



Delta3D Version 2.4.0

dtGUI::

Reference Manual

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Main Page

Delta3D is an Open Source engine which can be used for games, simulations, or other graphical applications.

The Delta3D framework exists as a number of modules, each sitting in its own library, enclosed within its own namespace. At the very core lies the **dtCore** (p.9) library. This contains basic, low-level functionality which is mostly required for all 3D applications written in C++.

Around and alongside this sit other supporting libraries, such as dtUtil (containing reusable features which are useful for most applications), dtTerrain (for rendering terrain databases), dtGame, dtNet, etc.

Extensive online documentation is available from the Delta3D Docs section to help in using Delta3D.

The project's original reference guides generated by Doxygen from the source code may be viewed at the Delta3D API Documentation section.

To download source code, binaries, dependencies and sample datasets visit the Delta3D Downloads page.

For more about dependencies see the Delta3D Dependencies page.

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

Enjoy!

Todo List

Directory Documentation

3.1 src/dtGUI/ Directory Reference

Files

- file `ceguiconnectionmanager.cpp`
- file `ceguikeyboardlistener.cpp`
- file `ceguimouselistener.cpp`
- file `ceguirenderer.cpp`
- file `ceguitexture.cpp`
- file `ceuidrawable.cpp`
- file `guiexceptionenum.cpp`
- file `hud.cpp`
- file `renderer.cpp`
- file `resourceprovider.cpp`
- file `scriptmodule.cpp`

3.2 inc/dtGUI/ Directory Reference

Files

- file **basescriptmodule.h**
- file **ceguiconnectionmanager.h**
- file **ceguiconnectionsignatures.h**
- file **ceguikeyboardlistener.h**
- file **ceguimouselistener.h**
- file **ceguirenderer.h**
- file **ceguitexture.h**
- file **ceuidrawable.h**
- file **dtgui.h**
- file **export.h**
- file **guiexceptionenum.h**
- file **hud.h**
- file **mainpage.h**
- file **renderer.h**
- file **resourceprovider.h**
- file **scriptmodule.h**
- file **widget.h**

3.3 inc/ Directory Reference

Directories

- directory dtGUI

3.4 src/ Directory Reference

Directories

- directory **dtGUI**

Namespace Documentation

4.1 dtCore Namespace Reference

4.1.1 Detailed Description

4.2 dtGUI Namespace Reference

The **dtGUI** (p. 10) namespace contains the functionality to render and control OpenGL graphical user interfaces.

Classes

- class **BaseScriptModule**
*An abstract interface for classes used by **CEUIDrawable** (p. 29).*
- class **CEGUIConnectionManager**
this class is used to keep track of connections (event-callbacks) for any widget/EventSet created for/by a gui-object.
- class **CEGUIKeyboardListener**
- class **CEGUIMemberSignature**
objects instantiated from this class describes an object-member-"signature"
- class **CEGUIMemberSignatureBase**
Common interface for a member-callback-connection-signatures.
- class **CEGUIMouseListener**
A mouse device listener to inject input to CEGUI.
- class **CEGUIRenderer**
- class **CEGUISignatureStatic**
objects instantiated from this class describes a static-method's signature
- class **CEGUITexture**
implementation of the CEGUI::Texture for OpenSceneGraph
- class **CEUIDrawable**
A DeltaDrawable used to render CEGUI.
- class **ExceptionEnum**
- class **HUD**
gui-class for rendering and managing widgets
- class **Renderer**
Simple CEGui rendering class based on the CEGUI::OpenGLRender class.
- class **ResourceProvider**
*A simple CEGUI **ResourceProvider** (p. 41) based on the CEGUI::DefaultResourceProvider.*
- class **ScriptModule**
***ScriptModule** (p. 42) is the binding from CEGUI::Events to specific application callbacks.*

Typedefs

- typedef CEGUI::Window **Widget**

Functions

- **IMPLEMENT_ENUM** (**ExceptionEnum**)

4.2.1 Detailed Description

The **dtGUI** (p. 10) namespace contains the functionality to render and control OpenGL graphical user interfaces. **dtGUI** (p. 10) uses CEGUI for high-level control of the widgets.

4.2.2 Typedef Documentation

4.2.2.1 typedef CEGUI::Window Widget

4.2.3 Function Documentation

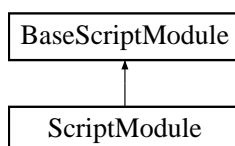
4.2.3.1 dtGUI::IMPLEMENT_ENUM (ExceptionEnum)

Class Documentation

5.1 BaseScriptModule Class Reference

An abstract interface for classes used by **CEUIDrawable** (p. 29).

`#include <inc/dtGUI/basescriptmodule.h>`Inheritance diagram for BaseScriptModule::



Public Member Functions

- **BaseScriptModule** ()
- virtual **~BaseScriptModule** ()
- virtual bool **executeScriptedEventHandler** (const CEGUI::String &handlerName, const CEGUI::EventArgs &ea)=0
 - Overload this function to handle Events triggered from a CEGUI::Window.*
- virtual void **executeScriptFile** (const CEGUI::String &filename, const CEGUI::String &resourceGroup="")=0
- virtual int **executeScriptGlobal** (const CEGUI::String &function_name)=0
- virtual void **executeString** (const CEGUI::String &str)=0

5.1.1 Detailed Description

An abstract interface for classes used by **CEUIDrawable** (p.29). **BaseScriptModule** (p.13) is mean to be implemented to provide support for Events triggered by the CEGUI Windows in a GUI scene. See also **dtGUI::ScriptModule** (p. 42).

5.1.2 Constructor & Destructor Documentation

5.1.2.1 **BaseScriptModule** () [inline]

5.1.2.2 virtual **~BaseScriptModule** () [inline, virtual]

5.1.3 Member Function Documentation

5.1.3.1 virtual bool **executeScriptedEventHandler** (const CEGUI::String & *handlerName*, const CEGUI::EventArgs & *ea*) [pure virtual]

Overload this function to handle Events triggered from a CEGUI::Window. Parameters

handlerName the name of something to handle this event, typically a function name.

ea the CEGUI::EventArgs that can contain useful information about the CEGUI::Event that occurred.

Implemented in **ScriptModule** (p. 43).

5.1.3.2 `virtual void executeScriptFile (const CEGUI::String & filename, const CEGUI::String & resourceGroup = "")` [pure virtual]

Implemented in **ScriptModule** (p. 43).

5.1.3.3 `virtual int executeScriptGlobal (const CEGUI::String & function_name)` [pure virtual]

Implemented in **ScriptModule** (p. 44).

5.1.3.4 `virtual void executeString (const CEGUI::String & str)` [pure virtual]

Implemented in **ScriptModule** (p. 44).

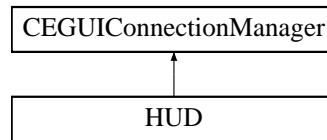
The documentation for this class was generated from the following file:

- **basescriptmodule.h**

5.2 CEGUIConnectionManager Class Reference

this class is used to keep track of connections (event-callbacks) for any widget/EventSet created for/by a gui-object.

#include <inc/dtGUI/ceguiconnectionmanager.h> Inheritance diagram for CEGUIConnectionManager::



Public Member Functions

- void **Connect** (CEGUI::EventSet *pEventSet, const std::string &sEventName, bool(*pFunction)(const CEGUI::EventArgs &))
connects static function to an event
- template<class T >
void **Connect** (CEGUI::EventSet *pEventSet, const std::string &sEventName, bool(T::*pObjectMember)(const CEGUI::EventArgs &), T *pObject)
connects object-member from an event
- void **Disconnect** (CEGUI::EventSet *pEventSet, const std::string &sEventName, bool(*pFunction)(const CEGUI::EventArgs &))
disconnects static functions from an event
- template<class T >
void **Disconnect** (CEGUI::EventSet *pEventSet, const std::string &sEventName, bool(T::*pObjectMember)(const CEGUI::EventArgs &), T *pObject)
disconnects object-member from an event

Protected Member Functions

- **CEGUIConnectionManager** ()
constructs the a connection-manager
- virtual **~CEGUIConnectionManager** ()
destructs/clean up the connection-manager

5.2.1 Detailed Description

this class is used to keep track of connections (event-callbacks) for any widget/EventSet created for/by a gui-object.

5.2.2 Constructor & Destructor Documentation

5.2.2.1 CEGUIConnectionManager () [inline, protected]

constructs the a connection-manager

5.2.2.2 ~CEGUIConnectionManager () [protected, virtual]

destructs/clean up the connection-manager

5.2.3 Member Function Documentation

5.2.3.1 void Connect (CEGUI::EventSet * *pEventSet*, const std::string & *sEventName*, bool (*)(const CEGUI::EventArgs &) *pFunction*)

connects static function to an event Parameters

pEventSet CEGUIEventSet which includes the event

sEventName name of the event to be connected

pFunction addr of static function

5.2.3.2 void Connect (CEGUI::EventSet * *pEventSet*, const std::string & *sEventName*, bool(T::*)(const CEGUI::EventArgs &) *pObjectMember*, T * *pObject*) [inline]

connects object-member from an event Parameters

pEventSet CEGUIEventSet which includes the event

sEventName name of the event to be connected

pObjectMember (relative)addr of object member

pObject pointer to the instantiated object which owns the callback

5.2.3.3 void Disconnect (CEGUI::EventSet * *pEventSet*, const std::string & *sEventName*, bool (*)(const CEGUI::EventArgs &) *pFunction*)

disconnects static functions from an event Parameters

pEventSet CEGUIEventSet which includes the event

sEventName name of the CEGUIEvent

pFunction addr of static function

5.2.3.4 void Disconnect (CEGUI::EventSet * *pEventSet*, const std::string & *sEventName*, bool(T::*)(const CEGUI::EventArgs &) *pObjectMember*, T * *pObject*) [inline]

disconnects object-member from an event Parameters

pEventSet CEGUIEventSet which includes the event

sEventName name of the CEGUIEvent

pObjectMember (relative)addr of object member

pObject pointer to the instantiated object which owns the callback

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

- **ceguiconnectionmanager.h**
- **ceguiconnectionmanager.cpp**

5.3 CEGUIKeyboardListener Class Reference

```
#include <inc/dtGUI/ceguikeyboardlistener.h>
```

Public Member Functions

- **CEGUIKeyboardListener** (HUD *pGUI=NULL)
- bool **HandleKeyPressed** (const dtCore::Keyboard *keyboard, int key)
- bool **HandleKeyReleased** (const dtCore::Keyboard *keyboard, int key)
- bool **HandleKeyTyped** (const dtCore::Keyboard *keyboard, int key)

Static Public Member Functions

- static CEGUI::Key::Scan **KeyboardKeyToKeyScan** (int key)
Determines the CEGUI scancode that corresponds to the specified Producer::KeyboardKey.

Protected Member Functions

- virtual ~**CEGUIKeyboardListener** ()

5.3.1 Constructor & Destructor Documentation

5.3.1.1 **CEGUIKeyboardListener** (HUD * *pGUI* = NULL)

5.3.1.2 ~**CEGUIKeyboardListener** () [protected, virtual]

5.3.2 Member Function Documentation

5.3.2.1 bool **HandleKeyPressed** (const dtCore::Keyboard * *keyboard*, int *key*)

5.3.2.2 bool **HandleKeyReleased** (const dtCore::Keyboard * *keyboard*, int *key*)

5.3.2.3 bool **HandleKeyTyped** (const dtCore::Keyboard * *keyboard*, int *key*)

Todo

what is this supposed to do? inject both keypressed and keyreleased to CEGUI::System? Haven't those already been injected with the other calls?

5.3.2.4 **CEGUI::Key::Scan KeyboardKeyToKeyScan** (int *key*) [static]

Determines the CEGUI scancode that corresponds to the specified Producer::KeyboardKey. Parameters

key the key to map

Returns the corresponding CEGUI key scancode

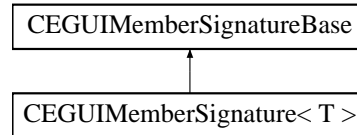
The documentation for this class was generated from the following files:

- **ceguikeyboardlistener.h**
- **ceguikeyboardlistener.cpp**

5.4 CEGUIMemberSignature< T > Class Template Reference

objects instantiated from this class describes an object-member-"signature"

```
#include <inc/dtGUI/ceguiconnectionsignatures.h>
Inheritance diagram for CEGUIMemberSignature< T >::
```



Public Types

- typedef bool(T::* **CALLBACK_FPTR**)(const CEGUI::EventArgs &)

Public Member Functions

- **CEGUIMemberSignature** (CEGUI::EventSet *pEventSet, const std::string &sEventName, const **CALLBACK_FPTR** pMemberFunction, const void *pObject)
construcs a connection-signature-object
- const **CALLBACK_FPTR** **GetFunctionPtr** () const
returns the pointer to the object-member
- const void * **GetObjectPtr** () const
returns the pointer to the object
- bool **match** (CEGUI::EventSet *pEventSet, const std::string &sEventName, const **CALLBACK_FPTR** pMemberFunction, const void *pObject) const
check if one signature "matches" another (empty strings and NULL-Pointers are Wildcards, means: "match any value")
- virtual bool **operator==** (const **CEGUIMemberSignatureBase** &x) const
compares member-signatures

5.4.1 Detailed Description

```
template<class T> class dtGUI::CEGUIMemberSignature< T >
```

objects instantiated from this class describes an object-member-"signature"

5.4.2 Member Typedef Documentation

5.4.2.1 typedef bool(T::* **CALLBACK_FPTR**)(const CEGUI::EventArgs &)

5.4.3 Constructor & Destructor Documentation

5.4.3.1 **CEGUIMemberSignature** (CEGUI::EventSet * *pEventSet*, const std::string & *sEventName*, const **CALLBACK_FPTR** *pMemberFunction*, const void * *pObject*) [inline]

construcs a connection-signature-object

5.4.4 Member Function Documentation

5.4.4.1 const **CALLBACK_FPTR** **GetFunctionPtr** () const [inline]

returns the pointer to the object-member

5.4.4.2 const void* GetObjectPtr () const [inline]

returns the pointer to the object

5.4.4.3 bool match (CEGUI::EventSet * *pEventSet*, const std::string & *sEventName*, const CALLBACK_FPTR *pMemberFunction*, const void * *pObject*) const [inline]

check if one signature "matches" another (empty strings and NULL-Pointer's are Wildcards, means: "match any value")

5.4.4.4 virtual bool operator== (const CEGUIMemberSignatureBase &) const [inline, virtual]

compares member-signatures

Implements **CEGUIMemberSignatureBase** (p. 21).

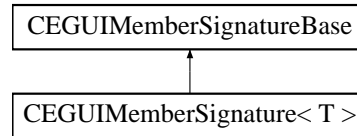
The documentation for this class was generated from the following file:

- **ceguiconnectionsignatures.h**

5.5 CEGUIMemberSignatureBase Class Reference

Common interface for a member-callback-connection-signatures.

#include <inc/dtGUI/ceguiconnectionsignatures.h> Inheritance diagram for CEGUIMemberSignatureBase::



Public Member Functions

- **CEGUIMemberSignatureBase** (CEGUI::EventSet *pEventSet, const std::string &sEventName)
constructs a signature for an object-member-function
- const std::string & **GetEventName** () const
returns the event name which is part of the signature
- const CEGUI::EventSet * **GetEventSet** () const
returns the event set which is part of the signature
- virtual bool **operator==** (const **CEGUIMemberSignatureBase** &) const =0
compares member-signatures

Protected Member Functions

- virtual ~**CEGUIMemberSignatureBase** ()

Protected Attributes

- CEGUI::EventSet * **m_pEventSet**
- std::string **m_sEventName**

Friends

- class **CEGUIConnectionManager**

5.5.1 Detailed Description

Common interface for a member-callback-connection-signatures.

5.5.2 Constructor & Destructor Documentation

5.5.2.1 CEGUIMemberSignatureBase (CEGUI::EventSet * pEventSet, const std::string & sEventName) [inline]

constructs a signature for an object-member-function

5.5.2.2 virtual ~CEGUIMemberSignatureBase () [inline, protected, virtual]

5.5.3 Member Function Documentation

5.5.3.1 const std::string& GetEventName () const [inline]

returns the event name which is part of the signature

5.5.3.2 const CEGUI::EventSet* GetEventSet () const [inline]

returns the event set which is part of the signature

5.5.3.3 virtual bool operator==(const CEGUIMemberSignatureBase &) const [pure virtual]

compares member-signatures

Implemented in **CEGUIMemberSignature< T >** (p. 19).

5.5.4 Friends And Related Function Documentation**5.5.4.1 friend class CEGUIConnectionManager [friend]****5.5.5 Member Data Documentation****5.5.5.1 CEGUI::EventSet* m_pEventSet [protected]****5.5.5.2 std::string m_sEventName [protected]**

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

- **ceguiconnectionsignatures.h**

5.6 CEGUIMouseListener Class Reference

A mouse device listener to inject input to CEGUI.

```
#include <inc/dtGUI/ceguimouselistener.h>
```

Public Member Functions

- **CEGUIMouseListener** (**HUD** *pGui=NULL)
- bool **HandleButtonClicked** (const dtCore::Mouse *mouse, dtCore::Mouse::MouseButton button, int clickCount)
- bool **HandleButtonPressed** (const dtCore::Mouse *mouse, dtCore::Mouse::MouseButton button)
- bool **HandleButtonReleased** (const dtCore::Mouse *mouse, dtCore::Mouse::MouseButton button)
- bool **HandleMouseDragged** (const dtCore::Mouse *mouse, float x, float y)
- bool **HandleMouseMoved** (const dtCore::Mouse *mouse, float x, float y)
- bool **HandleMouseScrolled** (const dtCore::Mouse *mouse, int delta)
- void **SetWindowSize** (unsigned int width, unsigned int height)

Protected Member Functions

- ~CEGUIMouseListener ()

5.6.1 Detailed Description

A mouse device listener to inject input to CEGUI.

Todo

Why maintain mWidth AND mHalfWidth?

5.6.2 Constructor & Destructor Documentation

5.6.2.1 CEGUIMouseListener (HUD * pGui = NULL)

5.6.2.2 ~CEGUIMouseListener () [protected]

5.6.3 Member Function Documentation

5.6.3.1 bool HandleButtonClicked (const dtCore::Mouse * mouse, dtCore::Mouse::MouseButton button, int clickCount)

Todo

what is this supposed to do? inject both buttonpressed and buttonreleased to CEGUI::System? Haven't those already been injected with the other calls?

5.6.3.2 bool HandleButtonPressed (const dtCore::Mouse * mouse, dtCore::Mouse::MouseButton button)

Todo

test System for null, throw exception if null.

5.6.3.3 bool HandleButtonReleased (const dtCore::Mouse * mouse, dtCore::Mouse::MouseButton button)

Todo

test System for null, throw exception if null.

5.6.3.4 bool HandleMouseDragged (const dtCore::Mouse * mouse, float x, float y)

Todo

test System for null, throw exception if null.

5.6.3.5 bool HandleMouseMoved (const dtCore::Mouse * *mouse*, float *x*, float *y*)**Todo**

test System for null, throw exception if null.

Todo

document these magic constants from the CEUIDrawable-days.

5.6.3.6 bool HandleMouseScrolled (const dtCore::Mouse * *mouse*, int *delta*)**Todo**

test System for null, throw exception if null.

5.6.3.7 void SetWindowSize (unsigned int *width*, unsigned int *height*)

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

- **ceguimouselistener.h**
- **ceguimouselistener.cpp**

5.7 CEGUIRenderer Class Reference

```
#include <inc/dtGUI/ceguirenderer.h>
```

Classes

- struct **MyQuad**
- struct **QuadInfo**

Public Member Functions

- **CEGUIRenderer** (CEGUI::uint max_quads, int width, int height, CEGUI::ImageCodec *codec=0)
- **CEGUIRenderer** (CEGUI::uint max_quads, CEGUI::ImageCodec *codec=0)
- virtual **~CEGUIRenderer** (void)
- virtual void **addQuad** (const CEGUI::Rect &dest_rect, float z, const CEGUI::Texture *tex, const CEGUI::Rect &texture_rect, const CEGUI::ColourRect &colours, CEGUI::QuadSplitMode quam_split_mode)
- virtual void **clearRenderList** (void)
- virtual CEGUI::Texture * **createTexture** (float size)
- virtual CEGUI::Texture * **createTexture** (const CEGUI::String &filename, const CEGUI::String &resource-Group)
- virtual CEGUI::Texture * **createTexture** (void)
- virtual void **destroyAllTextures** (void)
- virtual void **destroyTexture** (CEGUI::Texture *texture)
- virtual void **doRender** (void)
- virtual float **getHeight** (void) const
- virtual CEGUI::uint **getHorzScreenDPI** (void) const
- CEGUI::ImageCodec & **getImageCodec** (void)
- virtual CEGUI::uint **getMaxTextureSize** (void) const
- virtual CEGUI::Rect **getRect** (void) const
- virtual CEGUI::Size **getSize** (void) const
- virtual CEGUI::uint **getVertScreenDPI** (void) const
- virtual float **getWidth** (void) const
- virtual bool **isQueueingEnabled** (void) const
- void **setDisplaySize** (const CEGUI::Size &sz)
- void **SetGraphicsContext** (osg::GraphicsContext *)
- void **setImageCodec** (CEGUI::ImageCodec *codec)
- void **setImageCodec** (const CEGUI::String &codecName)
- virtual void **setQueueingEnabled** (bool setting)

Static Public Member Functions

- static const CEGUI::String & **getDefaultImageCodecName** ()
- static void **setDefaultImageCodecName** (const CEGUI::String &codecName)

5.7.1 Constructor & Destructor Documentation

5.7.1.1 CEGUIRenderer (CEGUI::uint *max_quads*, CEGUI::ImageCodec * *codec* = 0)

5.7.1.2 CEGUIRenderer (CEGUI::uint *max_quads*, int *width*, int *height*, CEGUI::ImageCodec * *codec* = 0)

5.7.1.3 ~CEGUIRenderer (void) [virtual]

5.7.2 Member Function Documentation

5.7.2.1 void addQuad (const CEGUI::Rect & *dest_rect*, float *z*, const CEGUI::Texture * *tex*, const CEGUI::Rect & *texture_rect*, const CEGUI::ColourRect & *colours*, CEGUI::QuadSplitMode *quam_split_mode*) [virtual]

5.7.2.2 void clearRenderList (void) [virtual]

5.7.2.3 CEGUI::Texture * createTexture (float *size*) [virtual]

5.7.2.4 CEGUI::Texture * createTexture (const CEGUI::String & *filename*, const CEGUI::String & *resourceGroup*) [virtual]

5.7.2.5 CEGUI::Texture * createTexture (void) [virtual]

5.7.2.6 void destroyAllTextures (void) [virtual]

5.7.2.7 void destroyTexture (CEGUI::Texture * *texture*) [virtual]

5.7.2.8 void doRender (void) [virtual]

5.7.2.9 const CEGUI::String & getDefaultImageCodecName () [static]

5.7.2.10 virtual float getHeight (void) const [inline, virtual]

5.7.2.11 virtual CEGUI::uint getHorzScreenDPI (void) const [inline, virtual]

5.7.2.12 CEGUI::ImageCodec & getImageCodec (void)

5.7.2.13 virtual CEGUI::uint getMaxTextureSize (void) const [inline, virtual]

5.7.2.14 virtual CEGUI::Rect getRect (void) const [inline, virtual]

5.7.2.15 virtual CEGUI::Size getSize (void) const [inline, virtual]

5.7.2.16 virtual CEGUI::uint getVertScreenDPI (void) const [inline, virtual]

5.7.2.17 virtual float getWidth (void) const [inline, virtual]

5.7.2.18 virtual bool isQueueingEnabled (void) const [inline, virtual]

5.7.2.19 void setDefaultImageCodecName (const CEGUI::String & *codecName*) [static]

5.7.2.20 void setDisplaySize (const CEGUI::Size & *sz*)

5.7.2.21 void SetGraphicsContext (osg::GraphicsContext * *gc*)

5.7.2.22 void setImageCodec (CEGUI::ImageCodec * *codec*)

5.7.2.23 void setImageCodec (const CEGUI::String & *codecName*)

5.7.2.24 virtual void setQueueingEnabled (bool *setting*) [inline, virtual]

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

- `ceguirenderer.h`
- `ceguirenderer.cpp`

5.8 CEGUISignatureStatic Class Reference

objects instantiated from this class describes a static-method's signature

```
#include <inc/dtGUI/ceguiconnectionsignatures.h>
```

Public Types

- typedef bool(* **CALLBACK_FPTR**)(const CEGUI::EventArgs &)

Public Member Functions

- **CEGUISignatureStatic** (CEGUI::EventSet *pEventSet, const std::string &sEventName, const **CALLBACK_FPTR** pFunction)
- const std::string & **GetEventName** () const
returns the event set which is part of the signature
- const CEGUI::EventSet * **GetEventSet** () const
returns the event set which is part of the signature
- const **CALLBACK_FPTR** **GetFunctionPtr** () const
- bool **match** (CEGUI::EventSet *pEventSet, const std::string &sEventName, const **CALLBACK_FPTR** pFunction) const
check if one signature "matches" another (empty strings and NULL-Pointer's are Wildcards, means: "match any value")
- virtual bool **operator==** (const **CEGUISignatureStatic** &x) const

5.8.1 Detailed Description

objects instantiated from this class describes a static-method's signature

5.8.2 Member Typedef Documentation

5.8.2.1 typedef bool(* **CALLBACK_FPTR**)(const CEGUI::EventArgs &)

5.8.3 Constructor & Destructor Documentation

5.8.3.1 **CEGUISignatureStatic** (CEGUI::EventSet * *pEventSet*, const std::string & *sEventName*, const **CALLBACK_FPTR** *pFunction*) [inline]

5.8.4 Member Function Documentation

5.8.4.1 const std::string& **GetEventName** () const [inline]

returns the event set which is part of the signature

5.8.4.2 const CEGUI::EventSet* **GetEventSet** () const [inline]

returns the event set which is part of the signature

5.8.4.3 const **CALLBACK_FPTR** **GetFunctionPtr** () const [inline]

5.8.4.4 bool **match** (CEGUI::EventSet * *pEventSet*, const std::string & *sEventName*, const **CALLBACK_FPTR** *pFunction*) const [inline]

check if one signature "matches" another (empty strings and NULL-Pointer's are Wildcards, means: "match any value")

5.8.4.5 virtual bool **operator==** (const **CEGUISignatureStatic** & *x*) const [inline, virtual]

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

- **ceguiconnectionsignatures.h**

5.9 CEGUITexture Class Reference

implementation of the CEGUI::Texture for OpenSceneGraph

```
#include <inc/dtGUI/ceguiTexture.h>
```

Public Member Functions

- **CEGUITexture** (CEGUI::Renderer *)
- **~CEGUITexture** ()
- virtual CEGUI::ushort **getHeight** () const
- virtual CEGUI::ushort **getOriginalHeight** (void) const
get the original height of the texture (cegui-textures are automatically resized to pot)
- virtual CEGUI::ushort **getOriginalWidth** (void) const
get the original with of the texture (cegui-textures are automatically resized to pot)
- const osg::Texture2D * **GetOSGTexture** () const
get current osg-texture
- osg::Texture2D * **GetOSGTexture** ()
get current osg-texture
- unsigned int **GetTextureID** (osg::GraphicsContext *)
get osg-texture-handle for a osg::GraphicsContext
- virtual CEGUI::ushort **getWidth** () const
- virtual float **getXScale** (void) const
- virtual float **getYScale** (void) const
- bool **IsFlippedHorizontal** () const
if true the CEGUIRenderer will flip y-coordinates
- virtual void **loadFromFile** (const CEGUI::String &filename, const CEGUI::String &resourceGroup)
- virtual void **loadFromMemory** (const void *buffPtr, CEGUI::uint buffWidth, CEGUI::uint buffHeight, CEGUI::Texture::PixelFormat pixelFormat)
- void **ResizeToMinPOT** (unsigned short w, unsigned short h)
- void **SetFlipHorizontal** (bool bX)
if set to true the CEGUIRenderer will flip y-coordinates
- void **SetOSGTexture** (osg::Texture2D *pTexture)
set the osg-texture that'll be used

5.9.1 Detailed Description

implementation of the CEGUI::Texture for OpenSceneGraph

5.9.2 Constructor & Destructor Documentation

5.9.2.1 CEGUITexture (CEGUI::Renderer * pRenderer)

5.9.2.2 ~CEGUITexture ()

5.9.3 Member Function Documentation

5.9.3.1 CEGUI::ushort getHeight () const [virtual]

5.9.3.2 CEGUI::ushort getOriginalHeight (void) const [virtual]

get the original height of the texture (cegui-textures are automatically resized to pot)

5.9.3.3 CEGUI::ushort getOriginalWidth (void) const [virtual]

get the original with of the texture (cegui-textures are automatically resized to pot)

5.9.3.4 const osg::Texture2D* GetOSGTexture () const [inline]

get current osg-texture

5.9.3.5 osg::Texture2D* GetOSGTexture () [inline]

get current osg-texture

5.9.3.6 unsigned int GetTextureID (osg::GraphicsContext * *pGraphicsContext*)

get osg-texture-handle for a osg::GraphicsContext

5.9.3.7 CEGUI::ushort getWidth () const [virtual]**5.9.3.8 virtual float getXScale (void) const [inline, virtual]****5.9.3.9 virtual float getYScale (void) const [inline, virtual]****5.9.3.10 bool IsFlippedHorizontal () const [inline]**

if true the CEGUIRenderer will flip y-coordinates

5.9.3.11 void loadFromFile (const CEGUI::String & *filename*, const CEGUI::String & *resourceGroup*) [virtual]**5.9.3.12 void loadFromMemory (const void * *buffPtr*, CEGUI::uint *buffWidth*, CEGUI::uint *buffHeight*, CEGUI::Texture::PixelFormat *pixelFormat*) [virtual]****5.9.3.13 void ResizeToMinPOT (unsigned short *w*, unsigned short *h*)****5.9.3.14 void SetFlipHorizontal (bool *bX*) [inline]**

if set to true the CEGUIRenderer will flip y-coordinates

5.9.3.15 void SetOSGTexture (osg::Texture2D * *pTexture*) [inline]

set the osg-texture that'll be used

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

- **ceguiTexture.h**
- **ceguiTexture.cpp**

5.10 CEUIDrawable Class Reference

A DeltaDrawable used to render CEGUI.

```
#include <inc/dtGUI/ceuidrawable.h>
```

Classes

- class **osgCEUIDrawable**

private class that ties the GUI rendering to an OSG node This is a private class that is used by the UIDrawable class.

Public Member Functions

- **CEUIDrawable** (dtCore::DeltaWin *win, dtCore::Keyboard *keyboard, dtCore::Mouse *mouse, dtGUI::BaseScriptModule *sm=0)

Overloaded constructor, will automatically update CEGUI when the supplied Window is resized.

- bool **AddChild** (dtCore::DeltaDrawable *child)

Attaches the Delta3D child's OSG graphics Node.

- bool **GetAutoResizing** () const

- const **CEGUIKeyboardListener** * **GetKeyboardListener** () const

- const **CEGUIMouseListener** * **GetMouseListener** () const

- const osg::Node * **GetOSGNode** () const

- osg::Node * **GetOSGNode** ()

required by DeltaDrawable

- osg::Projection * **GetProjectionNode** ()

Not usually needed, but this getter is provided for unusual scenarios.

- const dtGUI::CEGUIRenderer * **GetRenderer** () const

- dtGUI::CEGUIRenderer * **GetRenderer** ()

*Get a pointer to the underlying **Renderer** (p. 40).*

- osg::MatrixTransform * **GetTransformNode** ()

Not usually needed, but this getter is provided for unusual scenarios.

- CEGUI::System * **GetUI** ()

Get a pointer to the underlying CEGUI::System.

- void **SetAutoResizing** (bool enable=true)

Automatically notify CEGUI of DeltaWin resizes (enabled by default).

- void **SetOSGNode** (osg::Node *pNode)

- void **SetRenderBinDetails** (int binNumber, const std::string &binName)

Set the render bin details on the contained geode's state set.

- void **SetRenderingSize** (int width, int height)

Manually set the size of the rendering area (in pixels).

- void **ShutdownGUI** ()

Turns off the GUI System, no longer yielding GUI support.

Static Public Member Functions

- static void **DisplayProperties** (CEGUI::Window *window, bool onlyNonDefault=true)
Display all the properties of the supplied CEGUI::Window.

Protected Member Functions

- virtual ~**CEUIDrawable** ()
- void **OnMessage** (dtCore::Base::MessageData *data)

Protected Attributes

- dtCore::RefPtr< osg::Geode > **mGeode**
- int **mHeight**
- dtCore::RefPtr< dtCore::Keyboard > **mKeyboard**
- dtCore::RefPtr< dtCore::Mouse > **mMouse**
- dtCore::RefPtr< osg::Node > **mNode**
- dtCore::RefPtr< osg::Projection > **mProjection**
- **CEGUIRenderer * mRenderer**
The opengl renderer we're using.
- **dtGUI::BaseScriptModule * mScriptModule**
- dtCore::RefPtr< osg::MatrixTransform > **mTransform**
- CEGUI::System * **mUI**
Pointer to the CUI_UI.
- int **mWidth**
- dtCore::RefPtr< dtCore::DeltaWin > **mWindow**
The window this UI is being rendered in.

5.10.1 Detailed Description

A DeltaDrawable used to render CEGUI. This class is a derivative of DeltaDrawable and is used to render and manage the CEGUI system. The **CEUIDrawable** (p.29) is responsible for setting up the CEGUI system and supplying mouse and keyboard events to the UI.

To create a new GUI, instantiate a CEGUIDrawable and add it to the Scene using Scene::AddDrawable(). You can then use the CEGUI API to create CEGUI::Windows and adjust their properties.

NOTE: The CEGUIDrawable class must be instantiated *after* the application has created a valid OpenGL context (i.e., during dtABC::Application::Config()).

5.10.2 Constructor & Destructor Documentation

5.10.2.1 CEUIDrawable (dtCore::DeltaWin * win, dtCore::Keyboard * keyboard, dtCore::Mouse * mouse, dtGUI::BaseScriptModule * sm = 0)

Overloaded constructor, will automatically update CEGUI when the supplied Window is resized. The supplied DeltaWin will automatically be monitored for size change and pass the new size onto the CEGUI **Renderer** (p. 40).

Parameters

win : The DeltaWin to monitor for size change

sm : The **ScriptModule** (p. 42) to use for CEGUI script processing

Exceptions

dtUtil::Exception Gets thrown if CEGUI cannot be initialized

5.10.2.2 `~CEUIDrawable () [protected, virtual]`

5.10.3 Member Function Documentation

5.10.3.1 `bool AddChild (dtCore::DeltaDrawable * child)`

Attaches the Delta3D child's OSG graphics Node.

5.10.3.2 `void DisplayProperties (CEGUI::Window * window, bool onlyNonDefault = true) [static]`

Display all the properties of the supplied CEGUI::Window. Display the properties associated with the supplied CEGUI::Window to the console.

Useful to find all the text names of the properties and see what the current values of the properties are.

Parameters

window : The window to query the properties of

onlyNonDefault : Display only properties that are not default values (default=true)

5.10.3.3 `bool GetAutoResizing () const [inline]`

5.10.3.4 `const CEGUIKeyboardListener* GetKeyboardListener () const [inline]`

5.10.3.5 `const CEGUIMouseListener* GetMouseListener () const [inline]`

5.10.3.6 `const osg::Node* GetOSGNode () const [inline]`

5.10.3.7 `osg::Node* GetOSGNode () [inline]`

required by DeltaDrawable

5.10.3.8 `osg::Projection* GetProjectionNode () [inline]`

Not usually needed, but this getter is provided for unusual scenarios.

5.10.3.9 `const dtGUI::CEGUIRenderer* GetRenderer () const [inline]`

5.10.3.10 `dtGUI::CEGUIRenderer* GetRenderer () [inline]`

Get a pointer to the underlying **Renderer** (p. 40).

5.10.3.11 `osg::MatrixTransform* GetTransformNode () [inline]`

Not usually needed, but this getter is provided for unusual scenarios.

5.10.3.12 `CEGUI::System* GetUI () [inline]`

Get a pointer to the underlying CEGUI::System.

5.10.3.13 `void OnMessage (dtCore::Base::MessageData * data) [protected]`

Todo

must we really cast here?

5.10.3.14 `void SetAutoResizing (bool enable = true) [inline]`

Automatically notify CEGUI of DeltaWin resizes (enabled by default).

5.10.3.15 `void SetOSGNode (osg::Node * pNode) [inline]`

5.10.3.16 `void SetRenderBinDetails (int binNumber, const std::string & binName)`

Set the render bin details on the contained geode's state set. Parameters

binNumber Order of the bin in relation to other bins.

binName Name of the bin.

5.10.3.17 void SetRenderingSize (int *width*, int *height*)

Manually set the size of the rendering area (in pixels). Set the width and height of the rendering area. Typically this is just the size of the DeltaWin the GUI is being rendered in. If AutoResizing is enabled, these values will be overwritten. Disable AutoResizing to manually control the rendered area. See also **SetAutoResizing()** (p. 31)

Parameters

width : the width of the rendered area (pixels)

height : the height of the rendered area (pixels)

5.10.3.18 void ShutdownGUI ()

Turns off the GUI System, no longer yielding GUI support. The System will do its clean up at this time.

5.10.4 Member Data Documentation

5.10.4.1 dtCore::RefPtr<osg::Geode> mGeode [protected]

5.10.4.2 int mHeight [protected]

5.10.4.3 dtCore::RefPtr<dtCore::Keyboard> mKeyboard [protected]

5.10.4.4 dtCore::RefPtr<dtCore::Mouse> mMouse [protected]

5.10.4.5 dtCore::RefPtr<osg::Node> mNode [protected]

5.10.4.6 dtCore::RefPtr<osg::Projection> mProjection [protected]

5.10.4.7 CEGUIRenderer* mRenderer [protected]

The opengl renderer we're using.

5.10.4.8 dtGUI::BaseScriptModule* mScriptModule [protected]

5.10.4.9 dtCore::RefPtr<osg::MatrixTransform> mTransform [protected]

5.10.4.10 CEGUI::System* mUI [protected]

Pointer to the CUI_UI.

5.10.4.11 int mWidth [protected]

5.10.4.12 dtCore::RefPtr<dtCore::DeltaWin> mWindow [protected]

The window this UI is being rendered in.

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

- ceuidrawable.h
- ceuidrawable.cpp

5.11 ExceptionEnum Class Reference

```
#include <inc/dtGUI/guiexceptionenum.h>
```

Static Public Attributes

- static **ExceptionEnum GenericCEGUIException**

Protected Member Functions

- **ExceptionEnum** (const std::string &name)

5.11.1 Constructor & Destructor Documentation

5.11.1.1 **ExceptionEnum** (const std::string & *name*) [*inline*, *protected*]

5.11.2 Member Data Documentation

5.11.2.1 **ExceptionEnum GenericCEGUIException** [*static*]

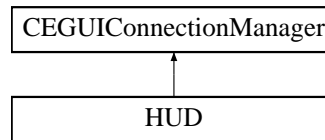
The documentation for this class was generated from the following files:

- **guiexceptionenum.h**
- **guiexceptionenum.cpp**

5.12 HUD Class Reference

gui-class for rendering and managing widgets

#include <inc/dtGUI/hud.h> Inheritance diagram for HUD::



Classes

- struct **GUIViewport**
internal viewport-representation
- class **HUDDrawable**
an osg::Drawable which will render a provided(defined via the constructor) gui

Public Member Functions

- **HUD** (dtCore::Camera *pTargetCamera, dtCore::Keyboard *pObservedKeyboard=0, dtCore::Mouse *pObservedMouse=0, const std::string &sName="HUD")
constructs a new gui object
- **HUD** (osg::Camera *pTargetCamera, dtCore::Keyboard *pObservedKeyboard=0, dtCore::Mouse *pObservedMouse=0, const std::string &sName="HUD")
constructs a new gui object
- void **Connect** (const std::string &sWidgetName, const std::string &sEventName, bool(*pFunction)(const CEGUI::EventArgs &))
- template<class T >
void **Connect** (const std::string &sWidgetName, const std::string &sEventName, bool(T::*pObjectMember)(const CEGUI::EventArgs &), T *pObject)
wraps CEGUIConnectionManager::Connect (p. 16)(this->GetWidget(widgetName), eventName, pObjectMember, pObject)
- **Widget * CreateWidget** (const std::string &sWidgetTypeName, const std::string &sWidgetName="", const std::string &sPrefix="")
creates/adds a widget to root-sheet
- **Widget * CreateWidget (Widget * pParentWidget**, const std::string &sWidgetTypeName, const std::string &sWidgetName="", const std::string &sPrefix="")
creates/adds a widget to a given parent
- void **Disconnect** (const std::string &sWidgetName, const std::string &sEventName, bool(*pFunction)(const CEGUI::EventArgs &))
- void **Disconnect** (const std::string &sWidgetName, const std::string &sEventName, int, int)
wraps this->Disconnect(this->GetWidget(widgetName), eventName, 'wildcard', 'wildcard')
- template<class T >
void **Disconnect** (const std::string &sWidgetName, const std::string &sEventName, bool(T::*pObjectMember)(const CEGUI::EventArgs &), int)
wraps this->Disconnect(this->GetWidget(widgetName), eventName, pObjectMember, 'wildcard')

- `template<class T >`
`void Disconnect (const std::string &sWidgetName, const std::string &sEventName, int, T *pObject)`
wraps this->Disconnect(this->GetWidget(widgetName), eventName, 'wildcard', pObject)
- `template<class T >`
`void Disconnect (const std::string &sWidgetName, const std::string &sEventName, bool(T::*pObjectMember)(const CEGUI::EventArgs &), T *pObject)`
wraps this->Disconnect(this->GetWidget(widgetName), eventName, pObjectMember, pObject)
- `osg::Geode * GetInternalGraph () const`
- `bool GetIsMouseCursorVisible () const`
returns whether the CEGUI mouse cursor should be visible or not
- `const dtCore::Keyboard * GetKeyboard () const`
returns keyboard-object used by the gui for input
- `dtCore::Keyboard * GetKeyboard ()`
returns keyboard-object used by the gui for input
- `const dtCore::Mouse * GetMouse () const`
returns mouse-object from which the gui receives events
- `dtCore::Mouse * GetMouse ()`
returns mouse-object from which the gui receives events
- `osg::Texture2D * GetOrCreateOSGTexture (const std::string &sWidgetName)`
returns associated osg-texture for any widget which has the "Image" property
- `const std::string GetPrefix () const`
returns auto-generated prefix for the gui
- `const Widget * GetRootsheet () const`
returns default sheet (autogenerated root-window)
- `Widget * GetRootSheet ()`
returns default sheet (autogenerated root-window)
- `Widget * GetWidget (const std::string &sWidgetName, const std::string &sPrefix="")`
searches widget by it's name
- `Widget * LoadLayout (Widget *pWidgetParent, const std::string &sFileName, const std::string &sPrefix="")`
loads a layout-file and add it to the given Widget(which should a child of the gui)
- `Widget * LoadLayout (const std::string &sFileName, const std::string &sPrefix="")`
loads a layout-file
- `void MakeCurrent () const`
- `void SetCamera (osg::Camera *pTargetCamera)`
sets the rendertarget (camera) for the gui-object
- `void SetIsMouseCursorVisible (bool val)`
sets whether the CEGUI mouse cursor should be visible or not
- `void SetKeyboard (dtCore::Keyboard *pObservedKeyboard)`
sets keyboard-object which is used for input

- void **SetMouse** (dtCore::Mouse *pObservedMouse)
sets the mouse-object from which the gui receives events

Static Public Member Functions

- static void **CreateFont** (const std::string &)
shortcut/wrapper to CEGUI::FontManager::createFont
- static void **DestroyAllFonts** ()
shortcut/wrapper to CEGUI::FontManager::destroryAllFonts
- static void **DestroyFont** (const std::string &)
shortcut/wrapper to CEGUI::FontManager::destroryFont
- static const std::string & **GetFilePath** ()
returns the file path for gui-xml-data/images
- static void **LoadScheme** (const std::string &)
shortcut/wrapper to CEGUI::SchemeManager::loadScheme
- static void **SetFilePath** (const std::string &sPath)
sets the file path for all gui-objects
- static void **SetMouseCursor** (const std::string &slmagesetName, const std::string &slmageName)
shortcut/wrapper to CEGUI::System::getSingleton().setMouseCursor
- static void **UnloadAllSchemes** ()
shortcut/wrapper to CEGUI::SchemeManager::undloadAllSchemes
- static void **UnloadScheme** (const std::string &)
shortcut/wrapper to CEGUI::SchemeManager::unloadScheme

Protected Member Functions

- virtual ~**HUD** ()
destructs an existing gui object

5.12.1 Detailed Description

gui-class for rendering and managing widgets any **HUD** (p.34) can use any camera as render-target each **HUD** (p.34) owns it's own root-sheet (See also **GetRootSheet()** (p.38)) which always fits the the whole viewport of the targeted-camera internally each **HUD** (p.34) will use an own name-prefix for widgets(if they were created via LoadLayout/CreateWidget). so if one intend to use cegui-standard-api (example: CEGUI::WindowManager::getWindow()) window names must be prefixed by the HUD's prefix See also **GetPrefix()** (p.38) if creating new connections via Connect/Disconnect one keep in mind that these connections are handled by the gui-object and thus they will be lost on gui-object-destruction the Connect/Disconnect are inteded to handle the connection creation/destruction more easily for widgets. because of this fact it's wise to use them only for this

5.12.2 Constructor & Destructor Documentation

5.12.2.1 HUD (osg::Camera * *pTargetCamera*, dtCore::Keyboard * *pObservedKeyboard* = 0, dtCore::Mouse * *pObservedMouse* = 0, const std::string & *sName* = "HUD")

constructs a new gui object Parameters

pTargetCamera camera where the gui is drawn as hud

pObservedKeyboard observed keyboard-object for input

pObservedMouse observed mouse-object for input

sName delta3D-name of the gui-object

5.12.2.2 HUD (dtCore::Camera * *pTargetCamera*, dtCore::Keyboard * *pObservedKeyboard* = 0, dtCore::Mouse * *pObservedMouse* = 0, const std::string & *sName* = "HUD")

constructs a new gui object Parameters

pTargetCamera camera where the gui will show up (as hud)

pObservedKeyboard observed keyboard-object for input

pObservedMouse observed mouse-object for input

sName delta3D-name of the gui-object

5.12.2.3 ~HUD () [protected, virtual]

destructs an existing gui object

5.12.3 Member Function Documentation

5.12.3.1 void Connect (const std::string & *sWidgetName*, const std::string & *sEventName*, bool(*)(const CEGUI::EventArgs &) *pFunction*) [inline]

5.12.3.2 void Connect (const std::string & *sWidgetName*, const std::string & *sEventName*, bool(T::*)(const CEGUI::EventArgs &) *pObjectMember*, T * *pObject*) [inline]

wraps **CEGUI::ConnectionManager::Connect** (p. 16)(this->GetWidget(widgetName), eventName, pObjectMember, pObject)

5.12.3.3 void CreateFont (const std::string & *sFileName*) [static]

shortcut/wrapper to CEGUI::FontManager::createFont

5.12.3.4 Widget * CreateWidget (const std::string & *sWidgetTypeName*, const std::string & *sWidgetName* = "", const std::string & *sPrefix* = "")

creates/adds a widget to root-sheet

5.12.3.5 Widget * CreateWidget (Widget * *pParentWidget*, const std::string & *sWidgetTypeName*, const std::string & *sWidgetName* = "", const std::string & *sPrefix* = "")

creates/adds a widget to a given parent

5.12.3.6 void DestroyAllFonts () [static]

shortcut/wrapper to CEGUI::FontManager::destroyAllFonts

5.12.3.7 void DestroyFont (const std::string & *sFileName*) [static]

shortcut/wrapper to CEGUI::FontManager::destroyFont

5.12.3.8 void Disconnect (const std::string & *sWidgetName*, const std::string & *sEventName*, bool (*)(const CEGUI::EventArgs &) *pFunction*) [inline]

5.12.3.9 void Disconnect (const std::string & *sWidgetName*, const std::string & *sEventName*, int, int) [inline]

wraps this->Disconnect(this->GetWidget(widgetName), eventName, 'wildcard', 'wildcard')

5.12.3.10 void Disconnect (const std::string & *sWidgetName*, const std::string & *sEventName*, bool(T::*)(const CEGUI::EventArgs &) *pObjectMember*, int) [inline]

wraps this->Disconnect(this->GetWidget(widgetName), eventName, pObjectMember, 'wildcard')

5.12.3.11 void Disconnect (const std::string & *sWidgetName*, const std::string & *sEventName*, int, T * *pObject*) [inline]

wraps this->Disconnect(this->GetWidget(widgetName), eventName, 'wildcard', pObject)

5.12.3.12 void Disconnect (const std::string & *sWidgetName*, const std::string & *sEventName*, bool(T::*)(const CEGUI::EventArgs &) *pObjectMember*, T * *pObject*) [inline]

wraps this->Disconnect(this->GetWidget(widgetName), eventName, pObjectMember, pObject)

5.12.3.13 const std::string & GetFilePath () [static]

returns the file path for gui-xml-data/images See also **SetFilePath** (p. 39)

5.12.3.14 osg::Geode* GetInternalGraph () const [inline]

5.12.3.15 bool GetIsMouseCursorVisible () const [inline]

returns whether the CEGUI mouse cursor should be visible or not

5.12.3.16 const dtCore::Keyboard* GetKeyboard () const [inline]

returns keyboard-object used by the gui for input

5.12.3.17 dtCore::Keyboard* GetKeyboard () [inline]

returns keyboard-object used by the gui for input

5.12.3.18 const dtCore::Mouse* GetMouse () const [inline]

returns mouse-object from which the gui receives events

5.12.3.19 dtCore::Mouse* GetMouse () [inline]

returns mouse-object from which the gui receives events

5.12.3.20 osg::Texture2D * GetOrCreateOSGTexture (const std::string & *sWidgetName*)

returns associated osg-texture for any widget which has the "Image" property

5.12.3.21 const std::string GetPrefix () const

returns auto-generated prefix for the gui

5.12.3.22 const Widget* GetRootsheet () const [inline]

returns default sheet (autogenerated root-window)

5.12.3.23 Widget* GetRootSheet () [inline]

returns default sheet (autogenerated root-window)

5.12.3.24 Widget * GetWidget (const std::string & *sWidgetName*, const std::string & *sPrefix* = "")

searches widget by it's name

5.12.3.25 Widget * LoadLayout (Widget * *pWidgetParent*, const std::string & *sFileName*, const std::string & *sPrefix* = "")

loads a layout-file and add it to the given Widget(which should a child of the gui)

5.12.3.26 **Widget * LoadLayout (const std::string & *sFileName*, const std::string & *sPrefix* = "")**

loads a layout-file

5.12.3.27 **void LoadScheme (const std::string & *sFileName*) [static]**

shortcut/wrapper to CEGUI::SchemeManager::loadScheme

5.12.3.28 **void MakeCurrent () const**

5.12.3.29 **void SetCamera (osg::Camera * *pTargetCamera*)**

sets the rendertarget (camera) for the gui-object

5.12.3.30 **void SetFilePath (const std::string & *sPath*) [static]**

sets the file path for all gui-objects

5.12.3.31 **void SetIsMouseCursorVisible (bool *val*) [inline]**

sets whether the CEGUI mouse cursor should be visible or not

5.12.3.32 **void SetKeyboard (dtCore::Keyboard * *pObservedKeyboard*)**

sets keyboard-object which is used for input

5.12.3.33 **void SetMouse (dtCore::Mouse * *pObservedMouse*)**

sets the mouse-object from which the gui receives events

5.12.3.34 **void SetMouseCursor (const std::string & *smagesetName*, const std::string & *smageName*) [static]**

shortcut/wrapper to CEGUI::System::getSingleton().setMouseCursor

5.12.3.35 **void UnloadAllSchemes () [static]**

shortcut/wrapper to CEGUI::SchemeManager::unloadAllSchemes

5.12.3.36 **void UnloadScheme (const std::string & *sFileName*) [static]**

shortcut/wrapper to CEGUI::SchemeManager::unloadScheme

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

- **hud.h**
- **hud.cpp**

5.13 Renderer Class Reference

Simple CEGui rendering class based on the CEGUI::OpenGLRender class.

```
#include <inc/dtGUI/renderer.h>
```

Public Member Functions

- **Renderer** (unsigned int max_quads=0, int width=0, int height=0)
- **~Renderer** ()
- virtual CEGUI::ResourceProvider * **createResourceProvider** ()
*Create the **ResourceProvider** (p. 41) (a dtGUI::ResourceProvider (p. 41)).*

5.13.1 Detailed Description

Simple CEGui rendering class based on the CEGUI::OpenGLRender class.

5.13.2 Constructor & Destructor Documentation

5.13.2.1 **Renderer** (unsigned int *max_quads* = 0, int *width* = 0, int *height* = 0)

Todo

deprecate this unnecessary ctor

5.13.2.2 **~Renderer** () [inline]

5.13.3 Member Function Documentation

5.13.3.1 **CEGUI::ResourceProvider * createResourceProvider** (void) [virtual]

Create the **ResourceProvider** (p. 41) (a dtGUI::ResourceProvider (p. 41)).

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

- **renderer.h**
- **renderer.cpp**

5.14 ResourceProvider Class Reference

A simple CEGUI **ResourceProvider** (p. 41) based on the CEGUI::DefaultResourceProvider.

```
#include <inc/dtGUI/resourceprovider.h>
```

Public Member Functions

- **ResourceProvider** ()
- **~ResourceProvider** ()
- void **loadRawDataContainer** (const CEGUI::String &filename, CEGUI::RawDataContainer &output, const CEGUI::String &resourceGroup)
Load the data of the supplied filename.

5.14.1 Detailed Description

A simple CEGUI **ResourceProvider** (p. 41) based on the CEGUI::DefaultResourceProvider. Add the functionality of using search paths to find the data files used by CEGUI.

See also SetDataFilePathList()

5.14.2 Constructor & Destructor Documentation

5.14.2.1 ResourceProvider ()

5.14.2.2 ~ResourceProvider () [inline]

5.14.3 Member Function Documentation

5.14.3.1 void loadRawDataContainer (const CEGUI::String & filename, CEGUI::RawDataContainer & output, const CEGUI::String & resourceGroup)

Load the data of the supplied filename. This will load the file with the supplied filename using the search paths find the files.

See also SetDataFilePathList()

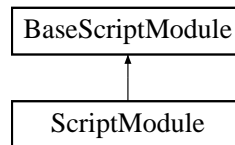
The documentation for this class was generated from the following files:

- **resourceprovider.h**
- **resourceprovider.cpp**

5.15 ScriptModule Class Reference

ScriptModule (p. 42) is the binding from CEGUI::Events to specific application callbacks.

#include <inc/dtGUI/scriptmodule.h> Inheritance diagram for ScriptModule::



Public Types

- typedef std::map< std::string, **HandlerFuncor** > **CallbackRegistry**
- typedef dtUtil::Funcor< bool, TYPELIST_1(const CEGUI::EventArgs &)> **HandlerFuncor**
- typedef bool(* **STATIC_FUNCTION**)(const CEGUI::EventArgs &e)

Public Member Functions

- **ScriptModule** ()
- virtual ~**ScriptModule** ()
- bool **AddCallback** (const std::string &name, const **HandlerFuncor** &callback)
Add a non-static callback handler.
- bool **AddCallback** (const std::string &name, **STATIC_FUNCTION** func)
Add a static callback handler.
- virtual bool **executeScriptedEventHandler** (const CEGUI::String &handler_name, const CEGUI::EventArgs &ea)
Uses the map of strings to functions to execute a function to handle the EventArgs.
- virtual void **executeScriptFile** (const CEGUI::String &filename, const CEGUI::String &resourceGroup="")
- virtual int **executeScriptGlobal** (const CEGUI::String &function_name)
- virtual void **executeString** (const CEGUI::String &str)
- const **CallbackRegistry** & **GetRegistry** () const
Returns the StaticRegistry.

5.15.1 Detailed Description

ScriptModule (p. 42) is the binding from CEGUI::Events to specific application callbacks. Create an instance of this class, and provide it as a parameter during construction of a **CEUIDrawable** (p. 29) instance. Add new handlers with the AddCallback function.

5.15.2 Member Typedef Documentation

5.15.2.1 typedef std::map<std::string,HandlerFuncor> **CallbackRegistry**

5.15.2.2 typedef dtUtil::Funcor<bool,TYPELIST_1(const CEGUI::EventArgs&)> **HandlerFuncor**

5.15.2.3 typedef bool(* **STATIC_FUNCTION**)(const CEGUI::EventArgs &e)

Todo

test to know if this typedef can support just NonMemberFunction, not requiring them to be static.

5.15.3 Constructor & Destructor Documentation

5.15.3.1 ScriptModule ()

5.15.3.2 ~ScriptModule () [virtual]

5.15.4 Member Function Documentation

5.15.4.1 bool AddCallback (const std::string & *name*, const HandlerFuncor & *callback*)

Add a non-static callback handler. Example:

```
class App
{
    ...
public:
    bool OnClick( const CEGUI::EventArgs &e );
    ...
}

...
App *mApp = new App();

dtGUI::ScriptModule::HandlerFuncor handler( dtUtil::MakeFuncor( &App::OnClick
    , mApp ) );
mScriptModule->AddCallback("OnDoSomething", handler );
...
```

Parameters

name is the string representation of the handler function to be executed for the CEGUI::Event.

func is an instance of a function object to be called when the CEGUI::Event is activated.

Attention An attempt was made to implement this with the signature `template<typename InstT> bool AddCallback(const std::string& name, bool (InstT::*MemFun)(const CEGUI::EventArgs&), InstT* instance)` but somehow creating the HandlerFuncor internal to the function caused some problems.

5.15.4.2 bool AddCallback (const std::string & *name*, **STATIC_FUNCTION** *func*)

Add a static callback handler. Example:

```
class MyClass
{
    ...
    static bool OnClick( const CEGUI::EventArgs &e );
    ...
}

...
mScriptModule->AddCallback("OnDoSomething", &OnClick);
...
```

Parameters

name is the string representation of the handler function to be executed for the CEGUI::Event.

func is the pointer to the function to be called when the CEGUI::Event is activated.

5.15.4.3 bool executeScriptedEventHandler (const CEGUI::String & *handler_name*, const CEGUI::EventArgs & *ea*) [virtual]

Uses the map of strings to functions to execute a function to handle the EventArgs. This function is called by CEGUI::System when a CEGUI::Window throws an CEGUI::Event

Implements **BaseScriptModule** (p. 13).

5.15.4.4 void executeScriptFile (const CEGUI::String & *filename*, const CEGUI::String & *resourceGroup* = "") [virtual]

Implements **BaseScriptModule** (p. 14).

5.15.4.5 `int executeScriptGlobal (const CEGUI::String & function_name) [virtual]`

Implements **BaseScriptModule** (p. 14).

5.15.4.6 `void executeString (const CEGUI::String & str) [virtual]`

Implements **BaseScriptModule** (p. 14).

5.15.4.7 `const CallbackRegistry& GetRegistry () const [inline]`

Returns the StaticRegistry.

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

- **scriptmodule.h**
- **scriptmodule.cpp**

File Documentation

6.1 bascriptmodule.h File Reference

```
#include <CEGUI/CEGUIScriptModule.h>
```

```
#include <dtGUI/export.h>
```

Classes

- class **BaseScriptModule**

*An abstract interface for classes used by **CEUIDrawable** (p. 29).*

Namespaces

- namespace **dtGUI**

*The **dtGUI** (p. 10) namespace contains the functionality to render and control OpenGL graphical user interfaces.*

6.2 ceguiconnectionmanager.cpp File Reference

```
#include <dtGUI/ceguiconnectionmanager.h>
```

6.3 ceguiconnectionmanager.h File Reference

```
#include <string>
#include <map>
#include <dtGUI/ceguintconnections.h>
#include <CEGUI/CEGUIWindow.h>
#include <CEGUI/CEGUIEvent.h>
#include <CEGUI/CEGUIInputEvent.h>
#include <CEGUI/CEGUIEventSet.h>
#include <CEGUI/CEGUIEventArgs.h>
#include <CEGUI/CEGUISubscriberSlot.h>
#include <dtUtil/log.h>
```

Classes

- class **CEGUIConnectionManager**

this class is used to keep track of connections (event-callbacks) for any widget/EventSet created for/by a gui-object.

Namespaces

- namespace **dtGUI**

*The **dtGUI** (p. 10) namespace contains the functionality to render and control OpenGL graphical user interfaces.*

6.4 ceguiconnectionsignatures.h File Reference

```
#include <string>
```

Classes

- class **CEGUIMemberSignature**< T >
objects instantiated from this class describes an object-member-"signature"
- class **CEGUIMemberSignatureBase**
Common interface for a member-callback-connection-signatures.
- class **CEGUISignatureStatic**
objects instantiated from this class describes a static-method's signature

Namespaces

- namespace **dtGUI**
*The **dtGUI** (p. 10) namespace contains the functionality to render and control OpenGL graphical user interfaces.*

6.5 ceguikeyboardlistener.cpp File Reference

```
#include <dtGUI/ceguikeyboardlistener.h>
#include <dtGUI/hud.h>
#include <CEGUI/CEGUISystem.h>
#include <osgGA/GUIEventAdapter>
```

6.6 ceguikeyboardlistener.h File Reference

```
#include <dtCore/keyboard.h>
#include <CEGUI/CEGUIInputEvent.h>
#include <dtGUI/export.h>
```

Classes

- class **CEGUIKeyboardListener**

Namespaces

- namespace **dtGUI**

*The **dtGUI** (p. 10) namespace contains the functionality to render and control OpenGL graphical user interfaces.*

6.7 ceguiMouseListener.cpp File Reference

```
#include <dtGUI/ceguiMouseListener.h>
#include <dtGUI/hud.h>
#include <CEGUI/CEGUIInputEvent.h>
#include <CEGUI/CEGUISystem.h>
#include <dtUtil/mathdefines.h>
```

6.8 ceguiMouseListener.h File Reference

```
#include <dtCore/mouse.h>
```

```
#include <dtGUI/export.h>
```

Classes

- class **CEGUIMouseListener**
A mouse device listener to inject input to CEGUI.

Namespaces

- namespace **dtGUI**
*The **dtGUI** (p. 10) namespace contains the functionality to render and control OpenGL graphical user interfaces.*

6.9 ceguirenderer.cpp File Reference

```
#include <dtGUI/ceguirenderer.h>
#include <dtGUI/ceguitexture.h>
#include <dtUtil/macros.h>
#include <osg/GL>
#include <osg/GLU>
#include <iostream>
#include <CEGUI/CEGUIExceptions.h>
#include <CEGUI/CEGUIEventArgs.h>
#include <CEGUI/CEGUIImageCodec.h>
#include <CEGUI/CEGUIDynamicModule.h>
#include <CEGUI/CEGUIBase.h>
#include <CEGUI/CEGUITexture.h>
#include <CEGUI/CEGUILogger.h>
```

Defines

- #define **S_(X)** #X
- #define **STRINGIZE(X)** S_(X)

6.9.1 Define Documentation

6.9.1.1 #define S_(X) #X

6.9.1.2 #define STRINGIZE(X) S_(X)

6.10 ceguirenderer.h File Reference

```
#include <list>
#include <set>
#include <dtGUI/export.h>
#include <osg/GraphicsContext>
#include <CEGUI/CEGUIRenderer.h>
```

Classes

- class **CEGUIRenderer**
- struct **MyQuad**
- struct **QuadInfo**

Namespaces

- namespace **dtGUI**

*The **dtGUI** (p. 10) namespace contains the functionality to render and control OpenGL graphical user interfaces.*

Defines

- #define **OGLRENDERER_VBUFF_CAPACITY** 4096

6.10.1 Define Documentation

6.10.1.1 #define OGLRENDERER_VBUFF_CAPACITY 4096

6.11 ceguitexture.cpp File Reference

```
#include <dtGUI/ceguitexture.h>
#include <dtGUI/cegurenderer.h>
#include <osg/GraphicsContext>
#include <osg/Image>
#include <osg/Texture2D>
#include <CEGUI/CEGUIExceptions.h>
#include <CEGUI/CEGUISystem.h>
#include <CEGUI/CEGUIImageCodec.h>
#include <iostream>
```

6.12 ceguitexture.h File Reference

```
#include <dtGUI/export.h>
#include <osg/Texture2D>
#include <CEGUI/CEGUITexture.h>
```

Classes

- class **CEGUITexture**
implementation of the CEGUI::Texture for OpenSceneGraph

Namespaces

- namespace **dtGUI**
*The **dtGUI** (p. 10) namespace contains the functionality to render and control OpenGL graphical user interfaces.*

6.13 ceidrawable.cpp File Reference

```
#include <CEGUI/CEGUIPropertySet.h>
#include <CEGUI/CEGUISystem.h>
#include <CEGUI/CEGUIWindow.h>
#include <CEGUI/CEGUIExceptions.h>
#include <CEGUI/CEGUIVersion.h>
#include <dtGUI/ceidrawable.h>
#include <dtGUI/ceguimouselistener.h>
#include <dtGUI/ceguikeyboardlistener.h>
#include <dtGUI/basescriptmodule.h>
#include <dtGUI/guiexceptionenum.h>
#include <dtGUI/resourceprovider.h>
#include <dtGUI/ceguirenderer.h>
#include <dtCore/exceptionenum.h>
#include <dtUtil/exception.h>
#include <dtCore/deltawin.h>
#include <dtCore/system.h>
#include <dtUtil/log.h>
#include <dtGUI/renderer.h>
#include <osg/Geode>
#include <osg/Projection>
#include <osg/MatrixTransform>
#include <osg/State>
```

6.14 ceuidrawable.h File Reference

```
#include <dtCore/deltadrawable.h>
#include <dtCore/refptr.h>
#include <dtGUI/export.h>
#include <osg/Drawable>
#include <osg/CopyOp>
#include <osg/Node>
```

Classes

- class **CEUIDrawable**
A DeltaDrawable used to render CEGUI.
- class **osgCEUIDrawable**
private class that ties the GUI rendering to an OSG node This is a private class that is used by the UIDrawable class.

Namespaces

- namespace **dtCore**
- namespace **dtGUI**
*The **dtGUI** (p. 10) namespace contains the functionality to render and control OpenGL graphical user interfaces.*

6.15 dtgui.h File Reference

```
#include <dtGUI/ceuidrawable.h>
```

```
#include <dtGUI/scriptmodule.h>
```

Namespaces

- namespace **dtGUI**

*The **dtGUI** (p. 10) namespace contains the functionality to render and control OpenGL graphical user interfaces.*

6.16 export.h File Reference

Defines

- #define `DT_GUI_EXPORT`

6.16.1 Define Documentation

6.16.1.1 #define `DT_GUI_EXPORT`

6.17 guiexceptionenum.cpp File Reference

```
#include <dtGUI/guiexceptionenum.h>
```

Namespaces

- namespace **dtGUI**

*The **dtGUI** (p. 10) namespace contains the functionality to render and control OpenGL graphical user interfaces.*

Functions

- **IMPLEMENT_ENUM** (ExceptionEnum)

6.18 guiexceptionenum.h File Reference

```
#include <dtUtil/enumeration.h>
#include <dtUtil/exception.h>
#include <dtGUI/export.h>
```

Classes

- class **ExceptionEnum**

Namespaces

- namespace **dtGUI**

*The **dtGUI** (p. 10) namespace contains the functionality to render and control OpenGL graphical user interfaces.*

6.19 hud.cpp File Reference

```
#include <dtGUI/hud.h>
#include <dtGUI/ceguirenderer.h>
#include <dtGUI/ceguiimage.h>
#include <CEGUI/CEGUI.h>
#include <CEGUI/CEGUIDefaultResourceProvider.h>
#include <CEGUI/CEGUIPropertySet.h>
#include <CEGUI/CEGUISystem.h>
#include <CEGUI/CEGUIWindow.h>
#include <CEGUI/CEGUIWindowManager.h>
#include <CEGUI/CEGUIImageset.h>
#include <CEGUI/CEGUIImagesetManager.h>
#include <CEGUI/CEGUIExceptions.h>
#include <CEGUI/CEGUIVersion.h>
#include <CEGUI/CEGUIXMLParser.h>
#include <CEGUI/CEGUITexture.h>
#include <CEGUI/CEGUIPropertyHelper.h>
#include <CEGUI/CEGUISchemeManager.h>
#include <dtCore/system.h>
#include <dtCore/globals.h>
#include <dtCore/mouse.h>
#include <dtCore/camera.h>
#include <dtCore/keyboard.h>
#include <dtCore/deltadrawable.h>
#include <dtUtil/log.h>
#include <dtUtil/macros.h>
#include <osg/GraphicsContext>
#include <osg/State>
#include <osg/Camera>
#include <osg/Texture2D>
#include <osg/Geode>
#include <sstream>
```

Functions

- `std::string GetCEGUIPrefix (CEGUI::Window *win)`

6.19.1 Function Documentation

6.19.1.1 `std::string GetCEGUIPrefix (CEGUI::Window * win)`

6.20 hud.h File Reference

```
#include <map>
#include <string>
#include <dtGUI/export.h>
#include <dtGUI/ceguiconnectionmanager.h>
#include <dtGUI/ceguimouselistener.h>
#include <dtGUI/ceguikeyboardlistener.h>
#include <dtGUI/widget.h>
#include <dtCore/refptr.h>
#include <dtCore/base.h>
#include <osg/Drawable>
```

Classes

- struct **GUIViewport**
internal viewport-representation
- class **HUD**
gui-class for rendering and managing widgets
- class **HUDDrawable**
an osg::Drawable which will render a provided(defined via the constructor) gui

Namespaces

- namespace **dtCore**
- namespace **dtGUI**
*The **dtGUI** (p. 10) namespace contains the functionality to render and control OpenGL graphical user interfaces.*

6.21 mainpage.h File Reference

6.21.1 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 Delta3D.

6.22 renderer.cpp File Reference

```
#include <dtGUI/renderer.h>
```

```
#include <dtGUI/resourceprovider.h>
```

6.23 renderer.h File Reference

```
#include <dtGUI/export.h>
#include <CEGUI/CEGUIVersion.h>
#include <CEGUI/renderers/OpenGLGUIRenderer/openglrenderer.h>
```

Classes

- class **Renderer**
Simple CEGui rendering class based on the CEGUI::OpenGLRender class.

Namespaces

- namespace **dtGUI**
*The **dtGUI** (p. 10) namespace contains the functionality to render and control OpenGL graphical user interfaces.*

6.24 resourceprovider.cpp File Reference

```
#include <CEGUI/CEGUIExceptions.h>  
#include <dtGUI/resourceprovider.h>  
#include <dtCore/globals.h>  
#include <dtUtil/log.h>
```

6.25 resourceprovider.h File Reference

```
#include <dtGUI/export.h>
```

```
#include <CEGUI/CEGUIDefaultResourceProvider.h>
```

Classes

- class **ResourceProvider**

*A simple CEGUI **ResourceProvider** (p. 41) based on the CEGUI::DefaultResourceProvider.*

Namespaces

- namespace **dtGUI**

*The **dtGUI** (p. 10) namespace contains the functionality to render and control OpenGL graphical user interfaces.*

6.26 scriptmodule.cpp File Reference

```
#include <dtGUI/scriptmodule.h>  
#include <dtUtil/log.h>  
#include <CEGUI/CEGUIEventSet.h>
```

6.27 scriptmodule.h File Reference

```
#include <dtGUI/basescriptmodule.h>
#include <map>
#include <queue>
#include <string>
#include <dtUtil/functor.h>
```

Classes

- class **ScriptModule**
ScriptModule (p. 42) is the binding from CEGUI::Events to specific application callbacks.

Namespaces

- namespace **dtGUI**
The *dtGUI* (p. 10) namespace contains the functionality to render and control OpenGL graphical user interfaces.

6.28 widget.h File Reference

```
#include <CEGUI/CEGUIWindow.h>
```

Namespaces

- namespace **dtGUI**

*The **dtGUI** (p. 10) namespace contains the functionality to render and control OpenGL graphical user interfaces.*

Typedefs

- typedef CEGUI::Window **Widget**

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