtual]

4.26.3.8 bool previous () [inline]

4.26.3.9 void setBackgroundColor (const osg::Vec4 & *backgroundColor*) [inline]

4.26.3.10 void setNextPageKeyEvent (int *key*) [inline]

4.26.3.11 void setPreviousPageKeyEvent (int *key*) [inline]

4.26.4 Member Data Documentation

4.26.4.1 osg::Vec4 *_backgroundColor* [protected]

4.26.4.2 int *_nextPageKeyEvent* [protected]

4.26.4.3 int *_pageNum* [protected]

4.26.4.4 int *_previousPageKeyEvent* [protected]

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

- PdfReader

4.27 PdfReader Class Reference

Convenience class that provides a interactive quad that can be placed directly in the scene.

Public Member Functions

- **PdfReader** (const std::string &filename, const **GeometryHints** &hints=**GeometryHints**())
- **PdfReader** ()
- bool **assign** (**PdfImage** *pdfImage, const **GeometryHints** &hints=**GeometryHints**())
- bool **next** ()
- bool **open** (const std::string &filename, const **GeometryHints** &hints=**GeometryHints**())
- bool **page** (int pageNum)
- bool **previous** ()

Protected Attributes

- osg::ref_ptr< **PdfImage** > **_pdfImage**

4.27.1 Detailed Description

Convenience class that provides a interactive quad that can be placed directly in the scene.

4.27.2 Constructor & Destructor Documentation

4.27.2.1 PdfReader () [inline]

4.27.2.2 PdfReader (const std::string & *filename*, const **GeometryHints** & *hints* = **GeometryHints**())

4.27.3 Member Function Documentation

4.27.3.1 bool assign (**PdfImage** * *pdfImage*, const **GeometryHints** & *hints* = **GeometryHints**())

4.27.3.2 bool next ()

4.27.3.3 bool open (const std::string & *filename*, const **GeometryHints** & *hints* = **GeometryHints**())

4.27.3.4 bool page (int *pageNum*)

4.27.3.5 bool previous ()

4.27.4 Member Data Documentation

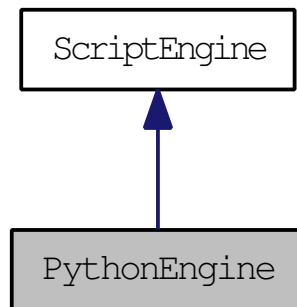
4.27.4.1 osg::ref_ptr<**PdfImage**> **_pdfImage** [protected]

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

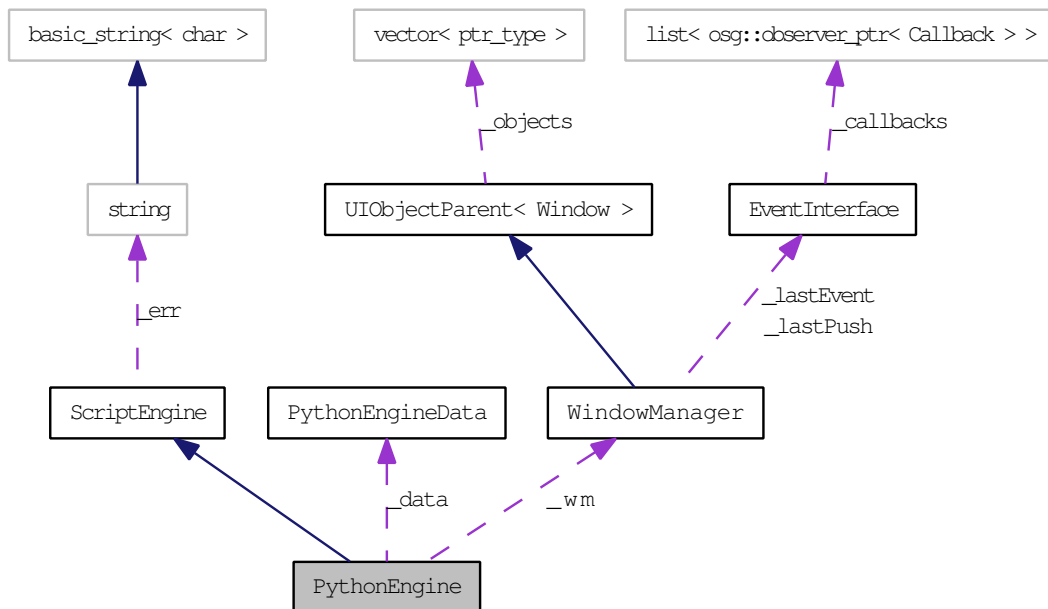
- **PdfReader**
- **PdfReader.cpp**

4.28 PythonEngine Class Reference

Inheritance diagram for PythonEngine:



Collaboration diagram for PythonEngine:



Public Member Functions

- **PythonEngine** (**WindowManager** *wm* = 0)
- **bool close** ()
- **bool eval** (const std::string &)
- **bool initialize** ()
- **bool runFile** (const std::string &)

Protected Attributes

- **PythonEngineData** * **_data**
- **WindowManager** * **_wm**

4.28.1 Constructor & Destructor Documentation

4.28.1.1 PythonEngine (WindowManager * *wm* = 0)

4.28.2 Member Function Documentation

4.28.2.1 **bool close** () [virtual]

Reimplemented from **ScriptEngine** (p. 67).

4.28.2.2 bool eval (const std::string & code) [virtual]

Reimplemented from **ScriptEngine** (p. 67).

4.28.2.3 bool initialize () [virtual]

Reimplemented from **ScriptEngine** (p. 68).

4.28.2.4 bool runFile (const std::string & filePath) [virtual]

Reimplemented from **ScriptEngine** (p. 68).

4.28.3 Member Data Documentation**4.28.3.1 PythonEngineData* _data [protected]****4.28.3.2 WindowManager* _wm [protected]**

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

- **Python**
- **Python.cpp**

4.29 PythonEngineData Struct Reference

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

- **Python.cpp**

4.30 ResizeHandler Class Reference

Public Member Functions

- **ResizeHandler** (**WindowManager** *, **osg::Camera** *=0)
- virtual bool **handle** (const **osgGA::GUIEventAdapter** &, **osgGA::GUIActionAdapter** &, **osg::Object** *, **osg::NodeVisitor** *)

Protected Attributes

- **osg::observer_ptr**< **osg::Camera** > **_camera**
- **osg::observer_ptr**< **WindowManager** > **_wm**

4.30.1 Constructor & Destructor Documentation

4.30.1.1 **ResizeHandler** (**WindowManager** * *wm*, **osg::Camera** * *camera* = 0)

4.30.2 Member Function Documentation

4.30.2.1 bool **handle** (const **osgGA::GUIEventAdapter** & *gea*, **osgGA::GUIActionAdapter** & *gaa*, **osg::Object** * *obj*, **osg::NodeVisitor** * *nv*) [virtual]

4.30.3 Member Data Documentation

4.30.3.1 **osg::observer_ptr**<**osg::Camera**> **_camera** [protected]

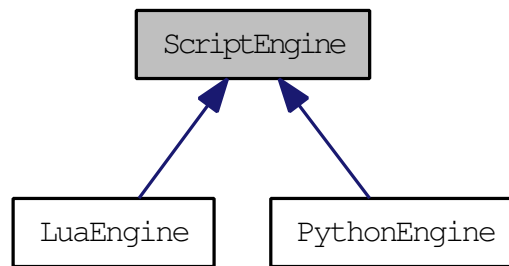
4.30.3.2 **osg::observer_ptr**<**WindowManager**> **_wm** [protected]

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

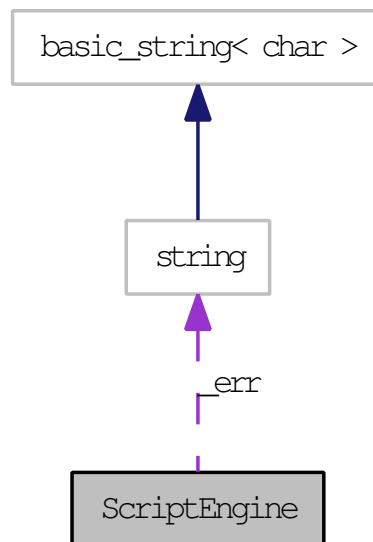
- **ViewerEventHandlers**
- **ViewerEventHandlers.cpp**

4.31 ScriptEngine Class Reference

Inheritance diagram for ScriptEngine:



Collaboration diagram for ScriptEngine:



Public Member Functions

- virtual bool **close** ()
- virtual bool **eval** (const std::string &)
- virtual const std::string & **getLastErrorText** () const
- virtual bool **initialize** ()
- virtual bool **runFile** (const std::string &)

Protected Attributes

- std::string **_err**

4.31.1 Member Function Documentation

4.31.1.1 virtual bool close () [inline, virtual]

Reimplemented in **LuaEngine** (p. 52), and **PythonEngine** (p. 63).

4.31.1.2 virtual bool eval (const std::string &) [inline, virtual]

Reimplemented in **LuaEngine** (p. 52), and **PythonEngine** (p. 64).

4.31.1.3 virtual const std::string& getLastErrorText () const [inline, virtual]

4.31.1.4 virtual bool initialize () [inline, virtual]

Reimplemented in **LuaEngine** (p. 52), and **PythonEngine** (p. 64).

4.31.1.5 virtual bool runFile (const std::string &) [inline, virtual]

Reimplemented in **LuaEngine** (p. 52), and **PythonEngine** (p. 64).

4.31.2 Member Data Documentation

4.31.2.1 std::string_err [protected]

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

- **ScriptEngine**

4.32 Sizes Struct Reference

Public Member Functions

- **Sizes** (`point_type c=-1.0f`, `point_type m=-1.0f`)

Public Attributes

- `point_type current`
- `point_type minimum`

4.32.1 Constructor & Destructor Documentation

4.32.1.1 **Sizes** (`point_type c = -1.0f`, `point_type m = -1.0f`) [`inline`]

4.32.2 Member Data Documentation

4.32.2.1 `point_type current`

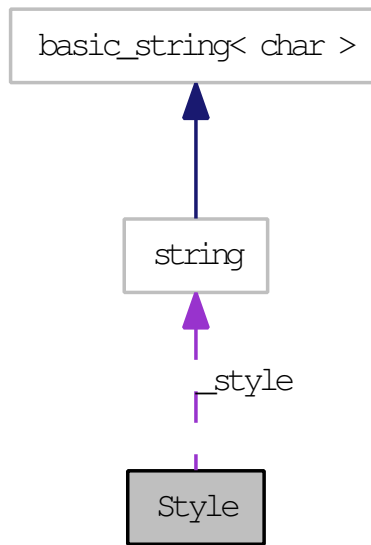
4.32.2.2 `point_type minimum`

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

- **Window**

4.33 Style Class Reference

Collaboration diagram for Style:



Public Member Functions

- **Style** (const **Style** &, const osg::CopyOp &)
- **Style** (const std::string &="", const std::string &="")
- virtual bool **applyStyle** (**Canvas** *, **Reader**)
- virtual bool **applyStyle** (**Frame::Border** *, **Reader**)
- virtual bool **applyStyle** (**Frame::Corner** *, **Reader**)
- virtual bool **applyStyle** (**Box** *, **Reader**)
- virtual bool **applyStyle** (**Window::EmbeddedWindow** *, **Reader**)
- virtual bool **applyStyle** (**Window** *, **Reader**)
- virtual bool **applyStyle** (**Input** *, **Reader**)
- virtual bool **applyStyle** (**Label** *, **Reader**)
- virtual bool **applyStyle** (**Widget** *, **Reader**)
- const std::string & **getStyle** () const
- std::string & **getStyle** ()
- **META_Object** (osgWidget, **Style**)
- void **setStyle** (const std::string &style)

Static Public Member Functions

- static **Widget::CoordinateMode** **strToCoordMode** (const std::string &)
- static bool **strToFill** (const std::string &)
- static **Widget::HorizontalAlignment** **strToHAlign** (const std::string &)
- static **Widget::Layer** **strToLayer** (const std::string &)
- static **Widget::VerticalAlignment** **strToVAlign** (const std::string &)

Protected Member Functions

- bool **_match** (const char *seq, **Reader** r)

Protected Attributes

- std::string **_style**

4.33.1 Constructor & Destructor Documentation

4.33.1.1 `Style (const std::string & name = "", const std::string & style = "")`

4.33.1.2 `Style (const Style & style, const osg::CopyOp & co)`

4.33.2 Member Function Documentation

4.33.2.1 `bool _match (const char * seq, Reader r) [inline, protected]`

4.33.2.2 `bool applyStyle (Canvas * label, Reader r) [virtual]`

4.33.2.3 `bool applyStyle (Frame::Border *, Reader r) [virtual]`

4.33.2.4 `bool applyStyle (Frame::Corner *, Reader r) [virtual]`

4.33.2.5 `bool applyStyle (Box * box, Reader r) [virtual]`

4.33.2.6 `bool applyStyle (Window::EmbeddedWindow *, Reader r) [virtual]`

4.33.2.7 `bool applyStyle (Window * window, Reader r) [virtual]`

4.33.2.8 `bool applyStyle (Input * input, Reader r) [virtual]`

4.33.2.9 `bool applyStyle (Label * label, Reader r) [virtual]`

4.33.2.10 `bool applyStyle (Widget * widget, Reader r) [virtual]`

4.33.2.11 `const std::string& getStyle () const [inline]`

4.33.2.12 `std::string& getStyle () [inline]`

4.33.2.13 `META_Object (osgWidget, Style)`

4.33.2.14 `void setStyle (const std::string & style) [inline]`

4.33.2.15 `Widget::CoordinateMode strToCoordMode (const std::string & coordmode) [static]`

4.33.2.16 `bool strToFill (const std::string & fill) [static]`

4.33.2.17 `Widget::HorizontalAlignment strToHAlign (const std::string & halign) [static]`

4.33.2.18 `Widget::Layer strToLayer (const std::string & layer) [static]`

4.33.2.19 `Widget::VerticalAlignment strToVAlign (const std::string & valign) [static]`

4.33.3 Member Data Documentation

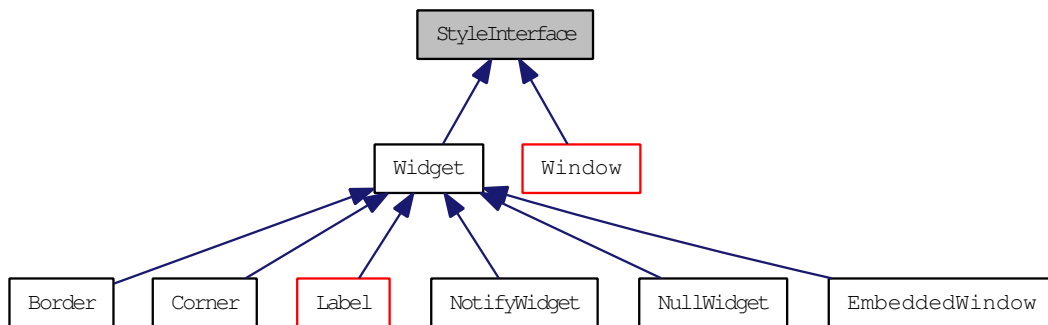
4.33.3.1 `std::string _style [protected]`

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

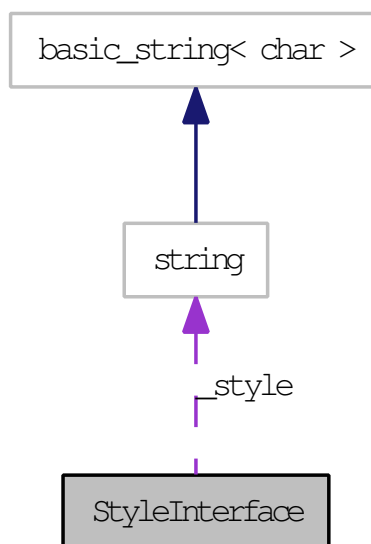
- `StyleManager`
- `StyleManager.cpp`

4.34 StyleInterface Class Reference

Inheritance diagram for StyleInterface:



Collaboration diagram for StyleInterface:



Public Member Functions

- **StyleInterface** (const **StyleInterface** &si)
- **StyleInterface** ()
- const std::string & **getStyle** () const
- std::string & **getStyle** ()
- void **setStyle** (const std::string &style)

4.34.1 Constructor & Destructor Documentation

4.34.1.1 **StyleInterface** () [inline]

4.34.1.2 **StyleInterface** (const **StyleInterface** & si) [inline]

4.34.2 Member Function Documentation

4.34.2.1 const std::string& **getStyle** () const [inline]

4.34.2.2 std::string& **getStyle** () [inline]

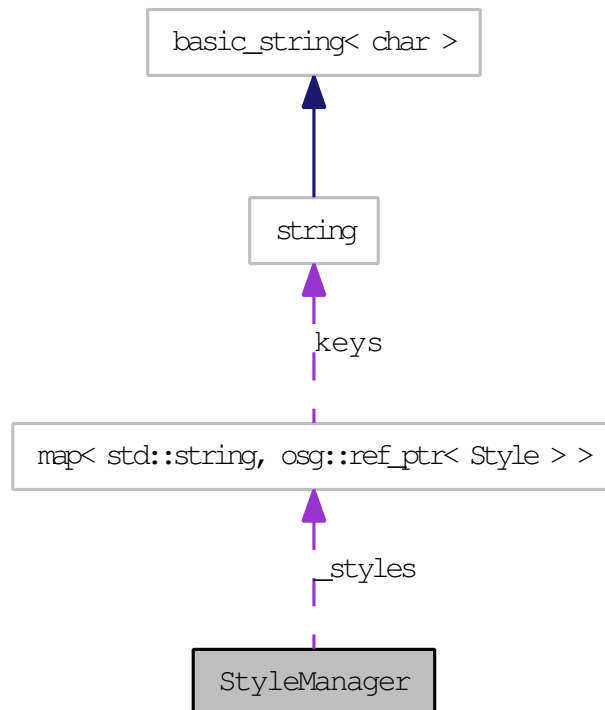
4.34.2.3 void **setStyle** (const std::string & style) [inline]

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

- **StyleInterface**

4.35 StyleManager Class Reference

Collaboration diagram for StyleManager:



Public Types

- typedef Styles::const_iterator **ConstIterator**
- typedef Styles::iterator **Iterator**
- typedef std::map< std::string, osg::ref_ptr< **Style** > > **Styles**

Public Member Functions

- **StyleManager** (const **StyleManager** &, const osg::CopyOp &)
- **StyleManager** ()
- bool **addStyle** (**Style** *)
- bool **applyStyles** (**Window** *window)
- bool **applyStyles** (**Widget** *widget)
- **META_Object** (osgWidget, **StyleManager**)

4.35.1 Member Typedef Documentation

4.35.1.1 typedef Styles::const_iterator ConstIterator

4.35.1.2 typedef Styles::iterator Iterator

4.35.1.3 typedef std::map<std::string, osg::ref_ptr<Style> > Styles

4.35.2 Constructor & Destructor Documentation

4.35.2.1 StyleManager ()

4.35.2.2 StyleManager (const StyleManager & *manager*, const osg::CopyOp & *co*)

4.35.3 Member Function Documentation

4.35.3.1 bool addStyle (Style * *style*)

4.35.3.2 bool applyStyles (Window * *window*) [inline]

4.35.3.3 bool applyStyles (Widget * *widget*) [inline]

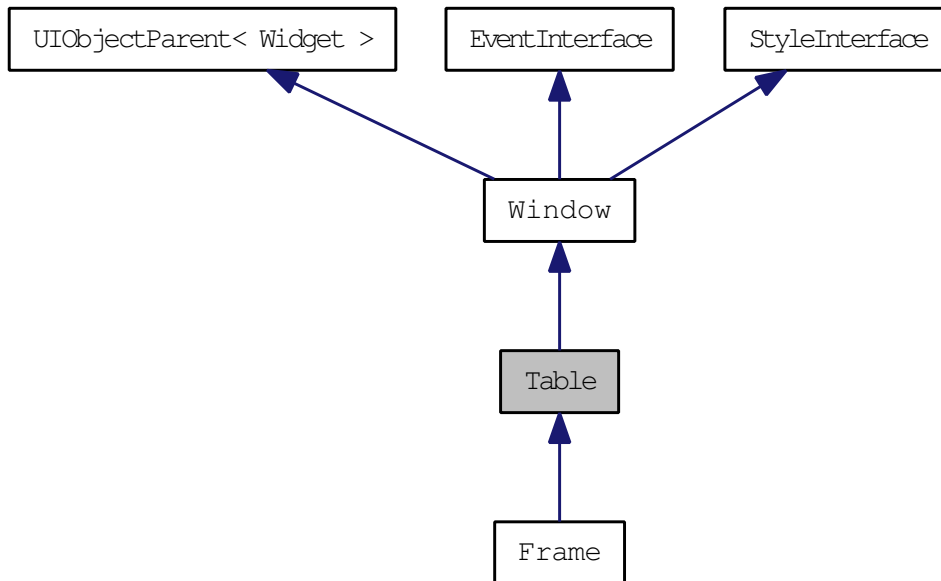
4.35.3.4 META_Object (osgWidget, StyleManager)

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

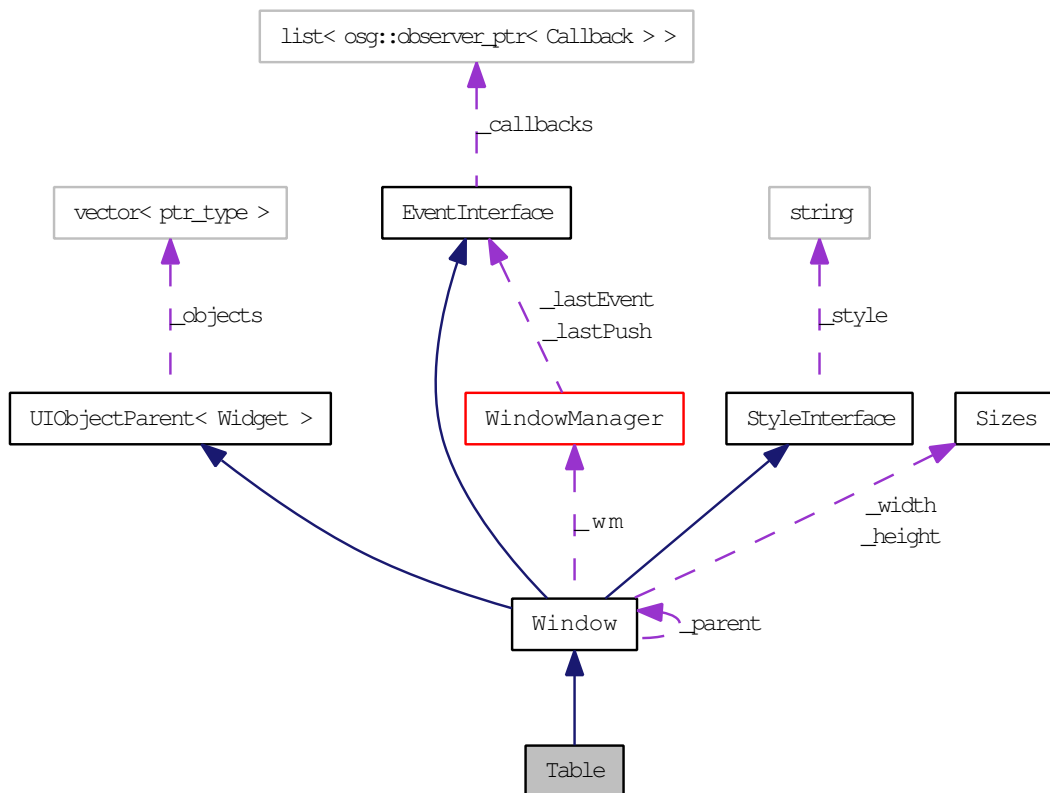
- StyleManager
- StyleManager.cpp

4.36 Table Class Reference

Inheritance diagram for Table:



Collaboration diagram for Table:



Public Types

- typedef std::vector< point_type > CellSizes

Public Member Functions

- **Table** (const **Table** &, const osg::CopyOp &)
- **Table** (const std::string &="", unsigned int=0, unsigned int=0)
- void **addHeightToRow** (unsigned int, **point_type**)
- virtual bool **addWidget** (**Widget** *, unsigned int, unsigned int)
- virtual bool **addWidget** (**Widget** *)
- void **addWidthToColumn** (unsigned int, **point_type**)
- const **Widget** * **getByRowCol** (unsigned int row, unsigned int col) const
- **Widget** * **getByRowCol** (unsigned int row, unsigned int col)
- void **getColumnMinWidths** (**CellSizes** &) const
- void **getColumnWidths** (**CellSizes** &) const
- void **getRowHeights** (**CellSizes** &) const
- void **getRowMinHeights** (**CellSizes** &) const
- bool **isColumnHorizontallyFillable** (unsigned int) const
- bool **isRowVerticallyFillable** (unsigned int) const
- **META_Object** (osgWidget, **Table**)

Protected Member Functions

- unsigned int **_calculateIndex** (unsigned int, unsigned int) const
- void **_getColumns** (**CellSizes** &, **Getter**) const
- virtual **Sizes** **_getHeightImplementation** () const
- void **_getRows** (**CellSizes** &, **Getter**) const
- virtual **Sizes** **_getWidthImplementation** () const
- virtual void **_resizeImplementation** (**point_type**, **point_type**)

Protected Attributes

- unsigned int **_cols**
- unsigned int **_lastColAdd**
- unsigned int **_lastRowAdd**
- unsigned int **_rows**

4.36.1 Member Typedef Documentation

4.36.1.1 typedef std::vector<**point_type**> **CellSizes**

4.36.2 Constructor & Destructor Documentation

4.36.2.1 **Table** (const std::string & *name* = "", unsigned int *rows* = 0, unsigned int *cols* = 0)

4.36.2.2 **Table** (const **Table** & *table*, const osg::CopyOp & *co*)

4.36.3 Member Function Documentation

4.36.3.1 unsigned int **_calculateIndex** (unsigned int *row*, unsigned int *col*) const [protected]

4.36.3.2 void **_getColumns** (**CellSizes** & *cols*, **Getter** *get*) const [protected]

4.36.3.3 **Window::Sizes** **_getHeightImplementation** () const [protected, virtual]

Reimplemented from **Window** (p. 97).

4.36.3.4 void **_getRows** (**CellSizes** & *rows*, **Getter** *get*) const [protected]

4.36.3.5 **Window::Sizes** **_getWidthImplementation** () const [protected, virtual]

Reimplemented from **Window** (p. 98).

4.36.3.6 void **_resizeImplementation** (**point_type** *width*, **point_type** *height*) [protected, virtual]

Implements **Window** (p. 98).

4.36.3.7 void addHeightToRow (unsigned int *row*, point_type *height*)

4.36.3.8 bool addWidget (Widget * *widget*, unsigned int *row*, unsigned int *col*) [virtual]

4.36.3.9 bool addWidget (Widget * *widget*) [virtual]

Reimplemented from Window (p. 99).

4.36.3.10 void addWidthToColumn (unsigned int *col*, point_type *width*)

4.36.3.11 const Widget* getByRowCol (unsigned int *row*, unsigned int *col*) const [inline]

4.36.3.12 Widget* getByRowCol (unsigned int *row*, unsigned int *col*) [inline]

4.36.3.13 void getColumnMinWidths (CellSizes & *colMinWidths*) const

4.36.3.14 void getColumnWidths (CellSizes & *colWidths*) const

4.36.3.15 void getRowHeights (CellSizes & *rowHeights*) const

4.36.3.16 void getRowMinHeights (CellSizes & *rowMinHeights*) const

4.36.3.17 bool isColumnHorizontallyFillable (unsigned int *col*) const

4.36.3.18 bool isRowVerticallyFillable (unsigned int *row*) const

4.36.3.19 META_Object (osgWidget, Table)

4.36.4 Member Data Documentation

4.36.4.1 unsigned int *_cols* [protected]

4.36.4.2 unsigned int *_lastColAdd* [protected]

4.36.4.3 unsigned int *_lastRowAdd* [protected]

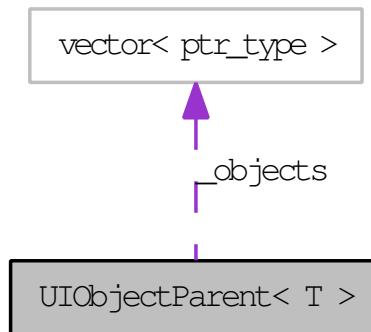
4.36.4.4 unsigned int *_rows* [protected]

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

- Table
- Table.cpp

4.37 UIObjectParent< T > Class Template Reference

Collaboration diagram for UIObjectParent< T >:



Public Types

- typedef Vector::const_iterator **ConstIterator**
- typedef Vector::iterator **Iterator**
- typedef T **object_type**
- typedef osg::observer_ptr< **object_type** > **ptr_type**
- typedef std::vector< **ptr_type** > **Vector**

Public Member Functions

- **ConstIterator begin** () const
- **Iterator begin** ()
- **ConstIterator end** () const
- **Iterator end** ()
- const **object_type** * **getByIndex** (unsigned int index) const
- **object_type** * **getByIndex** (unsigned int index)
- const **object_type** * **getByName** (const std::string &name) const
- **object_type** * **getByName** (const std::string &name)
- unsigned int **getNumObjects** () const
- const **Vector** & **getObjects** () const
- **Vector** & **getObjects** ()
- Vector::size_type **size** () const

Protected Member Functions

- bool **_remove** (**object_type** *obj)
- bool **_removeByName** (const std::string &name)

Protected Attributes

- **Vector** **_objects**

template<typename T> class osgWidget::UIObjectParent< T >

4.37.1 Member Typedef Documentation

4.37.1.1 typedef Vector::const_iterator ConstIterator

4.37.1.2 typedef Vector::iterator Iterator

4.37.1.3 typedef T object_type

4.37.1.4 typedef osg::observer_ptr<object_type> ptr_type

4.37.1.5 typedef std::vector<ptr_type> Vector

4.37.2 Member Function Documentation

4.37.2.1 bool _remove (object_type * *obj*) [inline, protected]

4.37.2.2 bool _removeByName (const std::string & *name*) [inline, protected]

4.37.2.3 ConstIterator begin () const [inline]

4.37.2.4 Iterator begin () [inline]

4.37.2.5 ConstIterator end () const [inline]

4.37.2.6 Iterator end () [inline]

4.37.2.7 const object_type* getByIndex (unsigned int *index*) const [inline]

4.37.2.8 object_type* getByIndex (unsigned int *index*) [inline]

4.37.2.9 const object_type* getName (const std::string & *name*) const [inline]

4.37.2.10 object_type* getName (const std::string & *name*) [inline]

4.37.2.11 unsigned int getNumObjects () const [inline]

4.37.2.12 const Vector& getObjects () const [inline]

4.37.2.13 Vector& getObjects () [inline]

4.37.2.14 Vector::size_type size () const [inline]

4.37.3 Member Data Documentation

4.37.3.1 Vector _objects [protected]

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

- UIObjectParent

4.38 VncClient Class Reference

Convenience Vnc Client class that provides a interactive quad that can be placed directly in the scene.

Public Member Functions

- **VncClient** (const std::string &hostname, const **GeometryHints** &hints=**GeometryHints**())
- **VncClient** ()
- bool **assign** (**Vnclmage** *vnclmage, const **GeometryHints** &hints=**GeometryHints**())
- void **close** ()
- bool **connect** (const std::string &hostname, const **GeometryHints** &hints=**GeometryHints**())

Protected Attributes

- osg::ref_ptr< **Vnclmage** > **_vnclmage**

4.38.1 Detailed Description

Convenience Vnc Client class that provides a interactive quad that can be placed directly in the scene.

4.38.2 Constructor & Destructor Documentation

4.38.2.1 **VncClient** () [inline]

4.38.2.2 **VncClient** (const std::string & *hostname*, const **GeometryHints** & *hints* = **GeometryHints**())

4.38.3 Member Function Documentation

4.38.3.1 bool **assign** (**Vnclmage** * *vnclmage*, const **GeometryHints** & *hints* = **GeometryHints**())

4.38.3.2 void **close** ()

4.38.3.3 bool **connect** (const std::string & *hostname*, const **GeometryHints** & *hints* = **GeometryHints**())

4.38.4 Member Data Documentation

4.38.4.1 **osg::ref_ptr<Vnclmage> _vnclmage** [protected]

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

- **VncClient**
- **VncClient.cpp**

4.39 Vnclmage Class Reference

Pure virtual base class for **Vnclmage** (p. 82) that is subclassed by vnc plugin to provide the actual implementation.

Public Member Functions

- **Vnclmage** ()
- virtual void **close** ()=0
- virtual bool **connect** (const std::string &hostname)=0

Protected Member Functions

- virtual **~Vnclmage** ()

4.39.1 Detailed Description

Pure virtual base class for **Vnclmage** (p. 82) that is subclassed by vnc plugin to provide the actual implementation.

4.39.2 Constructor & Destructor Documentation

4.39.2.1 **Vnclmage** () [inline]

4.39.2.2 virtual **~Vnclmage** () [inline, protected, virtual]

4.39.3 Member Function Documentation

4.39.3.1 virtual void **close** () [pure virtual]

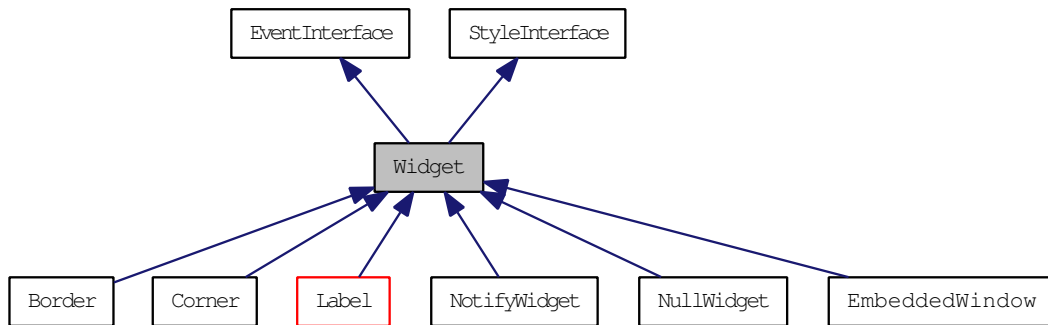
4.39.3.2 virtual bool **connect** (const std::string & *hostname*) [pure virtual]

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

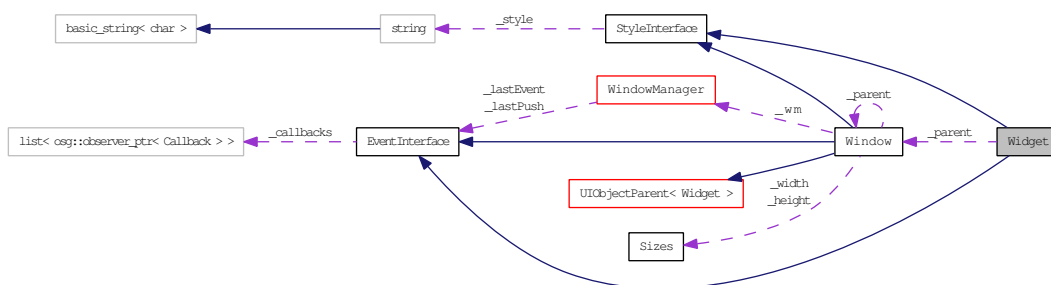
- **VncClient**

4.40 Widget Class Reference

Inheritance diagram for Widget:



Collaboration diagram for Widget:



Public Types

- enum **CoordinateMode** { **CM_ABSOLUTE**, **CM_RELATIVE** }
- enum **Corner** {
LOWER_LEFT = 0, **LOWER_RIGHT** = 1, **UPPER_RIGHT** = 2, **UPPER_LEFT** = 3,
LL = LOWER_LEFT, **LR** = LOWER_RIGHT, **UR** = UPPER_RIGHT, **UL** = UPPER_LEFT,
ALL_CORNERS = 4 }
- enum **HorizontalAlignment** { **HA_CENTER**, **HA_LEFT**, **HA_RIGHT** }
- enum **Layer** {
LAYER_TOP = 100, **LAYER_HIGH** = 75, **LAYER_MIDDLE** = 50, **LAYER_LOW** = 25,
LAYER_BG = 0 }
- enum **VerticalAlignment** { **VA_CENTER**, **VA_TOP**, **VA_BOTTOM** }

Public Member Functions

- **Widget** (const **Widget** &, const osg::CopyOp &)
- **Widget** (const std::string &="", **point_type**=0.0f, **point_type**=0.0f)
- virtual ~**Widget** ()
- void **addColor** (const **Color** &col, **Corner** p=ALL_CORNERS)
- void **addColor** (**color_type**, **color_type**, **color_type**, **color_type**, **Corner**=ALL_CORNERS)
- void **addHeight** (**point_type**)
- void **addOrigin** (const **XYCoord** &xy)
- void **addOrigin** (**point_type**, **point_type**)
- void **addSize** (const **XYCoord** &xy)
- void **addSize** (**point_type**, **point_type**)
- void **addWidth** (**point_type**)
- void **addX** (**point_type**)

- void **addY** (**point_type**)
- bool **canClone** () const
- bool **canFill** () const
- **HorizontalAlignment** **getAlignHorizontal** () const
- **VerticalAlignment** **getAlignVertical** () const
- const **Color** & **getColor** (**Corner**=ALL_CORNERS) const
- **CoordinateMode** **getCoordinateMode** () const
- **Quad** **getDimensions** () const
- **point_type** **getFillAsNumeric** () const
- **point_type** **getHeight** () const
- **point_type** **getHeightTotal** () const
- **Color** **getImageColorAtPointerXY** (double x, double y) const
- **Color** **getImageColorAtXY** (const **XYCoord** &xy) const
- **Color** **getImageColorAtXY** (**point_type** x, **point_type** y) const
- unsigned int **getIndex** () const
- unsigned int **getLayer** () const
- **point_type** **getMinHeight** () const
- **point_type** **getMinHeightTotal** () const
- **point_type** **getMinWidth** () const
- **point_type** **getMinWidthTotal** () const
- **XYCoord** **getOrigin** () const
- **point_type** **getPadBottom** () const
- **point_type** **getPadHorizontal** () const
- **point_type** **getPadLeft** () const
- **point_type** **getPadRight** () const
- **point_type** **getPadTop** () const
- **point_type** **getPadVertical** () const
- const **Window** * **getParent** () const
- **Window** * **getParent** ()
- const **Point** & **getPoint** (**Corner**=ALL_CORNERS) const
- **Point** **getPosition** () const
- **XYCoord** **getSize** () const
- const **TexCoord** & **getTexCoord** (**Corner**=ALL_CORNERS) const
- **point_type** **getWidth** () const
- **point_type** **getWidthTotal** () const
- const **WindowManager** * **getWindowManager** () const
- **WindowManager** * **getWindowManager** ()
- **point_type** **getX** () const
- **point_type** **getY** () const
- **point_type** **getZ** () const
- bool **isManaged** () const
- bool **isPaddingUniform** () const
- bool **isStyled** () const
- **XYCoord** **localXY** (double, double) const
- virtual void **managed** (**WindowManager** *)
- **META_Object** (osgWidget, **Widget**)
- virtual void **parented** (**Window** *)
- virtual void **positioned** ()
- void **setAlignHorizontal** (**HorizontalAlignment** h)
- void **setAlignVertical** (**VerticalAlignment** v)
- void **setCanClone** (bool c)
- void **setCanFill** (bool f)
- void **setColor** (const **Color** &col, **Corner** p=ALL_CORNERS)
- void **setColor** (**color_type**, **color_type**, **color_type**, **color_type**, **Corner**=ALL_CORNERS)
- void **setCoordinateMode** (**CoordinateMode** cm)
- void **setDimensions** (const **Quad** &q, **point_type** z=-1.0f)

- void **setDimensions** (point_type=-1.0f, point_type=-1.0f, point_type=-1.0f, point_type=-1.0f, point_type=-1.0f)
- void **setHeight** (point_type h)
- bool **setImage** (const std::string &, bool=false, bool=false)
- bool **setImage** (osg::Image *, bool=false, bool=false)
- void **setLayer** (Layer l, unsigned int offset=0)
- void **setMinimumSize** (const XYCoord &xy)
- void **setMinimumSize** (point_type width, point_type height)
- void **setOrigin** (const XYCoord &xy)
- void **setOrigin** (point_type x, point_type y)
- void **setPadBottom** (point_type p)
- void **setPadding** (point_type)
- void **setPadLeft** (point_type p)
- void **setPadRight** (point_type p)
- void **setPadTop** (point_type p)
- void **setSize** (const XYCoord &xy)
- void **setSize** (point_type w, point_type h)
- void **setTexCoord** (const XYCoord &xy, Corner p=ALL_CORNERS)
- void **setTexCoord** (texcoord_type, texcoord_type, Corner=ALL_CORNERS)
- void **setTexCoordRegion** (const XYCoord &xy, const XYCoord &wh)
- void **setTexCoordRegion** (point_type x, point_type y, const XYCoord &wh)
- void **setTexCoordRegion** (const XYCoord &xy, point_type w, point_type h)
- void **setTexCoordRegion** (point_type, point_type, point_type, point_type)
- void **setTexCoordWrapHorizontal** ()
- void **setTexCoordWrapVertical** ()
- bool **setTexture** (osg::Texture *, bool=false, bool=false)
- void **setWidth** (point_type w)
- void **setX** (point_type x)
- void **setY** (point_type y)
- void **setZ** (point_type z)
- virtual void **unmanaged** (WindowManager *)
- virtual void **unparented** (Window *)

Protected Member Functions

- point_type **_calculateZ** (unsigned int) const
- const ColorArray * **_cols** () const
- ColorArray * **_cols** ()
- osg::Image * **_getImage** () const
- WindowManager * **_getWindowManager** () const
- const osg::Image * **_image** () const
- osg::Image * **_image** ()
- const TexCoordArray * **_texts** () const
- TexCoordArray * **_texts** ()
- const osg::Texture * **_texture** () const
- osg::Texture * **_texture** ()
- const PointArray * **_verts** () const
- PointArray * **_verts** ()

Protected Attributes

- bool `_canClone`
- bool `_canFill`
- **CoordinateMode** `_coordMode`
- **HorizontalAlignment** `_halign`
- unsigned int `_index`
- bool `_isManaged`
- bool `_isStyled`
- unsigned int `_layer`
- **point_type** `_minHeight`
- **point_type** `_minWidth`
- **point_type** `_padBottom`
- **point_type** `_padLeft`
- **point_type** `_padRight`
- **point_type** `_padTop`
- **Window** * `_parent`
- **Quad** `_relCoords`
- **VerticalAlignment** `_valign`

Static Protected Attributes

- static osg::ref_ptr< **PointArray** > `_norms`

Friends

- class **Window**

4.40.1 Member Enumeration Documentation

4.40.1.1 enum CoordinateMode

Enumerator:

CM_ABSOLUTE
CM_RELATIVE

4.40.1.2 enum Corner

Enumerator:

LOWER_LEFT
LOWER_RIGHT
UPPER_RIGHT
UPPER_LEFT
LL
LR
UR
UL
ALL_CORNERS

4.40.1.3 enum HorizontalAlignment

Enumerator:

HA_CENTER
HA_LEFT
HA_RIGHT

4.40.1.4 enum Layer

Enumerator:

LAYER_TOP

LAYER_HIGH

LAYER_MIDDLE

LAYER_LOW

LAYER_BG

4.40.1.5 enum VerticalAlignment

Enumerator:

VA_CENTER

VA_TOP

VA_BOTTOM

4.40.2 Constructor & Destructor Documentation

4.40.2.1 Widget (const std::string & *name* = "", point_type *w* = 0.0f, point_type *h* = 0.0f)

4.40.2.2 Widget (const Widget & *widget*, const osg::CopyOp & *co*)

4.40.2.3 virtual ~Widget () [inline, virtual]

4.40.3 Member Function Documentation

4.40.3.1 point_type _calculateZ (unsigned int *layer*) const [protected]

4.40.3.2 const ColorArray* _cols () const [inline, protected]

4.40.3.3 ColorArray* _cols () [inline, protected]

4.40.3.4 osg::Image * _getImage () const [protected]

4.40.3.5 WindowManager * _getWindowManager () const [protected]

4.40.3.6 const osg::Image* _image () const [inline, protected]

4.40.3.7 osg::Image* _image () [inline, protected]

4.40.3.8 const TexCoordArray* _texs () const [inline, protected]

4.40.3.9 TexCoordArray* _texs () [inline, protected]

4.40.3.10 const osg::Texture* _texture () const [inline, protected]

4.40.3.11 osg::Texture* _texture () [inline, protected]

4.40.3.12 const PointArray* _verts () const [inline, protected]

4.40.3.13 PointArray* _verts () [inline, protected]

4.40.3.14 void addColor (const Color & *col*, Corner *p* = ALL_CORNERS) [inline]

4.40.3.15 void addColor (color_type *r*, color_type *g*, color_type *b*, color_type *a*, Corner *p* = ALL_CORNERS)

4.40.3.16 void addHeight (point_type *h*)

4.40.3.17 void addOrigin (const XYCoord & *xy*) [inline]

4.40.3.18 void addOrigin (point_type *x*, point_type *y*)

4.40.3.19 void addSize (const XYCoord & *xy*) [inline]

4.40.3.20 void addSize (point_type *w*, point_type *h*)

4.40.3.21 void addWidth (point_type *w*)

4.40.3.22 void addX (point_type *x*)

4.40.3.23 void addY (point_type *y*)

4.40.3.24 bool canClone () const [inline]

4.40.3.25 bool canFill () const [inline]

4.40.3.26 HorizontalAlignment getAlignHorizontal () const [inline]

4.40.3.27 VerticalAlignment getAlignVertical () const [inline]

4.40.3.28 const Color & getColor (Corner *p* = ALL_CORNERS) const

4.40.3.29 CoordinateMode getCoordinateMode () const [inline]

4.40.3.30 Quad getDimensions () const [inline]

4.40.3.31 point_type getFillAsNumeric () const [inline]

4.40.3.32 point_type getHeight () const

4.40.3.33 point_type getHeightTotal () const [inline]

4.40.3.34 Color getImageColorAtPointerXY (double *x*, double *y*) const [inline]

4.40.3.35 Color getImageColorAtXY (const XYCoord & *xy*) const [inline]

4.40.3.36 Color getImageColorAtXY (point_type *x*, ⁸⁸point_type *y*) const

4.40.3.37 unsigned int getIndex () const [inline]

4.40.3.68 META_Object (osgWidget, Widget)**4.40.3.69 virtual void parented (Window *) [inline, virtual]**

Reimplemented in **Corner** (p. 29), **Border** (p. 16), **Input** (p. 46), **Label** (p. 50), and **EmbeddedWindow** (p. 31).

4.40.3.70 virtual void positioned () [inline, virtual]

Reimplemented in **Border** (p. 16), **Input** (p. 46), **Label** (p. 50), and **EmbeddedWindow** (p. 31).

- 4.40.3.71 void setAlignHorizontal (HorizontalAlignment *h*) [inline]
- 4.40.3.72 void setAlignVertical (VerticalAlignment *v*) [inline]
- 4.40.3.73 void setCanClone (bool *c*) [inline]
- 4.40.3.74 void setCanFill (bool *f*) [inline]
- 4.40.3.75 void setColor (const Color & *col*, Corner *p* = ALL_CORNERS) [inline]
- 4.40.3.76 void setColor (color_type *r*, color_type *g*, color_type *b*, color_type *a*, Corner *p* = ALL_CORNERS)
- 4.40.3.77 void setCoordinateMode (CoordinateMode *cm*) [inline]
- 4.40.3.78 void setDimensions (const Quad & *q*, point_type *z* = -1.0f) [inline]
- 4.40.3.79 void setDimensions (point_type *x* = -1.0f, point_type *y* = -1.0f, point_type *w* = -1.0f, point_type *h* = -1.0f, point_type *z* = -1.0f)
- 4.40.3.80 void setHeight (point_type *h*) [inline]
- 4.40.3.81 bool setImage (const std::string & *filePath*, bool *setTexCoords* = false, bool *useTextRect* = false)
- 4.40.3.82 bool setImage (osg::Image * *image*, bool *setTexCoords* = false, bool *useTextRect* = false)
- 4.40.3.83 void setLayer (Layer *l*, unsigned int *offset* = 0)
- 4.40.3.84 void setMinimumSize (const XYCoord & *xy*) [inline]
- 4.40.3.85 void setMinimumSize (point_type *width*, point_type *height*) [inline]
- 4.40.3.86 void setOrigin (const XYCoord & *xy*) [inline]
- 4.40.3.87 void setOrigin (point_type *x*, point_type *y*) [inline]
- 4.40.3.88 void setPadBottom (point_type *p*) [inline]
- 4.40.3.89 void setPadding (point_type *pad*)
- 4.40.3.90 void setPadLeft (point_type *p*) [inline]
- 4.40.3.91 void setPadRight (point_type *p*) [inline]
- 4.40.3.92 void setPadTop (point_type *p*) [inline]
- 4.40.3.93 void setSize (const XYCoord & *xy*) [inline]
- 4.40.3.94 void setSize (point_type *w*, point_type *h*) [inline]
- 4.40.3.95 void setTexCoord (const XYCoord & *xy*, Corner *p* = ALL_CORNERS) [inline]
- 4.40.3.96 void setTexCoord (texcoord_type *tx*, texcoord_type *ty*, Corner *p* = ALL_CORNERS)
- 4.40.3.97 void setTexCoordRegion (const XYCoord & *xy*, const XYCoord & *wh*) [inline]
- 4.40.3.98 void setTexCoordRegion (point_type *x*, point_type *y*, const XYCoord & *wh*) [inline]
- 4.40.3.99 void setTexCoordRegion (const XYCoord & *xy*, point_type *w*, point_type *h*) [inline]
- 4.40.3.100 void setTexCoordRegion (point_type *x*, point_type *y*, point_type *w*, point_type *h*)
- 4.40.3.101 void setTexCoordWrapHorizontal ()
- 4.40.3.102 void setTexCoordWrapVertical ()
- 4.40.3.103 bool setTexture (osg::Texture * *texture*, bool *setTexCoords* = false, bool *useTextRect* = false)
- 4.40.3.104 void setWidth (point_type *w*) [inline]
- 4.40.3.105 void setX (point_type *x*) [inline]
- 4.40.3.106 void setY (point_type *y*) [inline]
- 4.40.3.107 void setZ (point_type *z*) [inline]
- 4.40.3.108 virtual void unmanaged (WindowManager *) [inline, virtual]

4.40.3.109 virtual void unparented (Window *) [inline, virtual]

Reimplemented in **Label** (p. 50), and **EmbeddedWindow** (p. 31).

4.40.4 Friends And Related Function Documentation**4.40.4.1 friend class Window [friend]****4.40.5 Member Data Documentation****4.40.5.1 bool _canClone [protected]****4.40.5.2 bool _canFill [protected]****4.40.5.3 CoordinateMode _coordMode [protected]****4.40.5.4 HorizontalAlignment _halign [protected]****4.40.5.5 unsigned int _index [protected]**

Reimplemented in **Input** (p. 46).

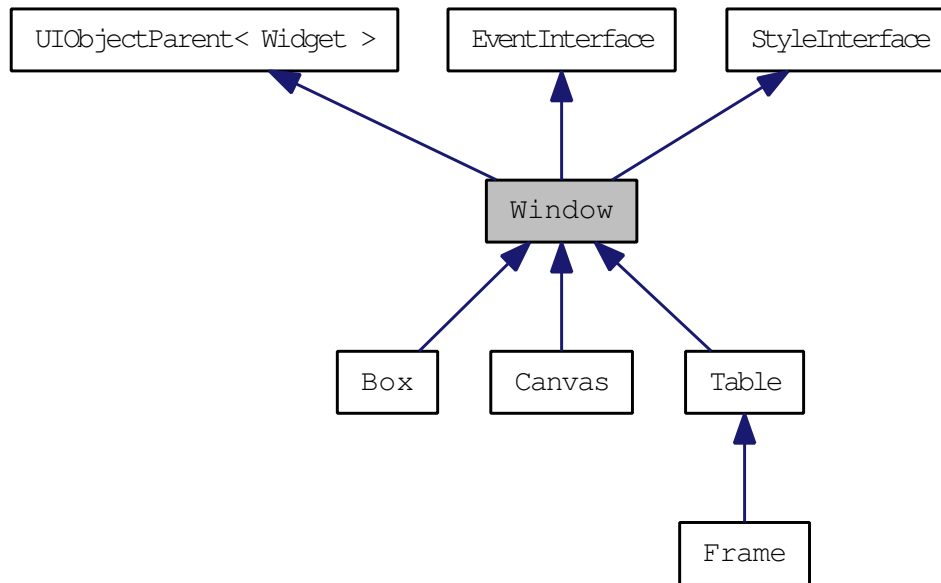
4.40.5.6 bool _isManaged [protected]**4.40.5.7 bool _isStyled [protected]****4.40.5.8 unsigned int _layer [protected]****4.40.5.9 point_type _minHeight [protected]****4.40.5.10 point_type _minWidth [protected]****4.40.5.11 osg::ref_ptr< PointArray > _norms [static, protected]****4.40.5.12 point_type _padBottom [protected]****4.40.5.13 point_type _padLeft [protected]****4.40.5.14 point_type _padRight [protected]****4.40.5.15 point_type _padTop [protected]****4.40.5.16 Window* _parent [protected]****4.40.5.17 Quad _relCoords [protected]****4.40.5.18 VerticalAlignment _valign [protected]**

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

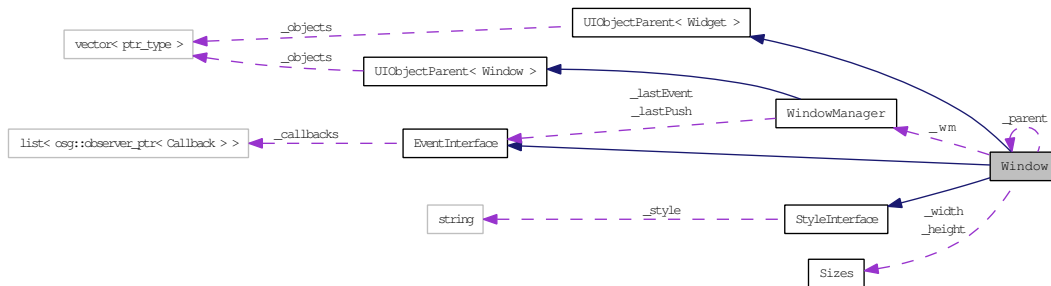
- **Widget**
- **Widget.cpp**

4.41 Window Class Reference

Inheritance diagram for Window:



Collaboration diagram for Window:



Classes

- class **EmbeddedWindow**
- struct **Sizes**

Public Types

- typedef **point_type**(Widget::* **Getter**)() const
- enum **HorizontalAnchor** { **HA_NONE**, **HA_CENTER**, **HA_LEFT**, **HA_RIGHT** }
- enum **Strata** { **STRATA_NONE**, **STRATA_BACKGROUND**, **STRATA_FOREGROUND** }
- enum **VerticalAnchor** { **VA_NONE**, **VA_CENTER**, **VA_TOP**, **VA_BOTTOM** }
- enum **VisibilityMode** { **VM_FULL**, **VM_PARTIAL**, **VM_ENTIRE** }
- typedef std::list< osg::observer_ptr< **Window** > > **WindowList**

Public Member Functions

- **Window** (const **Window** &, const osg::CopyOp &)
- **Window** (const std::string &= "")
- unsigned int **addChildAndGetIndex** (osg::Node *)
- unsigned int **addDrawableAndGetIndex** (osg::Drawable *)
- void **addOrigin** (matrix_type x, matrix_type y)

- void **addRotate** (**matrix_type** r)
- void **addScale** (**matrix_type** s)
- void **addVisibleArea** (int=0, int=0, int=0, int=0)
- virtual bool **addWidget** (**Widget** *)
- void **addX** (**matrix_type** x)
- void **addY** (**matrix_type** y)
- void **addZ** (**matrix_type** z)
- void **attachMoveCallback** ()
- void **attachRotateCallback** ()
- void **attachScaleCallback** ()
- void **attachTabFocusCallback** ()
- **EmbeddedWindow** * **embed** (const std::string &="", **Widget::Layer**=**Widget::LAYER_MIDDLE**, unsigned int=0)
- **XYCoord** **getAbsoluteOrigin** () const
- **HorizontalAnchor** **getAnchorHorizontal** () const
- **VerticalAnchor** **getAnchorVertical** () const
- const **Widget** * **getBackground** () const
- **Widget** * **getBackground** ()
- bool **getEmbeddedList** (**WindowList** &) const
- const **Widget** * **getFocused** () const
- **Widget** * **getFocused** ()
- bool **getFocusList** (**WidgetList** &) const
- const osg::Geode * **getGeode** () const
- osg::Geode * **getGeode** ()
- **point_type** **getHeight** () const
- unsigned int **getIndex** () const
- **point_type** **getMinHeight** () const
- **XYCoord** **getMinSize** () const
- **point_type** **getMinWidth** () const
- **XYCoord** **getOrigin** () const
- const **Window** * **getParent** () const
- **Window** * **getParent** ()
- void **getParentList** (**WindowList** &) const
- **Point** **getPosition** () const
- **matrix_type** **getRotate** () const
- **matrix_type** **getScale** () const
- **matrix_type** **getScaleDenominator** () const
- **XYCoord** **getSize** () const
- **Strata** **getStrata** () const
- const **Window** * **getTopmostParent** () const
- **Window** * **getTopmostParent** ()
- **VisibilityMode** **getVisibilityMode** () const
- const **Quad** & **getVisibleArea** () const
- **point_type** **getWidth** () const
- const **WindowManager** * **getWindowManager** () const
- **WindowManager** * **getWindowManager** ()
- **matrix_type** **getX** () const
- **matrix_type** **getY** () const
- **matrix_type** **getZ** () const
- **matrix_type** **getZRange** () const
- bool **grabFocus** ()
- bool **hide** ()
- virtual bool **insertWidget** (**Widget** *, unsigned int)
- bool **isPointerXYWithinVisible** (float x, float y) const
- bool **isVisible** () const
- bool **isXYWithinVisible** (float, float) const

- **XYCoord localXY** (double, double) const
- virtual void **managed** (**WindowManager ***)
- virtual bool **removeWidget** (**Widget ***)
- virtual bool **replaceWidget** (**Widget ***, **Widget ***)
- bool **resize** (**point_type=0.0f**, **point_type=0.0f**)
- bool **resizeAdd** (**point_type=0.0f**, **point_type=0.0f**)
- bool **resizePercent** (**point_type=0.0f**, **point_type=0.0f**)
- void **setAnchorHorizontal** (**HorizontalAnchor** ha)
- void **setAnchorVertical** (**VerticalAnchor** va)
- bool **setFirstFocusable** ()
- bool **setFocused** (const std::string &)
- bool **setFocused** (const **Widget ***)
- bool **setNextFocusable** ()
- void **setOrigin** (const **XYCoord** &xy)
- void **setOrigin** (**matrix_type** x, **matrix_type** y)
- void **setPosition** (const **Point** &p)
- void **setPosition** (**matrix_type** x, **matrix_type** y, **matrix_type** z)
- void **setRotate** (**matrix_type** r)
- void **setScale** (**matrix_type** s)
- void **setScaleDenominator** (**matrix_type** sd)
- void **setStrata** (**Strata** s)
- void **setVisibilityMode** (**VisibilityMode** v)
- void **setVisibleArea** (int=0, int=0, int=0, int=0)
- void **setX** (**matrix_type** x)
- void **setY** (**matrix_type** y)
- void **setZ** (**matrix_type** z)
- void **setZRange** (**matrix_type** zRange)
- bool **show** ()
- virtual void **unmanaged** (**WindowManager ***)
- virtual void **update** ()

Protected Types

- typedef std::greater< **point_type** > **Greater**
- typedef std::less< **point_type** > **Less**
- typedef std::plus< **point_type** > **Plus**

Protected Member Functions

- template<typename T >
point_type _accumulate (**Getter** get, int begin=0, int end=0, int add=1) const
- const **Widget *** **_bg** () const
- **Widget *** **_bg** ()
- template<typename T >
point_type _compare (**Getter** get, int begin=0, int end=0, int add=1) const
- template<typename T >
point_type _forEachAssignOrApply (**Getter** get, int begin, int end, int add, bool assign) const
- const osg::Geode * **_geode** () const
- osg::Geode * **_geode** ()
- **Widget *** **_getBackground** () const
- virtual **Sizes** **_getHeightImplementation** () const
- **point_type** **_getMaxWidgetHeight** (int=0, int=0, int=1) const
- **point_type** **_getMaxWidgetHeightTotal** (int=0, int=0, int=1) const
- **point_type** **_getMaxWidgetMinHeight** (int=0, int=0, int=1) const
- **point_type** **_getMaxWidgetMinHeightTotal** (int=0, int=0, int=1) const
- **point_type** **_getMaxWidgetMinWidth** (int=0, int=0, int=1) const
- **point_type** **_getMaxWidgetMinWidthTotal** (int=0, int=0, int=1) const

- **point_type _getMaxWidgetPadHorizontal** (int=0, int=0, int=1) const
- **point_type _getMaxWidgetPadVertical** (int=0, int=0, int=1) const
- **point_type _getMaxWidgetWidth** (int=0, int=0, int=1) const
- **point_type _getMaxWidgetWidthTotal** (int=0, int=0, int=1) const
- **point_type _getMinWidgetHeight** (int=0, int=0, int=1) const
- **point_type _getMinWidgetHeightTotal** (int=0, int=0, int=1) const
- **point_type _getMinWidgetMinHeight** (int=0, int=0, int=1) const
- **point_type _getMinWidgetMinHeightTotal** (int=0, int=0, int=1) const
- **point_type _getMinWidgetMinWidth** (int=0, int=0, int=1) const
- **point_type _getMinWidgetMinWidthTotal** (int=0, int=0, int=1) const
- **point_type _getMinWidgetPadHorizontal** (int=0, int=0, int=1) const
- **point_type _getMinWidgetPadVertical** (int=0, int=0, int=1) const
- **point_type _getMinWidgetWidth** (int=0, int=0, int=1) const
- **point_type _getMinWidgetWidthTotal** (int=0, int=0, int=1) const
- **point_type _getNumFill** (int=0, int=0, int=1) const
- **Window * _getTopmostParent** () const
- virtual **Sizes _getWidthImplementation** () const
- void **_positionWidget** (Widget *, **point_type**, **point_type**)
- void **_removeFromGeode** (Widget *)
- virtual void **_resizeImplementation** (**point_type**, **point_type**)=0
- osg::Scissor * **_scissor** ()
- void **_setFocused** (Widget *)
- void **_setManaged** (Widget *, bool=false)
- void **_setParented** (Widget *, bool=false)
- void **_setStyled** (Widget *)
- bool **_setVisible** (bool)
- bool **_setWidget** (Widget *, int=-1)
- void **_setWidthAndHeight** ()
- void **_setWidthAndHeightNotPAError** (const std::string &, **point_type**)
- void **_setWidthAndHeightUnknownSizeError** (const std::string &, **point_type**)

Protected Attributes

- osg::observer_ptr< **Widget** > **_focused**
- **HorizontalAnchor _hAnchor**
- **Sizes _height**
- unsigned int **_index**
- **Window * _parent**
- **matrix_type _r**
- **matrix_type _s**
- **matrix_type _scaleDenom**
- **Strata _strata**
- **VerticalAnchor _vAnchor**
- **VisibilityMode _vis**
- **Quad _visibleArea**
- **Sizes _width**
- **WindowManager * _wm**
- **matrix_type _x**
- **matrix_type _y**
- **matrix_type _z**
- **matrix_type _zRange**

Friends

- class **WindowManager**

4.41.1 Member Typedef Documentation

4.41.1.1 typedef point_type(Widget::* Getter)() const

4.41.1.2 typedef std::greater<point_type> Greater [protected]

4.41.1.3 typedef std::less<point_type> Less [protected]

4.41.1.4 typedef std::plus<point_type> Plus [protected]

4.41.1.5 typedef std::list<osg::observer_ptr<Window> > WindowList

4.41.2 Member Enumeration Documentation

4.41.2.1 enum HorizontalAnchor

Enumerator:

HA_NONE

HA_CENTER

HA_LEFT

HA_RIGHT

4.41.2.2 enum Strata

Enumerator:

STRATA_NONE

STRATA_BACKGROUND

STRATA_FOREGROUND

4.41.2.3 enum VerticalAnchor

Enumerator:

VA_NONE

VA_CENTER

VA_TOP

VA_BOTTOM

4.41.2.4 enum VisibilityMode

Enumerator:

VM_FULL

VM_PARTIAL

VM_ENTIRE

4.41.3 Constructor & Destructor Documentation

4.41.3.1 Window (const std::string & *name* = "")

4.41.3.2 Window (const Window & *window*, const osg::CopyOp & *co*)

4.41.4 Member Function Documentation

4.41.4.1 point_type _accumulate (Getter *get*, int *begin* = 0, int *end* = 0, int *add* = 1) const [inline, protected]

4.41.4.2 const Widget* _bg () const [inline, protected]

4.41.4.3 Widget* _bg () [inline, protected]

4.41.4.4 point_type _compare (Getter *get*, int *begin* = 0, int *end* = 0, int *add* = 1) const [inline, protected]

4.41.4.5 point_type _forEachAssignOrApply (Getter *get*, int *begin*, int *end*, int *add*, bool *assign*) const [inline, protected]

4.41.4.6 const osg::Geode* _geode () const [inline, protected]

4.41.4.7 osg::Geode* _geode () [inline, protected]

4.41.4.8 Widget* _getBackground () const [protected]

4.41.4.9 Window::Sizes _getHeightImplementation () const [protected, virtual]

Reimplemented in **Box** (p. 18), and **Table** (p. 77).

- 4.41.4.10 `point_type _getMaxWidgetHeight (int begin = 0, int end = 0, int add = 1) const` [protected]
- 4.41.4.11 `point_type _getMaxWidgetHeightTotal (int begin = 0, int end = 0, int add = 1) const` [protected]
- 4.41.4.12 `point_type _getMaxWidgetMinHeight (int begin = 0, int end = 0, int add = 1) const` [protected]
- 4.41.4.13 `point_type _getMaxWidgetMinHeightTotal (int begin = 0, int end = 0, int add = 1) const` [protected]
- 4.41.4.14 `point_type _getMaxWidgetMinWidth (int begin = 0, int end = 0, int add = 1) const` [protected]
- 4.41.4.15 `point_type _getMaxWidgetMinWidthTotal (int begin = 0, int end = 0, int add = 1) const` [protected]
- 4.41.4.16 `point_type _getMaxWidgetPadHorizontal (int begin = 0, int end = 0, int add = 1) const` [protected]
- 4.41.4.17 `point_type _getMaxWidgetPadVertical (int begin = 0, int end = 0, int add = 1) const` [protected]
- 4.41.4.18 `point_type _getMaxWidgetWidth (int begin = 0, int end = 0, int add = 1) const` [protected]
- 4.41.4.19 `point_type _getMaxWidgetWidthTotal (int begin = 0, int end = 0, int add = 1) const` [protected]
- 4.41.4.20 `point_type _getMinWidgetHeight (int begin = 0, int end = 0, int add = 1) const` [protected]
- 4.41.4.21 `point_type _getMinWidgetHeightTotal (int begin = 0, int end = 0, int add = 1) const` [protected]
- 4.41.4.22 `point_type _getMinWidgetMinHeight (int begin = 0, int end = 0, int add = 1) const` [protected]
- 4.41.4.23 `point_type _getMinWidgetMinHeightTotal (int begin = 0, int end = 0, int add = 1) const` [protected]
- 4.41.4.24 `point_type _getMinWidgetMinWidth (int begin = 0, int end = 0, int add = 1) const` [protected]
- 4.41.4.25 `point_type _getMinWidgetMinWidthTotal (int begin = 0, int end = 0, int add = 1) const` [protected]
- 4.41.4.26 `point_type _getMinWidgetPadHorizontal (int begin = 0, int end = 0, int add = 1) const` [protected]
- 4.41.4.27 `point_type _getMinWidgetPadVertical (int begin = 0, int end = 0, int add = 1) const` [protected]
- 4.41.4.28 `point_type _getMinWidgetWidth (int begin = 0, int end = 0, int add = 1) const` [protected]
- 4.41.4.29 `point_type _getMinWidgetWidthTotal (int begin = 0, int end = 0, int add = 1) const` [protected]
- 4.41.4.30 `point_type _getNumFill (int begin = 0, int end = 0, int add = 1) const` [protected]
- 4.41.4.31 `Window * _getTopmostParent () const` [protected]
- 4.41.4.32 `Window::Sizes _getWidthImplementation () const` [protected, virtual]
Reimplemented in `Box` (p. 18), and `Table` (p. 77).
- 4.41.4.33 `void _positionWidget (Widget * widget, point_type width, point_type height)` [protected]
- 4.41.4.34 `void _removeFromGeode (Widget * widget)` [protected]
- 4.41.4.35 `virtual void _resizeImplementation (point_type, point_type)` [protected, pure virtual]
Implemented in `Box` (p. 18), `Canvas` (p. 27), and `Table` (p. 77).

- 4.41.4.36 `osg::Scissor*_scissor ()` [inline, protected]
- 4.41.4.37 `void _setFocused (Widget * widget)` [protected]
- 4.41.4.38 `void _setManaged (Widget * widget, bool setUnmanaged = false)` [protected]
- 4.41.4.39 `void _setParented (Widget * widget, bool setUnparented = false)` [protected]
- 4.41.4.40 `void _setStyled (Widget * widget)` [protected]
- 4.41.4.41 `bool _setVisible (bool visible)` [protected]
- 4.41.4.42 `bool _setWidget (Widget * widget, int index = -1)` [protected]
- 4.41.4.43 `void _setWidthAndHeight ()` [protected]
- 4.41.4.44 `void _setWidthAndHeightNotPAError (const std::string & size, point_type val)` [protected]
- 4.41.4.45 `void _setWidthAndHeightUnknownSizeError (const std::string & size, point_type val)`
[protected]
- 4.41.4.46 `unsigned int addChildAndGetIndex (osg::Node * node)`
- 4.41.4.47 `unsigned int addDrawableAndGetIndex (osg::Drawable * drawable)`
- 4.41.4.48 `void addOrigin (matrix_type x, matrix_type y)` [inline]
- 4.41.4.49 `void addRotate (matrix_type r)` [inline]
- 4.41.4.50 `void addScale (matrix_type s)` [inline]
- 4.41.4.51 `void addVisibleArea (int x = 0, int y = 0, int w = 0, int h = 0)`
- 4.41.4.52 `bool addWidget (Widget * widget)` [virtual]

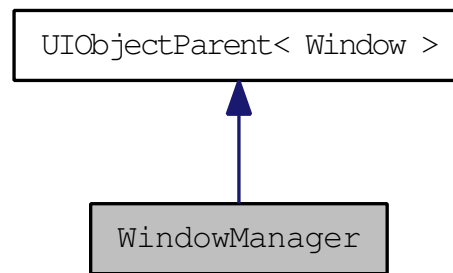
Reimplemented in **Table** (p. 78).

- 4.41.4.53 void addX (matrix_type x) [inline]
- 4.41.4.54 void addY (matrix_type y) [inline]
- 4.41.4.55 void addZ (matrix_type z) [inline]
- 4.41.4.56 void attachMoveCallback () [inline]
- 4.41.4.57 void attachRotateCallback () [inline]
- 4.41.4.58 void attachScaleCallback () [inline]
- 4.41.4.59 void attachTabFocusCallback () [inline]
- 4.41.4.60 Window::EmbeddedWindow * embed (const std::string & *newName* = "", Widget::Layer *layer* = Widget::LAYER_MIDDLE, unsigned int *layerOffset* = 0)
- 4.41.4.61 XYCoord getAbsoluteOrigin () const
- 4.41.4.62 HorizontalAnchor getAnchorHorizontal () const [inline]
- 4.41.4.63 VerticalAnchor getAnchorVertical () const [inline]
- 4.41.4.64 const Widget* getBackground () const [inline]
- 4.41.4.65 Widget* getBackground () [inline]
- 4.41.4.66 bool getEmbeddedList (WindowList & *wl*) const
- 4.41.4.67 const Widget* getFocused () const [inline]
- 4.41.4.68 Widget* getFocused () [inline]
- 4.41.4.69 bool getFocusList (WidgetList & *wl*) const
- 4.41.4.70 const osg::Geode* getGeode () const [inline]
- 4.41.4.71 osg::Geode* getGeode () [inline]
- 4.41.4.72 point_type getHeight () const [inline]
- 4.41.4.73 unsigned int getIndex () const [inline]
- 4.41.4.74 point_type getMinHeight () const [inline]
- 4.41.4.75 XYCoord getMinSize () const [inline]
- 4.41.4.76 point_type getMinWidth () const [inline]
- 4.41.4.77 XYCoord getOrigin () const [inline]
- 4.41.4.78 const Window* getParent () const [inline]
- 4.41.4.79 Window* getParent () [inline]
- 4.41.4.80 void getParentList (WindowList & *wl*) const
- 4.41.4.81 Point getPosition () const [inline]
- 4.41.4.82 matrix_type getRotate () const [inline]
- 4.41.4.83 matrix_type getScale () const [inline]
- 4.41.4.84 matrix_type getScaleDenominator () const [inline]
- 4.41.4.85 XYCoord getSize () const [inline]
- 4.41.4.86 Strata getStrata () const [inline]
- 4.41.4.87 const Window* getTopmostParent () const [inline]
- 4.41.4.88 Window* getTopmostParent () [inline]
- 4.41.4.89 VisibilityMode getVisibilityMode () const [inline]
- 4.41.4.90 const Quad& getVisibleArea () const [inline]
- 4.41.4.91 point_type getWidth () const [inline]
- 4.41.4.92 const WindowManager* getWindowManager () const [inline]
- 4.41.4.93 WindowManager* getWindowManager () [inline]
- 4.41.4.94 matrix_type getX () const [inline]

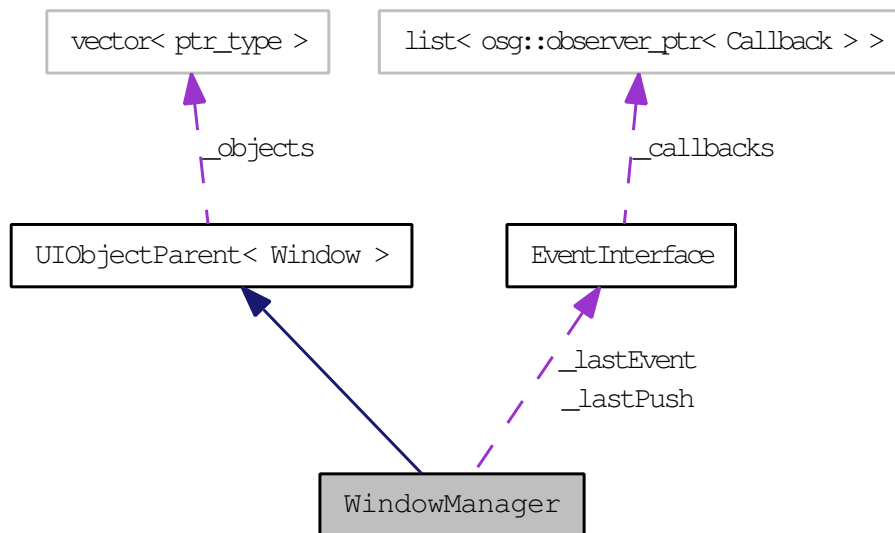
- [Window](#)
- [Window.cpp](#)

4.42 WindowManager Class Reference

Inheritance diagram for WindowManager:



Collaboration diagram for WindowManager:



Classes

- struct `WindowBinNumberCompare`
- struct `WindowZCompare`

Public Types

- enum `PointerDirection` {
`PD_NONE` = 0x00000000, `PD_LEFT` = 0x00000001, `PD_RIGHT` = 0x00000002, `PD_UP` = 0x00000004,
`PD_DOWN` = 0x00000008 }
- enum `PointerFocusMode` { `PFM_FOCUS` = 0x00000000, `PFM_UNFOCUS` = 0x00000001, `PFM_SLOPPY` = 0x00000002 }
- enum `WmFlags` { `WM_USE_LUA` = 0x00000001, `WM_USE_PYTHON` = 0x00000002, `WM_USE_RENDERBINS` = 0x00000004, `WM_PICK_DEBUG` = 0x00000008 }

Public Member Functions

- `WindowManager` (const `WindowManager` &, const `osg::CopyOp` &)
- `WindowManager` (`osgViewer::View` *=0, `point_type`=0.0f, `point_type`=0.0f, unsigned int=0, unsigned int=0)
- virtual `~WindowManager` ()
- `osg::Camera` * `createParentOrthoCamera` ()
- `point_type` `getHeight` () const

- const **ScriptEngine** * **getLuaEngine** () const
- **ScriptEngine** * **getLuaEngine** ()
- int **getMouseKeysDown** () const
- unsigned int **getNodeMask** () const
- int **getPointerDirectionVector** () const
- **PointerFocusMode** **getPointerFocusMode** () const
- **PointerDirection** **getPointerHorizontalDirection** () const
- **PointerDirection** **getPointerVerticalDirection** () const
- const **ScriptEngine** * **getPythonEngine** () const
- **ScriptEngine** * **getPythonEngine** ()
- const **StyleManager** * **getStyleManager** () const
- **StyleManager** * **getStyleManager** ()
- const osgViewer::View * **getView** () const
- osgViewer::View * **getView** ()
- **point_type** **getWidth** () const
- bool **isLeftMouseButtonDown** () const
- bool **isMiddleMouseButtonDown** () const
- bool **isMouseScrollingDown** () const
- bool **isMouseScrollingUp** () const
- bool **isPointerMovingDown** () const
- bool **isPointerMovingHorizontally** () const
- bool **isPointerMovingLeft** () const
- bool **isPointerMovingRight** () const
- bool **isPointerMovingUp** () const
- bool **isPointerMovingVertically** () const
- bool **isRightMouseButtonDown** () const
- bool **isUsingLua** () const
- bool **isUsingPython** () const
- bool **isUsingRenderBins** () const
- bool **keyDown** (int, int)
- bool **keyUp** (int, int)
- **XYCoord** **localXY** (double, double) const
- **META_Object** (osgWidget, **WindowManager**)
- bool **mousePushedLeft** (float x, float y)
- bool **mousePushedMiddle** (float x, float y)
- bool **mousePushedRight** (float x, float y)
- bool **mouseReleasedLeft** (float x, float y)
- bool **mouseReleasedMiddle** (float x, float y)
- bool **mouseReleasedRight** (float x, float y)
- bool **mouseScroll** (float, float)
- bool **pickAtXY** (float, float, **WidgetList** &)
- bool **pointerDrag** (float, float)
- bool **pointerMove** (float, float)
- void **resizeAllWindows** (bool=true)
- bool **setFocused** (**Window** *)
- bool **setFocusedByName** (const std::string &name)
- void **setHeight** (**point_type** h)
- void **setPointerFocusMode** (**PointerFocusMode** pfm)
- void **setPointerXY** (float, float)
- void **setScrollingMotion** (osgGA::GUIEventAdapter::ScrollingMotion sm)
- void **setSize** (**point_type** w, **point_type** h)
- void **setStyleManager** (**StyleManager** *)
- void **setWidth** (**point_type** w)
- void **setWindowSize** (**point_type** w, **point_type** h)
- **XYCoord** **windowXY** (double, double) const

Static Public Member Functions

- template<typename T >
static **EventInterface** * **getFirstEventInterface** (T &, **Event** &)
- static void **setEventFromInterface** (**Event** &, **EventInterface** *)

4.42.1 Member Enumeration Documentation

4.42.1.1 enum PointerDirection

Enumerator:

PD_NONE

PD_LEFT

PD_RIGHT

PD_UP

PD_DOWN

4.42.1.2 enum PointerFocusMode

Enumerator:

PFM_FOCUS

PFM_UNFOCUS

PFM_SLOPPY

4.42.1.3 enum WmFlags

Enumerator:

WM_USE_LUA

WM_USE_PYTHON

WM_USE_RENDERBINS

WM_PICK_DEBUG

4.42.2 Constructor & Destructor Documentation

4.42.2.1 `WindowManager (osgViewer::View * view = 0, point_type width = 0.0f, point_type height = 0.0f, unsigned int nodeMask = 0, unsigned int flags = 0)`

4.42.2.2 `WindowManager (const WindowManager & wm, const osg::CopyOp & co)`

4.42.2.3 `~WindowManager () [virtual]`

4.42.3 Member Function Documentation

4.42.3.1 `osg::Camera * createParentOrthoCamera ()`

4.42.3.2 `EventInterface * getFirstEventInterface (T & container, Event & ev) [inline, static]`

4.42.3.3 `point_type getHeight () const [inline]`

4.42.3.4 `const ScriptEngine* getLuaEngine () const [inline]`

4.42.3.5 `ScriptEngine* getLuaEngine () [inline]`

4.42.3.6 `int getMouseKeysDown () const [inline]`

4.42.3.7 `unsigned int getNodeMask () const [inline]`

4.42.3.8 `int getPointerDirectionVector () const [inline]`

4.42.3.9 `PointerFocusMode getPointerFocusMode () const [inline]`

4.42.3.10 `PointerDirection getPointerHorizontalDirection () const [inline]`

4.42.3.11 `PointerDirection getPointerVerticalDirection () const [inline]`

4.42.3.12 `const ScriptEngine* getPythonEngine () const [inline]`

4.42.3.13 `ScriptEngine* getPythonEngine () [inline]`

4.42.3.14 `const StyleManager* getStyleManager () const [inline]`

4.42.3.15 `StyleManager* getStyleManager () [inline]`

4.42.3.16 `const osgViewer::View* getView () const [inline]`

4.42.3.17 `osgViewer::View* getView () [inline]`

4.42.3.18 `point_type getWidth () const [inline]`

4.42.3.19 `bool isLeftMouseButtonDown () const [inline]`

4.42.3.20 `bool isMiddleMouseButtonDown () const [inline]`

4.42.3.21 `bool isMouseScrollingDown () const [inline]`

4.42.3.22 `bool isMouseScrollingUp () const [inline]`

4.42.3.23 `bool isPointerMovingDown () const [inline]`

4.42.3.24 `bool isPointerMovingHorizontally () const [inline]`

4.42.3.25 `bool isPointerMovingLeft () const [inline]`

4.42.3.26 `bool isPointerMovingRight () const [inline]`

4.42.3.27 `bool isPointerMovingUp () const [inline]`

4.42.3.28 `bool isPointerMovingVertically () const [inline]`

4.42.3.29 `bool isRightMouseButtonDown () const [inline]`

4.42.3.30 `bool isUsingLua () const [inline]`

4.42.3.31 `bool isUsingPython () const [inline]`

4.42.3.32 `bool isUsingRenderBins () const [inline]`

4.42.3.33 `bool keyDown (int key, int mask)`

4.42.3.34 `bool keyUp (int key, int mask)`

4.42.3.35 `XYCoord localXY (double x, double y) const`

4.42.3.36 `META_Object (osgWidget, WindowManager)`

4.42.3.37 `bool mousePushedLeft (float x, float y) [inline]`

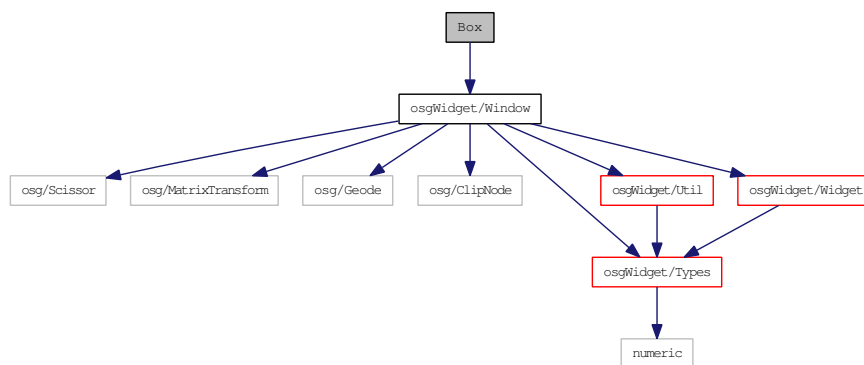
- [WindowManager](#)
- [WindowManager.cpp](#)

File Documentation

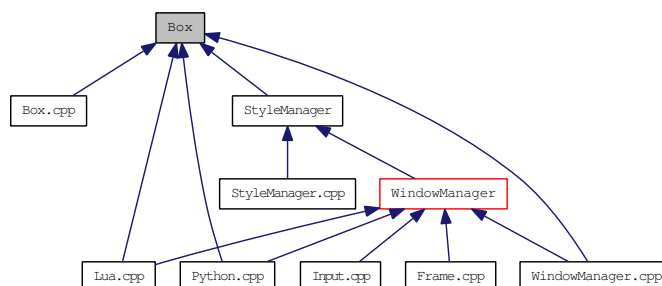
5.1 Box File Reference

```
#include <osgWidget/Window>
```

Include dependency graph for Box:



This graph shows which files directly or indirectly include this file:



Classes

- class **Box**

The **Box** (p. 17) object is a **Window** (p. 92) subclass that can be configured to uniformly (or non-uniformly) position its children either vertically or horizontally.

Namespaces

- namespace **osgWidget**

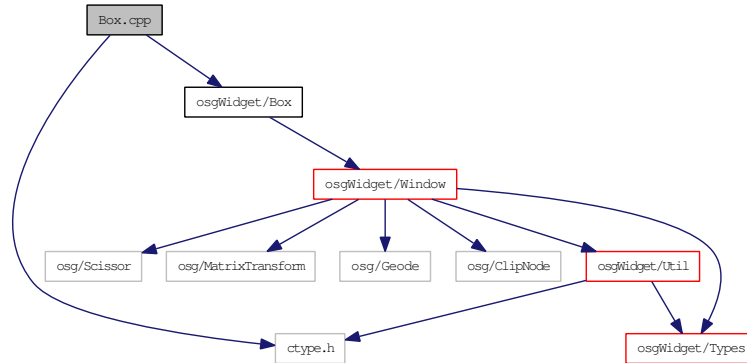
The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.

5.2 Box.cpp File Reference

```
#include <ctype.h>
```

```
#include <osgWidget/Box>
```

Include dependency graph for Box.cpp:



Namespaces

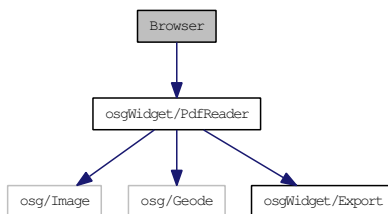
- namespace **osgWidget**

The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.

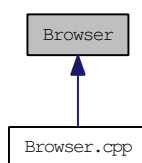
5.3 Browser File Reference

```
#include <osgWidget/PdfReader>
```

Include dependency graph for Browser:



This graph shows which files directly or indirectly include this file:



Classes

- class **Browser**
Convenience class that provides a interactive quad that can be placed directly in the scene.
- class **BrowserImage**
Pure virtual base class for that provides the browser interface for integration with 3rd party implementations.
- class **BrowserManager**

Namespaces

- namespace **osgWidget**
*The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.*

5.4 Browser.cpp File Reference

```
#include <osg/Notify>
```

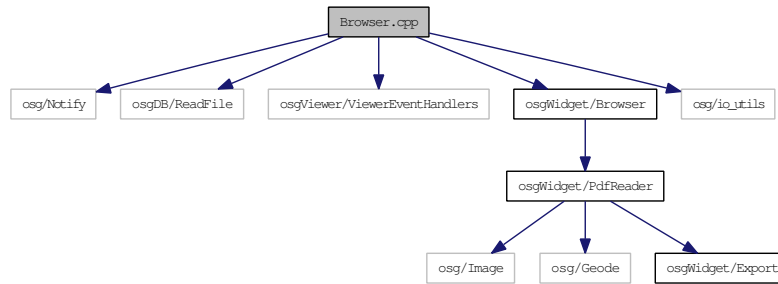
```
#include <osgDB/ReadFile>
```

```
#include <osgViewer/ViewerEventHandlers>
```

```
#include <osgWidget/Browser>
```

```
#include <osg/io_utils>
```

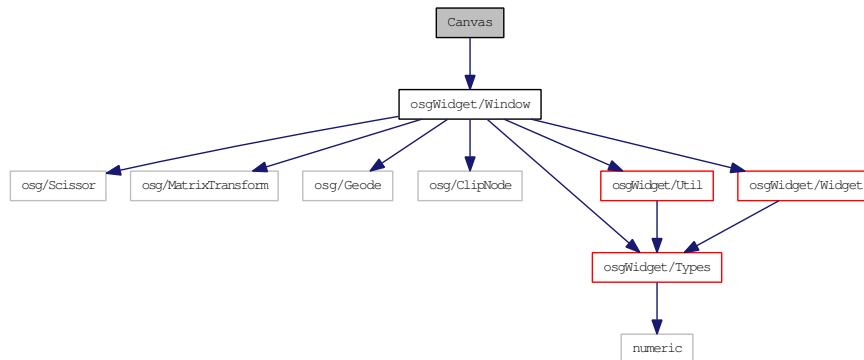
Include dependency graph for Browser.cpp:



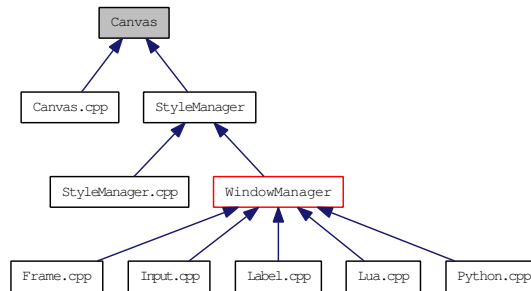
5.5 Canvas File Reference

```
#include <osgWidget/Window>
```

Include dependency graph for Canvas:



This graph shows which files directly or indirectly include this file:



Classes

- class **Canvas**

Namespaces

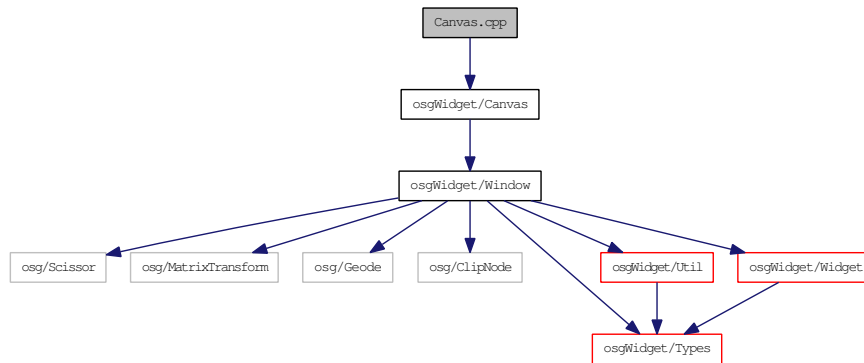
- namespace **osgWidget**

The *osgWidget* (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.

5.6 Canvas.cpp File Reference

```
#include <osgWidget/Canvas>
```

Include dependency graph for Canvas.cpp:



Namespaces

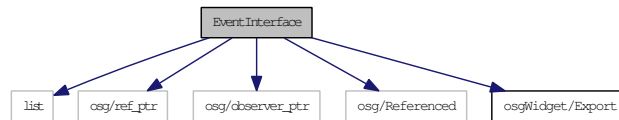
- namespace **osgWidget**

The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.

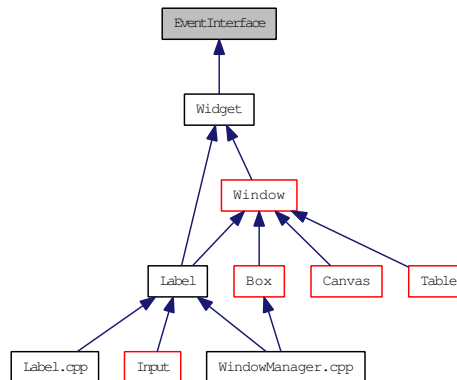
5.7 EventInterface File Reference

```
#include <list>
#include <osg/ref_ptr>
#include <osg/observer_ptr>
#include <osg/Referenced>
#include <osgWidget/Export>
```

Include dependency graph for EventInterface:



This graph shows which files directly or indirectly include this file:



Classes

- class **Callback**
- struct **CallbackInterface**
- class **Event**
- class **EventInterface**
- class **FunctionCallback**< T >
- class **ObjectCallback**< T >

Namespaces

- namespace **osgWidget**

The *osgWidget* (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.

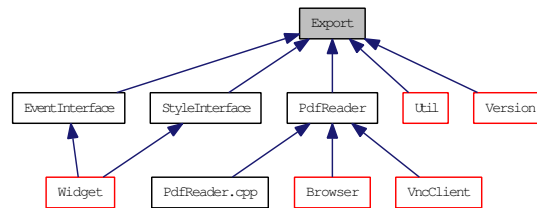
Enumerations

- enum **EventMask** {
 - EVENT_MASK_FOCUS** = EVENT_FOCUS | EVENT_UNFOCUS, **EVENT_MASK_MOUSE_MOVE** = EVENT_MOUSE_ENTER | EVENT_MOUSE_OVER | EVENT_MOUSE_LEAVE, **EVENT_MASK_MOUSE_CLICK** = EVENT_MOUSE_PUSH | EVENT_MOUSE_RELEASE, **EVENT_MASK_MOUSE_DRAG** = EVENT_MASK_MOUSE_MOVE | EVENT_MASK_MOUSE_CLICK | EVENT_MOUSE_DRAG, **EVENT_MASK_KEY** = EVENT_KEY_UP | EVENT_KEY_DOWN }

- enum **EventType** {
 EVENT_NONE = 0x0000, **EVENT_FOCUS** = 0x0001, **EVENT_UNFOCUS** = 0x0002, **EVENT_MOUSE_-**
 ENTER = 0x0004,
 EVENT_MOUSE_OVER = 0x0008, **EVENT_MOUSE_LEAVE** = 0x0010, **EVENT_MOUSE_DRAG** =
 0x0020, **EVENT_MOUSE_PUSH** = 0x0040,
 EVENT_MOUSE_RELEASE = 0x0080, **EVENT_MOUSE_SCROLL** = 0x0100, **EVENT_KEY_DOWN** =
 0x0200, **EVENT_KEY_UP** = 0x0400,
 EVENT_ALL = 0xFFFF }

5.8 Export File Reference

This graph shows which files directly or indirectly include this file:



Namespaces

- namespace **osgWidget**

*The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.*

Defines

- #define **OSGWIDGET_EXPORT**
- #define **OSGWIDGET_EXPORT_1**

5.8.1 Define Documentation

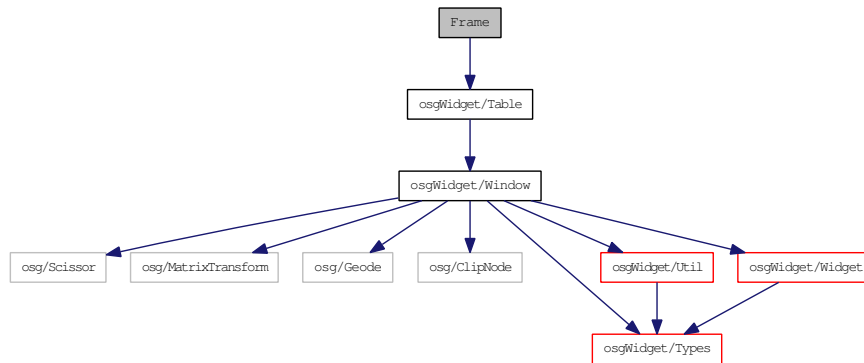
5.8.1.1 #define OSGWIDGET_EXPORT

5.8.1.2 #define OSGWIDGET_EXPORT_1

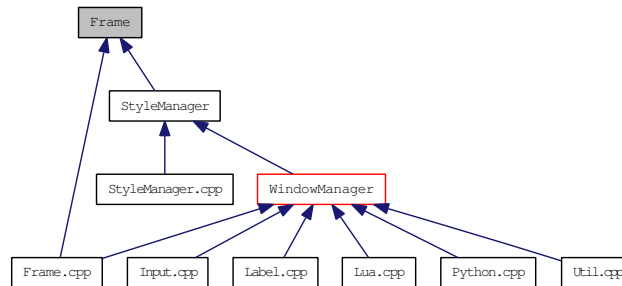
5.9 Frame File Reference

```
#include <osgWidget/Table>
```

Include dependency graph for Frame:



This graph shows which files directly or indirectly include this file:



Classes

- class **Border**
- class **Corner**
- class **Frame**

Namespaces

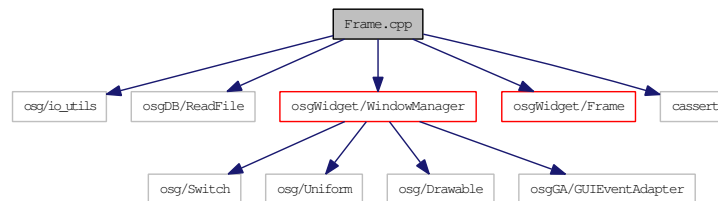
- namespace **osgWidget**

*The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.*

5.10 Frame.cpp File Reference

```
#include <osg/io_utils>
#include <osgDB/ReadFile>
#include <osgWidget/WindowManager>
#include <osgWidget/Frame>
#include <cassert>
```

Include dependency graph for Frame.cpp:



Namespaces

- namespace **osgWidget**

The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.

Functions

- void **copyData** (const osg::Image *source, const unsigned int x1, const unsigned int y1, const unsigned int x2, const unsigned int y2, osg::Image *destination, const unsigned int xd, const unsigned int yd)

Copies a rectangle of corners (x1, y1), (x2, y2) from an image into another image starting at position (xd, yd).
- template<typename T >
 void **copyDataImpl** (const osg::Image *source, const unsigned int x1, const unsigned int y1, const unsigned int x2, const unsigned int y2, osg::Image *destination, const unsigned int xd=0, const unsigned int yd=0)

Implementation of copyImage.
- osg::Image * **createNatifEdgeImageFromTheme** (osg::Image *theme)
- osg::Image * **rotatelmage** (osg::Image *image)

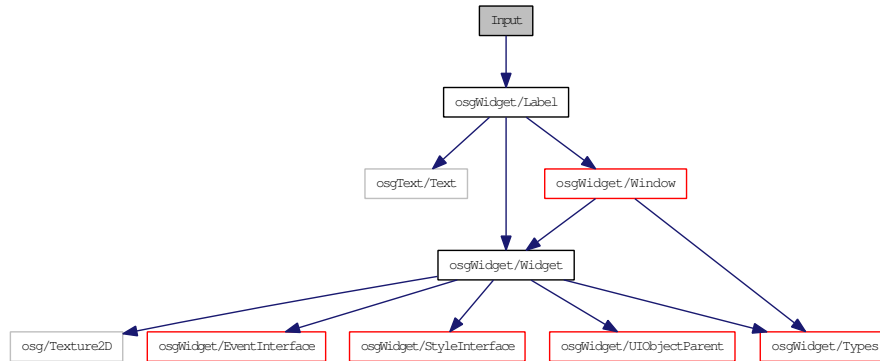
Rotates an osg::Image by 90 degrees.
- template<typename T >
 osg::Image * **rotatelmageImpl** (osg::Image *image)

Implementation of rotatelmage.

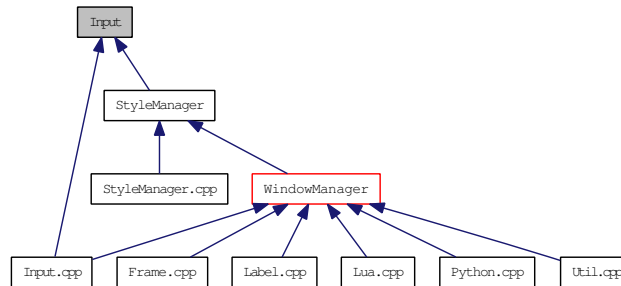
5.11 Input File Reference

```
#include <osgWidget/Label>
```

Include dependency graph for Input:



This graph shows which files directly or indirectly include this file:



Classes

- class **Input**

Namespaces

- namespace **osgWidget**

*The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.*

Functions

- const std::string **DESCENT_STRING** ("qpl")

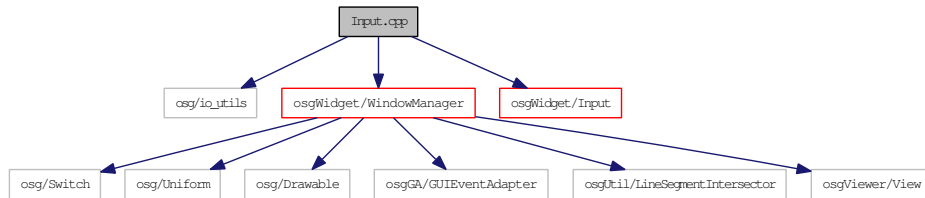
5.12 Input.cpp File Reference

```
#include <osg/io_utils>
```

```
#include <osgWidget/WindowManager>
```

```
#include <osgWidget/Input>
```

Include dependency graph for Input.cpp:



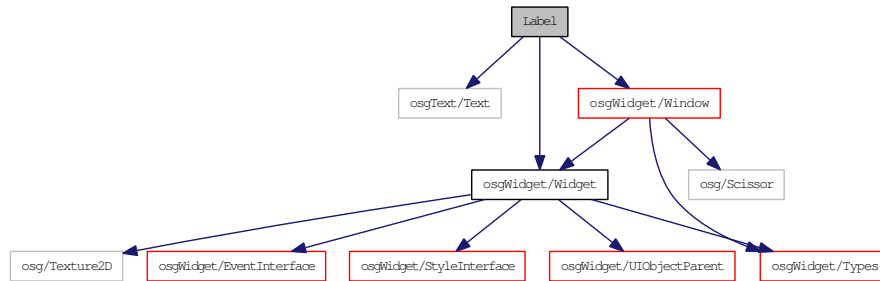
Namespaces

- namespace **osgWidget**

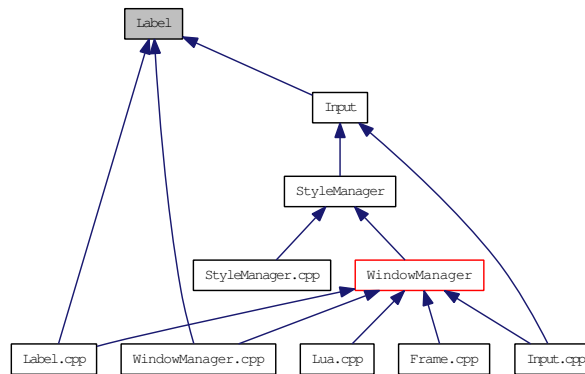
*The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.*

5.13 Label File Reference

```
#include <osgText/Text>
#include <osgWidget/Widget>
#include <osgWidget/Window>
Include dependency graph for Label:
```



This graph shows which files directly or indirectly include this file:



Classes

- class **Label**

Namespaces

- namespace **osgWidget**

*The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.*

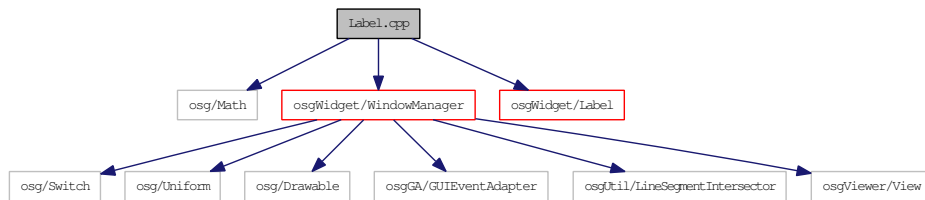
5.14 Label.cpp File Reference

```
#include <osg/Math>
```

```
#include <osgWidget/WindowManager>
```

```
#include <osgWidget/Label>
```

Include dependency graph for Label.cpp:



Namespaces

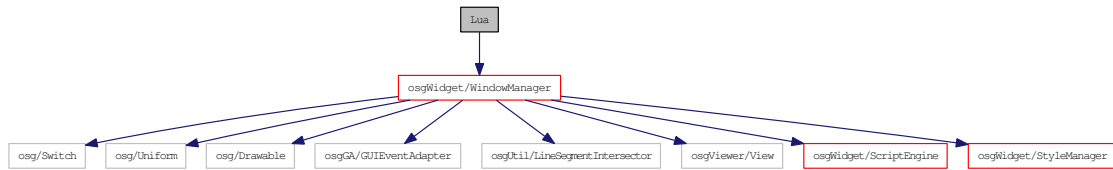
- namespace **osgWidget**

*The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.*

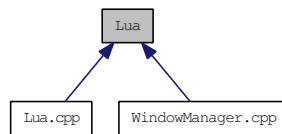
5.15 Lua File Reference

```
#include <osgWidget/WindowManager>
```

Include dependency graph for Lua:



This graph shows which files directly or indirectly include this file:



Classes

- class **LuaEngine**

Namespaces

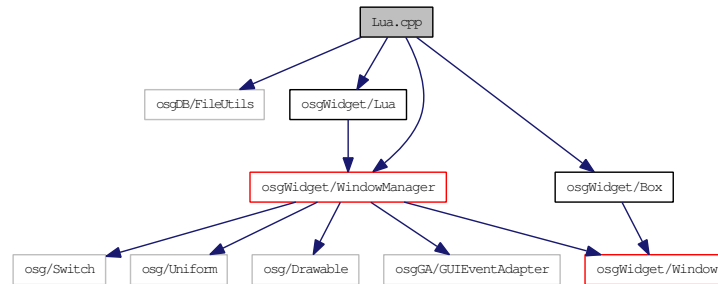
- namespace **osgWidget**

The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.

5.16 Lua.cpp File Reference

```
#include <osgDB/FileUtils>
#include <osgWidget/Lua>
#include <osgWidget/Box>
#include <osgWidget/WindowManager>
```

Include dependency graph for Lua.cpp:



Classes

- struct **LuaEngineData**

Namespaces

- namespace **osgWidget**

*The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.*

- namespace **osgWidget::lua**

Functions

- bool **noLuaFail** (const std::string &err)

5.17 mainpage.h File Reference

5.17.1 Detailed Description

This file contains doxygen special commands and text for the **Main Page** (p. ??) and some other minor aspects of this documentation. It is not part of the OSG.

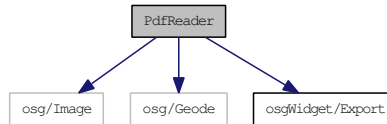
5.18 PdfReader File Reference

```
#include <osg/Image>
```

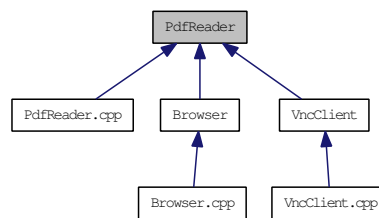
```
#include <osg/Geode>
```

```
#include <osgWidget/Export>
```

Include dependency graph for PdfReader:



This graph shows which files directly or indirectly include this file:



Classes

- struct **GeometryHints**

*Hints structure that can be passed to **PdfReader** (p. 62) and **VncClient** (p. 81) classes to help guide them on what geometry to build.*

- class **PdfImage**

Pure virtual base class for interfacing with implementation of PDF reader.

- class **PdfReader**

Convenience class that provides a interactive quad that can be placed directly in the scene.

Namespaces

- namespace **osgWidget**

*The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.*

5.19 PdfReader.cpp File Reference

```
#include <osg/Geode>
```

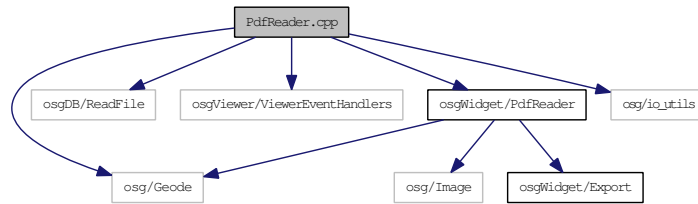
```
#include <osgDB/ReadFile>
```

```
#include <osgViewer/ViewerEventHandlers>
```

```
#include <osgWidget/PdfReader>
```

```
#include <osg/io_utils>
```

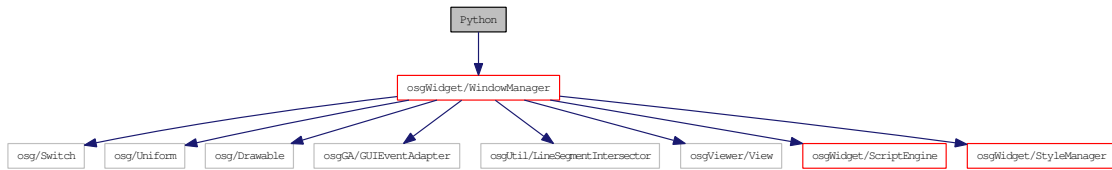
Include dependency graph for PdfReader.cpp:



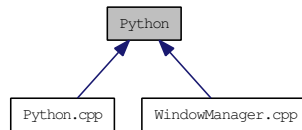
5.20 Python File Reference

```
#include <osgWidget/WindowManager>
```

Include dependency graph for Python:



This graph shows which files directly or indirectly include this file:



Classes

- class **PythonEngine**

Namespaces

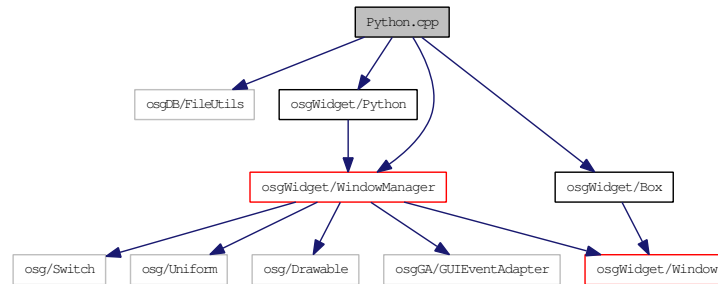
- namespace **osgWidget**

The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.

5.21 Python.cpp File Reference

```
#include <osgDB/FileUtils>
#include <osgWidget/Python>
#include <osgWidget/Box>
#include <osgWidget/WindowManager>
```

Include dependency graph for Python.cpp:



Classes

- struct **PythonEngineData**

Namespaces

- namespace **osgWidget**

*The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.*

- namespace **osgWidget::py**

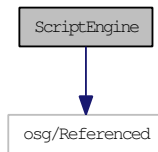
Functions

- bool **noPythonFail** (const std::string &err)

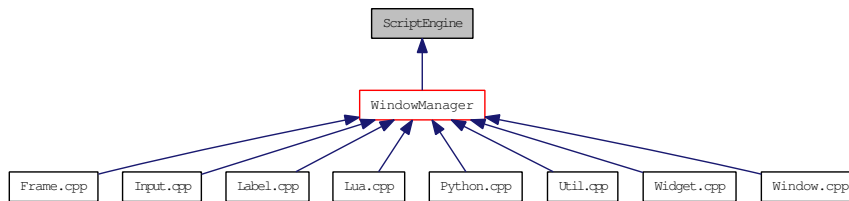
5.22 ScriptEngine File Reference

```
#include <osg/Referenced>
```

Include dependency graph for ScriptEngine:



This graph shows which files directly or indirectly include this file:



Classes

- class **ScriptEngine**

Namespaces

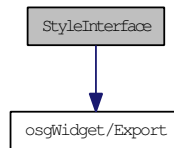
- namespace **osgWidget**

The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.

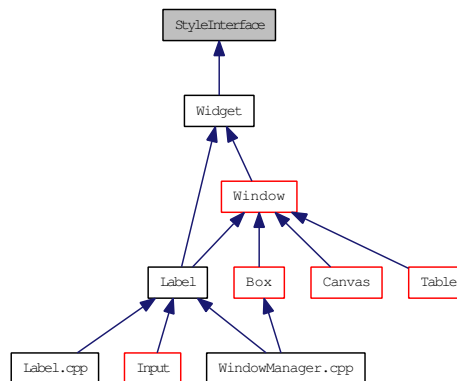
5.23 StyleInterface File Reference

```
#include <osgWidget/Export>
```

Include dependency graph for StyleInterface:



This graph shows which files directly or indirectly include this file:



Classes

- class **StyleInterface**

Namespaces

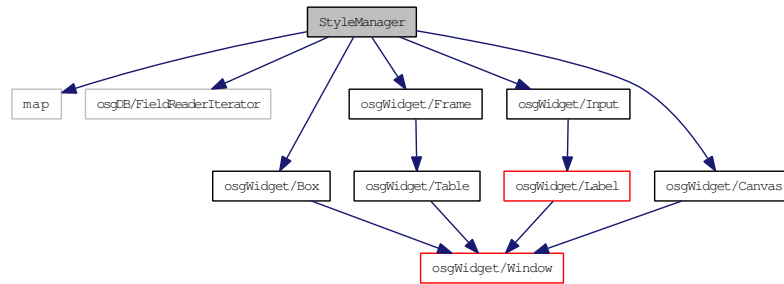
- namespace **osgWidget**

The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.

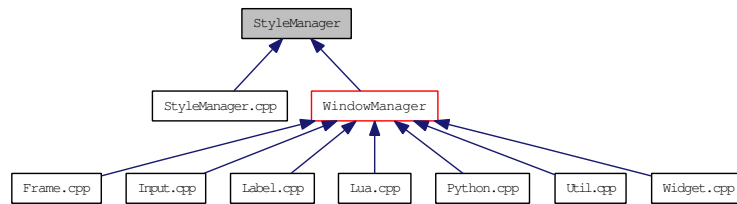
5.24 StyleManager File Reference

```
#include <map>
#include <osgDB/FieldReaderIterator>
#include <osgWidget/Box>
#include <osgWidget/Frame>
#include <osgWidget/Input>
#include <osgWidget/Canvas>
```

Include dependency graph for StyleManager:



This graph shows which files directly or indirectly include this file:



Classes

- class **Style**
- class **StyleManager**

Namespaces

- namespace **osgWidget**

*The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.*

Typedefs

- typedef osgDB::FieldReaderIterator & **Reader**

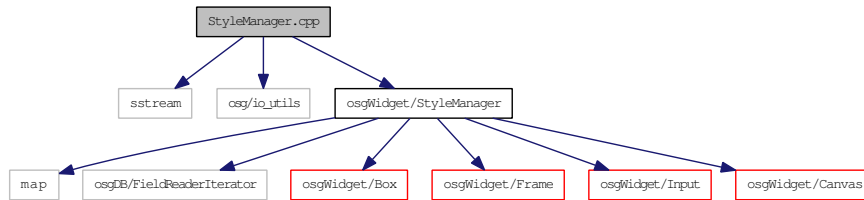
5.25 StyleManager.cpp File Reference

```
#include <sstream>
```

```
#include <osg/io_utils>
```

```
#include <osgWidget/StyleManager>
```

Include dependency graph for StyleManager.cpp:



Namespaces

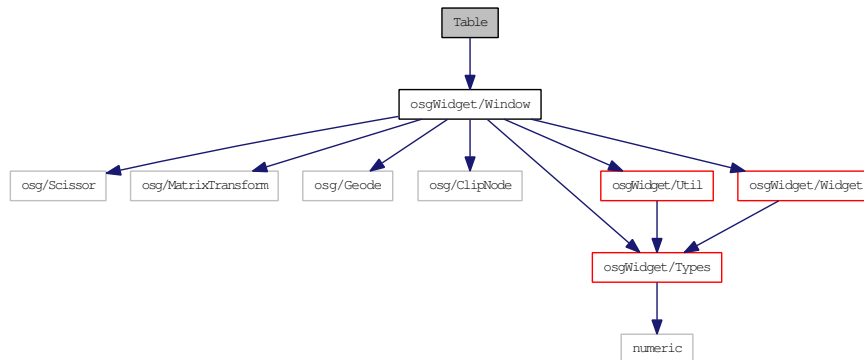
- namespace **osgWidget**

*The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.*

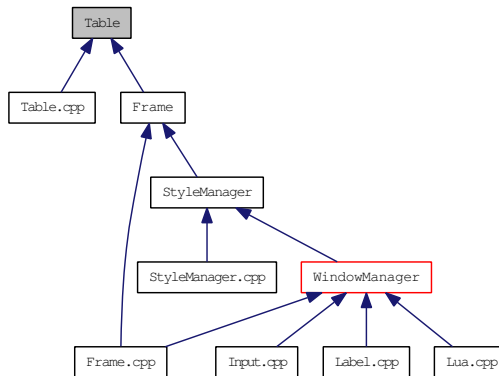
5.26 Table File Reference

```
#include <osgWidget/Window>
```

Include dependency graph for Table:



This graph shows which files directly or indirectly include this file:



Classes

- class **Table**

Namespaces

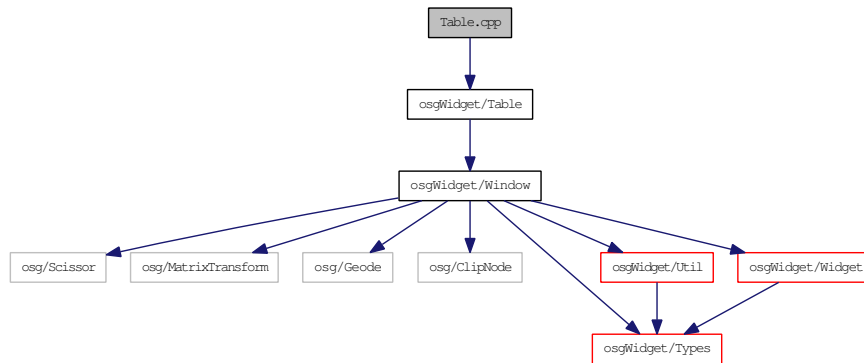
- namespace **osgWidget**

*The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.*

5.27 Table.cpp File Reference

```
#include <osgWidget/Table>
```

Include dependency graph for Table.cpp:



Namespaces

- namespace **osgWidget**

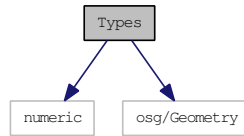
The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.

5.28 Types File Reference

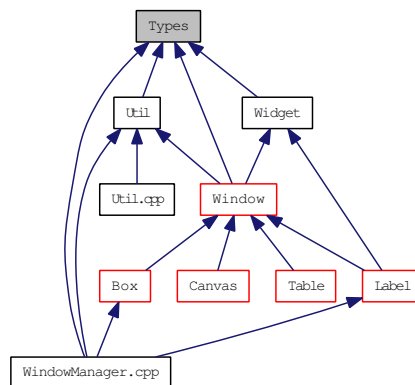
```
#include <numeric>
```

```
#include <osg/Geometry>
```

Include dependency graph for Types:



This graph shows which files directly or indirectly include this file:



Namespaces

- namespace **osgWidget**

*The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.*

Typedefs

- typedef ColorArray::value_type **Color**
- typedef Color::value_type **color_type**
- typedef osg::Vec4Array **ColorArray**
- typedef osg::Matrix::value_type **matrix_type**
- typedef PointArray::value_type **Point**
- typedef Point::value_type **point_type**
- typedef osg::Vec3Array **PointArray**
- typedef osg::Vec4 **Quad**
- typedef TexCoordArray::value_type **TexCoord**
- typedef TexCoord::value_type **texcoord_type**
- typedef osg::Vec2Array **TexCoordArray**
- typedef osg::Vec2 **XYCoord**

Variables

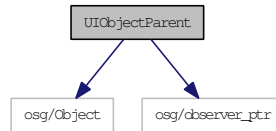
- const int **OSGWIDGET_RENDERBIN_MOD** = 5000

5.29 UIObjectParent File Reference

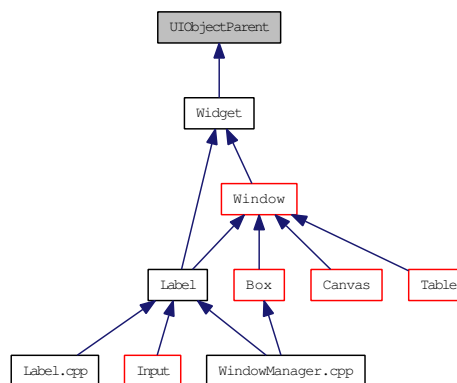
```
#include <osg/Object>
```

```
#include <osg/observer_ptr>
```

Include dependency graph for UIObjectParent:



This graph shows which files directly or indirectly include this file:



Classes

- class **UIObjectParent**< T >

Namespaces

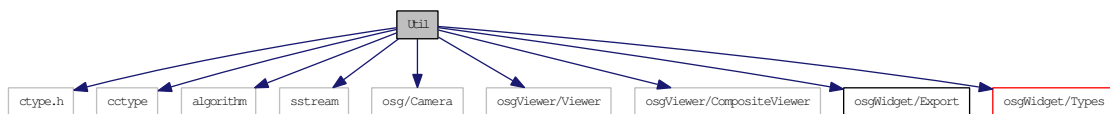
- namespace **osgWidget**

*The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.*

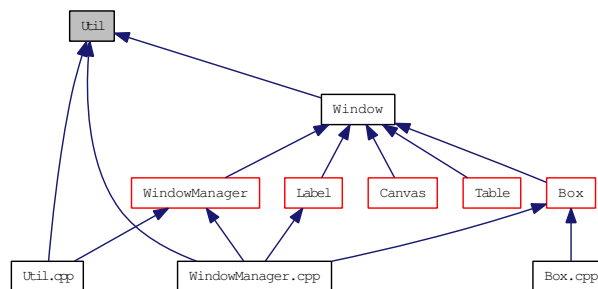
5.30 Util File Reference

```
#include <ctype.h>
#include <cctype>
#include <algorithm>
#include <sstream>
#include <osg/Camera>
#include <osgViewer/Viewer>
#include <osgViewer/CompositeViewer>
#include <osgWidget/Export>
#include <osgWidget/Types>
```

Include dependency graph for Util:



This graph shows which files directly or indirectly include this file:



Namespaces

- namespace **osgWidget**

The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.

Functions

- `std::ostream & _notify` (osg::NotifySeverity ns=osg::INFO)
- `int createExample` (osgViewer::Viewer &viewer, WindowManager *wm, osg::Node *node)
- `osg::Camera * createOrthoCamera` (matrix_type width, matrix_type height)
- `std::string generateRandomName` (const std::string &base)
- `std::string getFilePath` (const std::string &filename)
- `template<typename T>`
`bool hasDecimal` (T v)
- `std::ostream & info` ()
- `std::string lowerCase` (const std::string &str)
- `std::ostream & warn` ()
- `bool writeWindowManagerNode` (WindowManager *wm)

5.31 Util.cpp File Reference

```
#include <stdlib.h>
#include <osg/io_utils>
#include <osgGA/TrackballManipulator>
#include <osgGA/StateSetManipulator>
#include <osgDB/FileUtils>
#include <osgDB/WriteFile>
#include <osgViewer/ViewerEventHandlers>
#include <osgWidget/Util>
#include <osgWidget/ViewerEventHandlers>
#include <osgWidget/WindowManager>
```

Namespaces

- namespace **osgWidget**

*The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.*

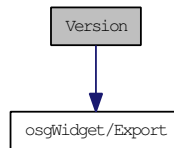
Functions

- int **createExample** (osgViewer::Viewer &viewer, WindowManager *wm, osg::Node *node)
- osg::Camera * **createOrthoCamera** (matrix_type width, matrix_type height)
- std::string **generateRandomName** (const std::string &base)
- std::string **getFilePath** (const std::string &filename)
- bool **writeWindowManagerNode** (WindowManager *wm)

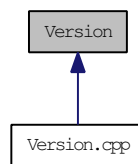
5.32 Version File Reference

```
#include <osgWidget/Export>
```

Include dependency graph for Version:



This graph shows which files directly or indirectly include this file:



Functions

- OSGWIDGET_EXPORT const char * **osgWidgetGetLibraryName** ()
osgWidgetGetLibraryName() (p. 140) returns the library name in human friendly form.
- OSGWIDGET_EXPORT const char * **osgWidgetGetVersion** ()
osgWidgetGetVersion() (p. 140) returns the library version number.

5.32.1 Function Documentation

5.32.1.1 OSGWIDGET_EXPORT const char* osgWidgetGetLibraryName ()

osgWidgetGetLibraryName() (p. 140) returns the library name in human friendly form.

5.32.1.2 OSGWIDGET_EXPORT const char* osgWidgetGetVersion ()

osgWidgetGetVersion() (p. 140) returns the library version number. Numbering convention : OpenSceneGraph-1.0 will return 1.0 from **osgWidgetGetVersion**.

This C function can be also used to check for the existence of the OpenSceneGraph library using autoconf and its m4 macro `AC_CHECK_LIB`.

Here is the code to add to your `configure.in`:

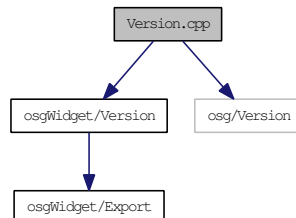
```
#
# Check for the OpenSceneGraph (OSG) Util library
#
AC_CHECK_LIB(osg, osgWidgetGetVersion, ,
  [AC_MSG_ERROR(OpenSceneGraph Util library not found. See http://www.openscenegraph.org)],)
```

5.33 Version.cpp File Reference

```
#include <osgWidget/Version>
```

```
#include <osg/Version>
```

Include dependency graph for Version.cpp:



Functions

- const char * **osgWidgetGetLibraryName** ()
osgWidgetGetLibraryName() (p. 140) returns the library name in human friendly form.
- const char * **osgWidgetGetVersion** ()
osgWidgetGetVersion() (p. 140) returns the library version number.

5.33.1 Function Documentation

5.33.1.1 const char* osgWidgetGetLibraryName ()

osgWidgetGetLibraryName() (p. 140) returns the library name in human friendly form.

5.33.1.2 const char* osgWidgetGetVersion ()

osgWidgetGetVersion() (p. 140) returns the library version number. Numbering convention : OpenSceneGraph-1.0 will return 1.0 from **osgWidgetGetVersion**.

This C function can be also used to check for the existence of the OpenSceneGraph library using autoconf and its m4 macro `AC_CHECK_LIB`.

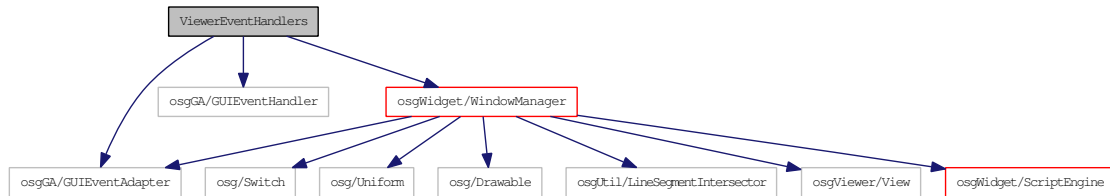
Here is the code to add to your configure.in:

```
#  
# Check for the OpenSceneGraph (OSG) Util library  
#  
AC_CHECK_LIB(osg, osgWidgetGetVersion, ,  
[AC_MSG_ERROR(OpenSceneGraph Util library not found. See http://www.openscenegraph.org)],)
```

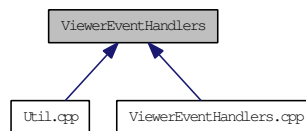
5.34 ViewerEventHandlers File Reference

```
#include <osgGA/GUIEventAdapter>
#include <osgGA/GUIEventHandler>
#include <osgWidget/WindowManager>
```

Include dependency graph for ViewerEventHandlers:



This graph shows which files directly or indirectly include this file:



Classes

- class **CameraSwitchHandler**
- class **KeyboardHandler**
- class **MouseHandler**
- class **ResizeHandler**

Namespaces

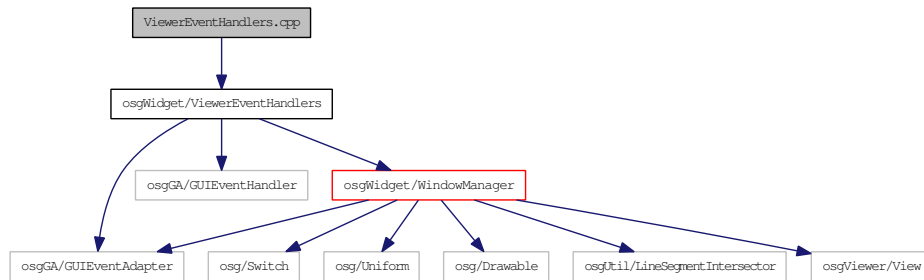
- namespace **osgWidget**

The *osgWidget* (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.

5.35 ViewerEventHandlers.cpp File Reference

```
#include <osgWidget/ViewerEventHandlers>
```

Include dependency graph for ViewerEventHandlers.cpp:



Namespaces

- namespace **osgWidget**

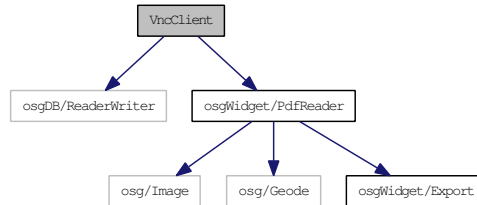
*The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.*

5.36 VncClient File Reference

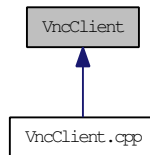
```
#include <osgDB/ReaderWriter>
```

```
#include <osgWidget/PdfReader>
```

Include dependency graph for VncClient:



This graph shows which files directly or indirectly include this file:



Classes

- class **VncClient**

Convenience Vnc Client class that provides a interactive quad that can be placed directly in the scene.

- class **Vnclmage**

*Pure virtual base class for **Vnclmage** (p. 82) that is subclassed by vnc plugin to provide the actual implementation.*

Namespaces

- namespace **osgWidget**

*The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.*

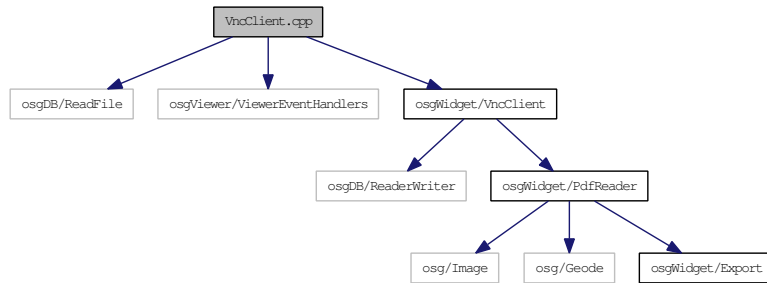
5.37 VncClient.cpp File Reference

```
#include <osgDB/ReadFile>
```

```
#include <osgViewer/ViewerEventHandlers>
```

```
#include <osgWidget/VncClient>
```

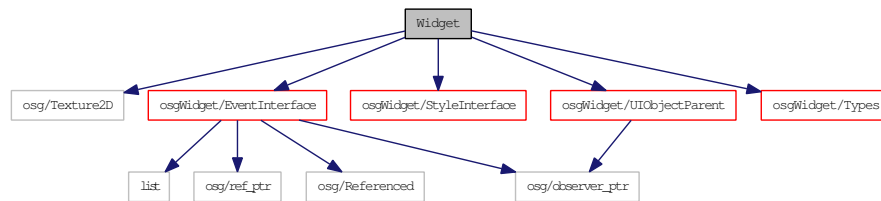
Include dependency graph for VncClient.cpp:



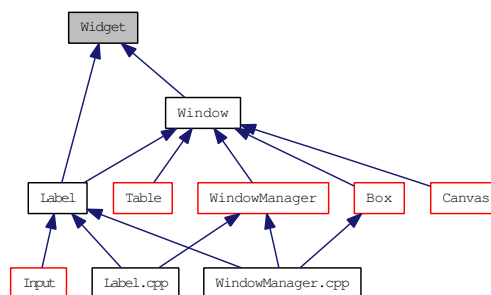
5.38 Widget File Reference

```
#include <osg/Texture2D>
#include <osgWidget/EventInterface>
#include <osgWidget/StyleInterface>
#include <osgWidget/UIObjectParent>
#include <osgWidget/Types>
```

Include dependency graph for Widget:



This graph shows which files directly or indirectly include this file:



Classes

- struct **NotifyWidget**
- struct **NullWidget**
- class **Widget**

Namespaces

- namespace **osgWidget**

*The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.*

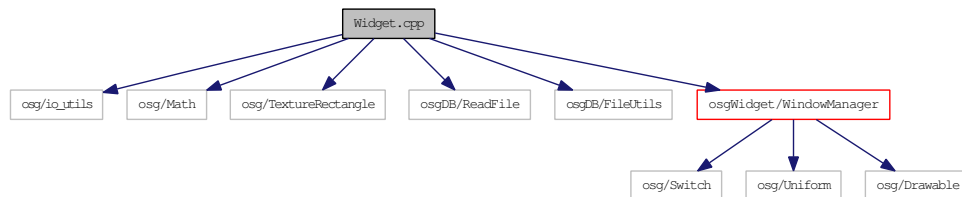
Typedefs

- typedef std::list< osg::observer_ptr< Widget > > **WidgetList**

5.39 Widget.cpp File Reference

```
#include <osg/io_utils>
#include <osg/Math>
#include <osg/TextureRectangle>
#include <osgDB/ReadFile>
#include <osgDB/FileUtils>
#include <osgWidget/WindowManager>
```

Include dependency graph for Widget.cpp:



Namespaces

- namespace **osgWidget**

The *osgWidget* (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.

Defines

- #define **MACRO_WIDGET_H(v)** (*v)[UL].y() - (*v)[LL].y()
- #define **MACRO_WIDGET_W(v)** (*v)[LR].x() - (*v)[LL].x()
- #define **MACRO_WIDGET_X(v)** (*v)[LL].x()
- #define **MACRO_WIDGET_Y(v)** (*v)[LL].y()

5.39.1 Define Documentation

5.39.1.1 #define **MACRO_WIDGET_H(v)** (*v)[UL].y() - (*v)[LL].y()

5.39.1.2 #define **MACRO_WIDGET_W(v)** (*v)[LR].x() - (*v)[LL].x()

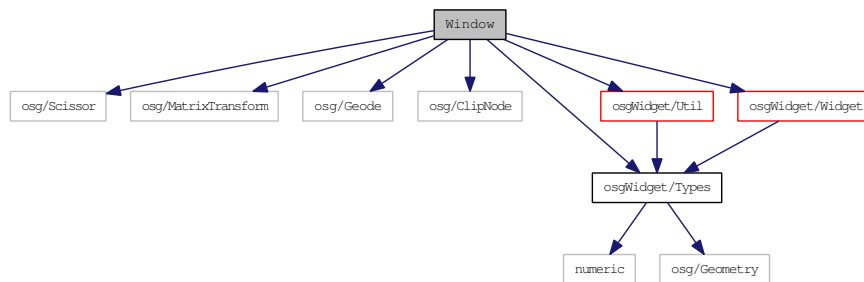
5.39.1.3 #define **MACRO_WIDGET_X(v)** (*v)[LL].x()

5.39.1.4 #define **MACRO_WIDGET_Y(v)** (*v)[LL].y()

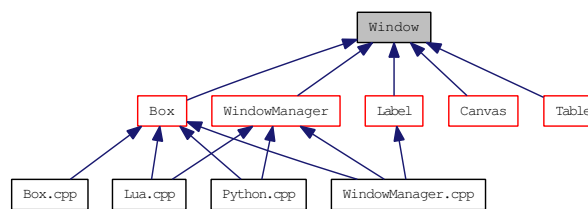
5.40 Window File Reference

```
#include <osg/Scissor>
#include <osg/MatrixTransform>
#include <osg/Geode>
#include <osg/ClipNode>
#include <osgWidget/Types>
#include <osgWidget/Util>
#include <osgWidget/Widget>
```

Include dependency graph for Window:



This graph shows which files directly or indirectly include this file:



Classes

- class **EmbeddedWindow**
- struct **Sizes**
- class **Window**

Namespaces

- namespace **osgWidget**

The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.

Typedefs

- typedef Window::WindowList **WindowList**

Functions

- bool **callbackWindowMove** (Event &ev)
- bool **callbackWindowRotate** (Event &ev)
- bool **callbackWindowScale** (Event &ev)
- bool **callbackWindowTabFocus** (Event &ev)

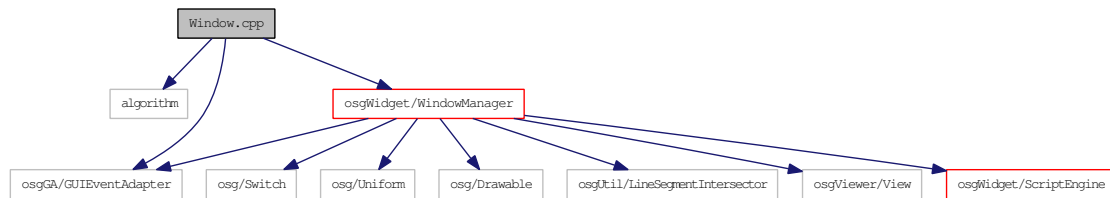
5.41 Window.cpp File Reference

```
#include <algorithm>
```

```
#include <osgGA/GUIEventAdapter>
```

```
#include <osgWidget/WindowManager>
```

Include dependency graph for Window.cpp:



Namespaces

- namespace **osgWidget**

The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.

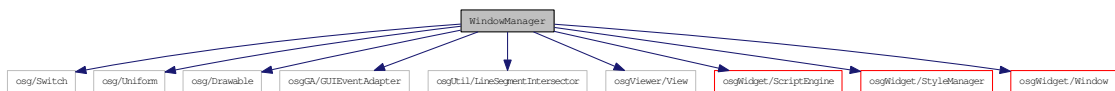
Functions

- bool **callbackWindowMove** (Event &ev)
- bool **callbackWindowRotate** (Event &ev)
- bool **callbackWindowScale** (Event &ev)
- bool **callbackWindowTabFocus** (Event &ev)

5.42 WindowManager File Reference

```
#include <osg/Switch>
#include <osg/Uniform>
#include <osg/Drawable>
#include <osgGA/GUIEventAdapter>
#include <osgUtil/LineSegmentIntersector>
#include <osgViewer/View>
#include <osgWidget/ScriptEngine>
#include <osgWidget/StyleManager>
#include <osgWidget/Window>
```

Include dependency graph for WindowManager:



Classes

- struct **WindowBinNumberCompare**
- class **WindowManager**
- struct **WindowZCompare**

Namespaces

- namespace **osgWidget**

*The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.*

Typedefs

- typedef osgUtil::LineSegmentIntersector::Intersections **Intersections**

5.43 WindowManager.cpp File Reference

```
#include <iostream>
#include <algorithm>
#include <osg/io_utils>
#include <osgWidget/Types>
#include <osgWidget/Util>
#include <osgWidget/WindowManager>
#include <osgWidget/Lua>
#include <osgWidget/Python>
#include <osgWidget/Box>
#include <osgWidget/Label>
```

Namespaces

- namespace **osgWidget**

*The **osgWidget** (p. 7) library is a NodeKit that extends the core scene graph to support a 2D (and eventually 3D) GUI widget set.*

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