Legend of the Great Unwashed

v0.1

Mon Nov 23 2015 13:39:00

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Namespace Documentation

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Functions

- static void logError (const std::string &desc)

  Writes an error message to the log file.

5.1.1 Function Documentation

5.1.1.1 static void MainNS::logError (const std::string & *desc*) `[static]`

Writes an error message to the log file.

Parameters

desc	The string containing the error message.

5.2 mediawrap Namespace Reference

Classes

- class AudioPlayer

  Provides basic audio playing capabilities with WAV files.
- class VideoContext

  Provides basic 2D rendering capabilities.
- class VideoDisplay

  Creates a window and initializes SDL2 and SDL2_IMG.

5.3 teamusa Namespace Reference

Classes

- class ActorEvent

  Event data generated by Actors, handled by Engine.
- class ActorVideo

Contains data for rendering actor.
- class AudioEngine

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- class AudioStreamActor

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- class BaseActor

  Abstract class which all actors must derive from.
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- class DelayedVideoActor

  Will increment a counter every time the step method is called.
- class Engine

  Processes all components of the game each frame.
- class GameSaveSerializer

  Provides multithreaded save, single-thread load of save files.
- class InventoryItemActor

  IventoryItemActor creates a collectible item in the game environment.
- class Level

  A Level is a container of Scenes and Actors corresponding to those scenes.
- class LevelLink

  Allows the player to transition between levels.
- class MovingActor

  Will transition from one region to the next by calculating the distance to move each frame for a set number of frames.
- class Player

  Handles all data relevant to the player engaging the game.
- class Point

  An (x,y) coordinate within the rendering window.
- class ResponsiveAudioActor

  Will increment the value of stepCount until it is equal to durationSteps for each call to the step method.
- class ResponsiveVideoActor

  Changes its texture ID based on hovering and clicks.
- class SceneLink

  Allows the player to transition between scenes.
- class TextboxSpawnActor

  Will emit a DisplayText event when the onClick method is called.
- class Timer

  A timer that counts up from zero in milliseconds.
- class VideoActor

  Displays a texture in a region and performs no other behavior.
- class VideoEngine

  Provides video capabilities that are specific to Legend of the Great Unwashed.
- class VideoEventActor

  Will display a texture and perform no action until clicked.

Typedefs

- typedef mediawrap::AudioPlayer::AudioID AudioID
- typedef std::shared_ptr< BaseActor > BaseActorPtr
- typedef std::vector< BaseActorPtr > ActorList
- typedef mediawrap::VideoContext::TextureID TextureID
- typedef mediawrap::VideoContext::Region Region

Enumerations

- enum ActorEventType {
  Nil = -1, ChangeScene, LoadLevel, PlayAudio,
  NewGame, LoadGame, DisplayText, ExitGame,
  StreamAudio }

  Events that actors can trigger.
- enum CursorStyle {
  CursorStyle::CURSOR_DEFAULT, CursorStyle::CURSOR_SELECT, CursorStyle::CURSOR_LEF↩
  T, CursorStyle::CURSOR_RIGHT,
  CursorStyle::CURSOR_UP, CursorStyle::CURSOR_DOWN }

  The possible styles for the mouse cursor.

5.3.1 Typedef Documentation

5.3.1.1 typedef std::vector<**BaseActorPtr**> **teamusa::ActorList**

5.3.1.2 typedef **mediawrap::AudioPlayer::AudioID teamusa::AudioID**

5.3.1.3 typedef std::shared_ptr<**BaseActor**> **teamusa::BaseActorPtr**

5.3.1.4 typedef **mediawrap::VideoContext::Region teamusa::Region**

5.3.1.5 typedef **mediawrap::VideoContext::TextureID teamusa::TextureID**

5.3.2 Enumeration Type Documentation

5.3.2.1 enum **teamusa::ActorEventType**

Events that actors can trigger.

Enumerator

Nil

ChangeScene

LoadLevel

PlayAudio

NewGame

LoadGame

DisplayText

ExitGame

StreamAudio

5.3.2.2 enum **teamusa::CursorStyle** `[strong]`

The possible styles for the mouse cursor.

Enumerator

CURSOR_DEFAULT Default cursor.

CURSOR_SELECT Offers the ability to select an object.

CURSOR_LEFT Points left.

CURSOR_RIGHT Points right.

CURSOR_UP Points up.

CURSOR_DOWN Points down.

Chapter 6

Class Documentation

6.1 teamusa::ActorEvent Class Reference

Event data generated by Actors, handled by Engine.

```
#include <ActorEvent.h>
```

Public Member Functions

- ActorEvent (void)

Public Attributes

- int32_t value
- ActorEventType type

6.1.1 Detailed Description

Event data generated by Actors, handled by Engine.

6.1.2 Constructor & Destructor Documentation

6.1.2.1 teamusa::ActorEvent::ActorEvent (void) `[inline]`

6.1.3 Member Data Documentation

6.1.3.1 ActorEventType teamusa::ActorEvent::type

6.1.3.2 int32_t teamusa::ActorEvent::value

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

- ActorEvent.h

6.2 teamusa::ActorVideo Class Reference

Contains data for rendering actor.

```
#include <BaseActor.h>
```

Public Member Functions

- ActorVideo (void)

Public Attributes

- int32_t layer
- int32_t textureID

6.2.1 Detailed Description

Contains data for rendering actor.

6.2.2 Constructor & Destructor Documentation

6.2.2.1 teamusa::ActorVideo::ActorVideo (void) [inline]

6.2.3 Member Data Documentation

6.2.3.1 int32_t teamusa::ActorVideo::layer

6.2.3.2 int32_t teamusa::ActorVideo::textureID

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

- BaseActor.h

6.3 teamusa::AudioEngine Class Reference

Provides project-specific audio functionality for Legend of the Great Unwashed.

```
#include <AudioEngine.hpp>
```

Public Member Functions

- void loadSound (const std::string &path, AudioID id, ResourceGroup group)

  Loads the given sound file and associates it with the given id.
- void playSound (AudioID id)

  Plays the sound associated with the given id.
- void playStream (const std::string &path)

  Plays the given stream in a loop continuously.
- void deleteSound (AudioID id)

  Deletes the given sound from memory.
- void deleteSoundGroup (ResourceGroup resourceGroup)

  Deletes the entire group of sounds.

Private Attributes

- std::vector< AudioID > coreResources
- std::vector< AudioID > levelResources
- AudioPlayer audioPlayer

Static Private Attributes

- static const AudioID MAX_RESERVED_ID = 1000

6.3.1 Detailed Description

Provides project-specific audio functionality for Legend of the Great Unwashed.

6.3.2 Member Function Documentation

6.3.2.1 void teamusa::AudioEngine::deleteSound (**AudioID** *id*)

Deletes the given sound from memory.

Parameters

id	The id of the audio to delete.

6.3.2.2 void teamusa::AudioEngine::deleteSoundGroup (**ResourceGroup** *resourceGroup*)

Deletes the entire group of sounds.

Parameters

6.3.2.3 void teamusa::AudioEngine::loadSound (const std::string & *path*, **AudioID** *id*, **ResourceGroup** *group*)

Loads the given sound file and associates it with the given id.

Parameters

path	The relative path of the sound file to load.
id	The id to associate with the given sound file.

6.3.2.4 void teamusa::AudioEngine::playSound (**AudioID** *id*)

Plays the sound associated with the given id.

Parameters

id	The id of the sound to play.

6.3.2.5 void teamusa::AudioEngine::playStream (const std::string & *path*)

Plays the given stream in a loop continuously.

Parameters

path	The path of the audio to stream.

6.3.3 Member Data Documentation

6.3.3.1 AudioPlayer teamusa::AudioEngine::audioPlayer `[private]`

6.3.3.2 std::vector< AudioID > teamusa::AudioEngine::coreResources `[private]`

6.3.3.3 std::vector< AudioID > teamusa::AudioEngine::levelResources `[private]`

6.3.3.4 const AudioID teamusa::AudioEngine::MAX_RESERVED_ID = 1000 `[static]`, `[private]`

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

- AudioEngine.hpp
- AudioEngine.cpp

6.4 mediawrap::AudioPlayer Class Reference

Provides basic audio playing capabilities with WAV files.

`#include <AudioPlayer.hpp>`

Public Types

- typedef unsigned int AudioID

  Used to uniquely identify each audio sample.

Public Member Functions

- AudioPlayer ()

  Constructs a new audio player.
- ~AudioPlayer ()

  Deletes the audio player and all of its samples and streams.
- void load_stream (const std::string &file_path)

  Loads the given audio file and prepares it for streaming.
- void stream_audio (int loops=-1)

  Plays the loaded audio stream loop+1 times.
- void load_sample (AudioID id, const std::string &file_path)

  Loads the given audio sample into memory.
- void play_sample (AudioID id)

  Plays the given audio sample in the first available channel.
- void delete_sample (AudioID id)

  Deletes the sample created by a call to load_sample().
- void clear_samples ()

  Deletes all samples created by a call to load_sample().

Private Attributes

- std::unordered_map< AudioID, Mix_Chunk ∗ > ∗ audio_samples
- Mix_Music ∗ audio_stream

Static Private Attributes

- static const int audio_rate = 44100
- static const int audio_channels = 1
- static const int audio_buffer = 4096
- static const Uint16 audio_format = AUDIO_S16

6.4.1 Detailed Description

Provides basic audio playing capabilities with WAV files.

Acts as an abstraction layer for SDL2.

6.4.2 Member Typedef Documentation

6.4.2.1 typedef unsigned int **mediawrap::AudioPlayer::AudioID**

Used to uniquely identify each audio sample.

6.4.3 Constructor & Destructor Documentation

6.4.3.1 mediawrap::AudioPlayer::AudioPlayer ( )

Constructs a new audio player.

Enables SDL audio functionality.

6.4.3.2 mediawrap::AudioPlayer::∼AudioPlayer ( )

Deletes the audio player and all of its samples and streams.

Disables SDL audio functionality.

6.4.4 Member Function Documentation

6.4.4.1 void mediawrap::AudioPlayer::clear_samples ( )

Deletes all samples created by a call to load_sample().

6.4.4.2 void mediawrap::AudioPlayer::delete_sample (**AudioID** *id*)

Deletes the sample created by a call to load_sample().

Parameters

id	The id of the sample to delete.

6.4.4.3 void mediawrap::AudioPlayer::load_sample (AudioID *id,* const std::string & *file_path*)

Loads the given audio sample into memory.

Loading a sample into an existing id will delete the sample associated with it before the new sample is loaded.

Parameters

id	The unique id to store the sample under.
file_path	The path of the audio file to load into memory.

6.4.4.4 void mediawrap::AudioPlayer::load_stream (const std::string & *file_path*)

Loads the given audio file and prepares it for streaming.

Only one audio stream can be loaded at a time. The previously loaded stream will be deleted if this method is called multiple times.

Parameters

file_path	The path of the file to load.

6.4.4.5 void mediawrap::AudioPlayer::play_sample (AudioID *id*)

Plays the given audio sample in the first available channel.

Parameters

id	The id of the audio sample to play.

6.4.4.6 void mediawrap::AudioPlayer::stream_audio (int *loops* = `-1`)

Plays the loaded audio stream loop+1 times.

If set to -1, the audio will loop indefinitely. Only one audio stream can be played at a time.

Parameters

loops	The number of times to play the audio. A value of -1 is infinite. Defaults to looping infinitely.

6.4.5 Member Data Documentation

6.4.5.1 const int mediawrap::AudioPlayer::audio_buffer = 4096 `[static]`, `[private]`

6.4.5.2 const int mediawrap::AudioPlayer::audio_channels = 1 `[static]`, `[private]`

6.4.5.3 const Uint16 mediawrap::AudioPlayer::audio_format = AUDIO_S16 `[static]`, `[private]`

6.4.5.4 const int mediawrap::AudioPlayer::audio_rate = 44100 `[static]`, `[private]`

6.4.5.5 std::unordered_map<AudioID, Mix_Chunk*>* mediawrap::AudioPlayer::audio_samples `[private]`

6.4.5.6 Mix_Music∗ mediawrap::AudioPlayer::audio_stream [private]

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

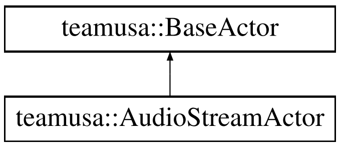
- AudioPlayer.hpp
- AudioPlayer.cpp

6.5 teamusa::AudioStreamActor Class Reference

If this actor is not activated, it will emit a StreamAudio event and set its status to activated when the step method is called.

`#include <AudioStreamActor.h>`

Inheritance diagram for teamusa::AudioStreamActor:



Public Member Functions

- AudioStreamActor (std::string path)
- virtual ∼AudioStreamActor (void) override
- virtual const ActorEvent step (Player &player) override

    This method updates the player on every frame.
- std::string getPath ()

    This method gets the path to the requested audio file.

Private Attributes

- std::string path
- bool activated

Additional Inherited Members

6.5.1 Detailed Description

If this actor is not activated, it will emit a StreamAudio event and set its status to activated when the step method is called.

The engine can then retrieve the path to the audio file by a call to this actor's getPath method.

6.5.2 Constructor & Destructor Documentation

6.5.2.1 AudioStreamActor::AudioStreamActor (std::string *path*) [explicit]

6.5.2.2 AudioStreamActor::∼AudioStreamActor (void) [override], [virtual]

6.5.3 Member Function Documentation

6.5.3.1 std::string AudioStreamActor::getPath ( )

This method gets the path to the requested audio file.

Returns

Returns a file path formatted as a string.

6.5.3.2 const ActorEvent AudioStreamActor::step (Player & *player*) [override], [virtual]

This method updates the player on every frame.

Parameters

Player	The player

Returns

Returns an ActorEvent that triggers an action from one or more actors.

Implements teamusa::BaseActor.

6.5.4 Member Data Documentation

6.5.4.1 bool teamusa::AudioStreamActor::activated [private]

6.5.4.2 std::string teamusa::AudioStreamActor::path [private]

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

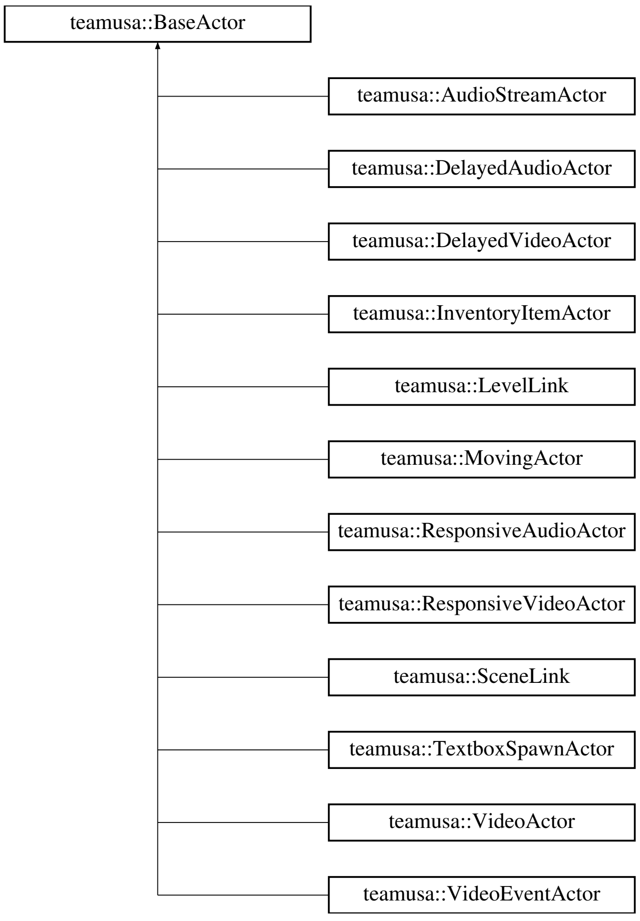
- AudioStreamActor.h
- AudioStreamActor.cpp

6.6 teamusa::BaseActor Class Reference

Abstract class which all actors must derive from.

`#include <BaseActor.h>`

Inheritance diagram for teamusa::BaseActor:


teamusa::BaseActor
teamusa::AudioStreamActor
teamusa::DelayedAudioActor
teamusa::DelayedVideoActor
teamusa::InventoryItemActor
teamusa::LevelLink
teamusa::MovingActor
teamusa::ResponsiveAudioActor
teamusa::ResponsiveVideoActor
teamusa::SceneLink
teamusa::TextboxSpawnActor
teamusa::VideoActor
teamusa::VideoEventActor

Public Member Functions

- BaseActor (const Region &region=Region())
- virtual ∼BaseActor (void)=0
- virtual const ActorEvent onClick (Player &player)

    Called when the actor is clicked on.
- virtual const ActorEvent onHover (Player &player)

    Called when the actor is hovered over with the mouse.
- virtual const ActorEvent step (Player &player)=0

    Called each frame, each derived actor should handle this.
- virtual const bool isInBounds (const Point &point)

    Calculates if point is in bounds of actor's region.
- virtual void setRegion (const Region &region)

    Sets the actor's region (can be used by Level when loading).
- virtual const Region getRegion (void) const

    Gets the actor's Region.
- virtual const int32_t getLayer (void) const

    Gets the layer the actor should be rendered on.
- virtual const int32_t getTextureID (void) const

    Gets the texture ID of the actor.
- const bool hasVideo (void) const

    Returns true if the actor has a video component.

Protected Attributes

- Region mRegion
- AudioID mAudioID
- ActorVideo ∗ mVideo

6.6.1 Detailed Description

Abstract class which all actors must derive from.

6.6.2 Constructor & Destructor Documentation

6.6.2.1 BaseActor::BaseActor (const Region & *region* = Region()) [explicit]

6.6.2.2 BaseActor::∼BaseActor (void) [pure virtual]

6.6.3 Member Function Documentation

6.6.3.1 const int32_t BaseActor::getLayer (void) const [virtual]

Gets the layer the actor should be rendered on.

Returns

An integer containing the layer.

6.6.3.2 const Region BaseActor::getRegion (void) const [virtual]

Gets the actor's Region.

Returns

The actor's Region struct.

6.6.3.3 const int32_t BaseActor::getTextureID (void) const [virtual]

Gets the texture ID of the actor.

Returns

The integer containing the texture ID.

6.6.3.4 const bool BaseActor::hasVideo (void) const

Returns true if the actor has a video component.

6.6.3.5 const bool BaseActor::isInBounds (const Point & *point*) [virtual]

Calculates if point is in bounds of actor's region.

Parameters

point	The point to test.

Returns

True if point is within actor's region.

6.6.3.6 const ActorEvent BaseActor::onClick (Player & *player*) [virtual]

Called when the actor is clicked on.

Parameters

player	The player in the scene.

Returns

The ActorEvent to be handled by Engine when clicked on.

Reimplemented in teamusa::MovingActor, teamusa::InventoryItemActor, teamusa::TextboxSpawnActor, teamusa::ResponsiveAudioActor, teamusa::VideoEventActor, teamusa::SceneLink, teamusa::LevelLink, and teamusa::ResponsiveVideoActor.

6.6.3.7 const ActorEvent BaseActor::onHover (Player & *player*) [virtual]

Called when the actor is hovered over with the mouse.

Parameters

player	The player in the scene.

Returns

The ActorEvent to be handled by Engine when hovered over.

Reimplemented in teamusa::MovingActor, teamusa::ResponsiveAudioActor, teamusa::VideoEventActor, teamusa::SceneLink, teamusa::LevelLink, teamusa::ResponsiveVideoActor, and teamusa::InventoryItemActor.

6.6.3.8 void BaseActor::setRegion (const Region & *region*) [virtual]

Sets the actor's region (can be used by Level when loading).

Parameters

region	The Region to set.

6.6.3.9 virtual const ActorEvent teamusa::BaseActor::step (Player & *player*) [pure virtual]

Called each frame, each derived actor should handle this.

Parameters

player	The player in the scene.

Returns

Any ActorEvent that should be handled immediately by Engine.

Implemented in teamusa::MovingActor, teamusa::ResponsiveAudioActor, teamusa::VideoEventActor, teamusa↩ ::SceneLink, teamusa::InventoryItemActor, teamusa::LevelLink, teamusa::ResponsiveVideoActor, teamusa::↩ TextboxSpawnActor, teamusa::DelayedVideoActor, teamusa::DelayedAudioActor, teamusa::AudioStreamActor, and teamusa::VideoActor.

6.6.4 Member Data Documentation

6.6.4.1 AudioID teamusa::BaseActor::mAudioID `[protected]`

6.6.4.2 Region teamusa::BaseActor::mRegion `[protected]`

6.6.4.3 ActorVideo∗ teamusa::BaseActor::mVideo `[protected]`

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

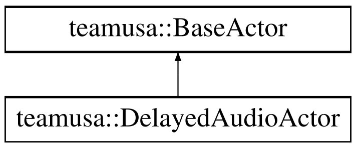
- BaseActor.h
- BaseActor.cpp

6.7 teamusa::DelayedAudioActor Class Reference

Will increment a counter every time the step method is called.

`#include <DelayedAudioActor.h>`

Inheritance diagram for teamusa::DelayedAudioActor:



Public Member Functions

- DelayedAudioActor (int audioID, int delaySteps)
- virtual ∼DelayedAudioActor (void) override
- virtual const ActorEvent step (Player &player) override

  Advances the actor one frame.

Private Attributes

- int audioId
- int delaySteps
- int currentStep

Additional Inherited Members

6.7.1 Detailed Description

Will increment a counter every time the step method is called.

After a specified number of steps have occurred, this actor will change its TextureID to a valid value and will be displayed. When the number of steps is equal to the disappearing step, the TextureID will be set to an ignored value, causing the actor to disappear.

6.7.2 Constructor & Destructor Documentation

6.7.2.1 DelayedAudioActor::DelayedAudioActor (int *audioID,* int *delaySteps* = 0) [explicit]

6.7.2.2 DelayedAudioActor::∼DelayedAudioActor (void) [override], [virtual]

6.7.3 Member Function Documentation

6.7.3.1 const ActorEvent DelayedAudioActor::step (Player & *player*) [override], [virtual]

Advances the actor one frame.

Parameters

Player	The Player.

Returns

Returns an ActorEvent that triggers one or more actors to perform an action

Implements teamusa::BaseActor.

6.7.4 Member Data Documentation

6.7.4.1 int teamusa::DelayedAudioActor::audioId [private]

6.7.4.2 int teamusa::DelayedAudioActor::currentStep [private]

6.7.4.3 int teamusa::DelayedAudioActor::delaySteps [private]

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

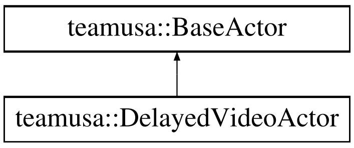
- DelayedAudioActor.h
- DelayedAudioActor.cpp

6.8 teamusa::DelayedVideoActor Class Reference

Will increment a counter every time the step method is called.

`#include <DelayedVideoActor.h>`

Inheritance diagram for teamusa::DelayedVideoActor:



Public Member Functions

- DelayedVideoActor (Region region, int textureID, int delaysteps, int disappearStep, int layer)
- virtual ∼DelayedVideoActor (void) override
- virtual const ActorEvent step (Player &player) override

  Advances the actor one frame.

Private Attributes

- int textureId
- int delaySteps
- int currentStep
- int disappear

Additional Inherited Members

6.8.1 Detailed Description

Will increment a counter every time the step method is called.

After a specified number of steps have occurred, this actor will change its TextureID to a valid value and will be displayed. When the number of steps is equal to the disappearing step, the TextureID will be set to an ignored value, causing the actor to disappear

6.8.2 Constructor & Destructor Documentation

6.8.2.1 DelayedVideoActor::DelayedVideoActor (Region *region,* int *textureID,* int *delaysteps,* int *disappearStep,* int *layer*) [explicit]

6.8.2.2 DelayedVideoActor::∼DelayedVideoActor (void) [override], [virtual]

6.8.3 Member Function Documentation

6.8.3.1 const ActorEvent DelayedVideoActor::step (Player & *player*) [override], [virtual]

Advances the actor one frame.

Parameters

Player	The Player.

Returns

Returns an ActorEvent that triggers one or more actors to perform an action.

Implements teamusa::BaseActor.

6.8.4 Member Data Documentation

6.8.4.1 int teamusa::DelayedVideoActor::currentStep `[private]`

6.8.4.2 int teamusa::DelayedVideoActor::delaySteps `[private]`

6.8.4.3 int teamusa::DelayedVideoActor::disappear `[private]`

6.8.4.4 int teamusa::DelayedVideoActor::textureId `[private]`

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

- DelayedVideoActor.h
- DelayedVideoActor.cpp

6.9 teamusa::Engine Class Reference

Processes all components of the game each frame.

`#include <Engine.h>`

Public Member Functions

- Engine (void)
- ~Engine (void)
- void run (void)

  Starts the game, runs until the player quits or there is an exception.

Private Types

- typedef std::function< void(BaseActorPtr actor, const int32_t value) > ActorEventHandler

Private Member Functions

- const Point getMouseCoordinates (void) const

  Retrieves the window mouse coordinates.
- const int32_t getMouseClickState (void) const

  Retrives the current mouse button state.
- void handleEvent (BaseActorPtr actor, const ActorEvent &e)

  Handles actor event on actor who triggered it.
- void render (const ActorList &actors)

  Renders all actors in the scene.
- void onChangeScene (BaseActorPtr actor, const int32_t value)

  Handles scene change events triggered by SceneLink actors.
- void onLoadLevel (BaseActorPtr actor, const int32_t value)

  Handles level change events triggered by LevelLink actors.
- void onPlayAudio (BaseActorPtr actor, const int32_t value)

  Handles audio events triggered by actors.
- void onNewGame (BaseActorPtr actor, const int32_t value)

  Handles new game events triggered by main menu actors.
- void onLoadGame (BaseActorPtr actor, const int32_t value)

Handles load game events triggered by main menu actors.

- void onDisplayText (BaseActorPtr actor, const int32_t value)

  Handles text display events triggered by actors.
- void onExitGame (BaseActorPtr actor, const int32_t value)

  Handles exit game events triggered by quit game button at main menu.
- void onStreamAudio (BaseActorPtr actor, const int32_t value)

  Handles stream audio events triggered by actors, calls into AudioEngine.
- void freeAndLoadLevel (const int32_t id)

  Clears resource data for current level and loads the specified level.

Private Attributes

- std::shared_ptr< AudioEngine > mAudioEngine
- std::shared_ptr< VideoEngine > mVideoEngine
- Level mLevel
- int32_t mCurrentLevelID
- Player mPlayer
- bool mIsRunning
- bool mMainMenu
- GameSaveSerializer mSerializer
- std::vector< ActorEventHandler > mActorEventHandlers

6.9.1 Detailed Description

Processes all components of the game each frame.

6.9.2 Member Typedef Documentation

6.9.2.1 typedef std::function< void(BaseActorPtr actor, const int32_t value) > teamusa::Engine::ActorEventHandler [private]

6.9.3 Constructor & Destructor Documentation

6.9.3.1 Engine::Engine (void) [explicit]

6.9.3.2 Engine::∼Engine (void)

6.9.4 Member Function Documentation

6.9.4.1 void Engine::freeAndLoadLevel (const int32_t *id*) [private]

Clears resource data for current level and loads the specified level.

6.9.4.2 const int32_t Engine::getMouseClickState (void) const [private]

Retrives the current mouse button state.

Returns

Integer describing mouse state.

6.9.4.3 const Point Engine::getMouseCoordinates (void) const [private]

Retrieves the window mouse coordinates.

Returns

A Point struct containg the x and y values of the mouse.

6.9.4.4 void Engine::handleEvent (BaseActorPtr *actor,* const ActorEvent & *e*) [private]

Handles actor event on actor who triggered it.

Looks up function pointer in table, calls the corresponding function.

6.9.4.5 void Engine::onChangeScene (BaseActorPtr *actor,* const int32_t *value*) [private]

Handles scene change events triggered by SceneLink actors.

Parameters

actor	The actor who triggered the event.
value	A value corresponding to the event, if needed.

6.9.4.6 void Engine::onDisplayText (BaseActorPtr *actor,* const int32_t *value*) [private]

Handles text display events triggered by actors.

Parameters

actor	The actor who triggered the event.
value	A value corresponding to the event, if needed.

6.9.4.7 void Engine::onExitGame (BaseActorPtr *actor,* const int32_t *value*) [private]

Handles exit game events triggered by quit game button at main menu.

Parameters

actor	The actor who triggered the event.
value	A value corresponding to the event, if needed.

6.9.4.8 void Engine::onLoadGame (BaseActorPtr *actor,* const int32_t *value*) [private]

Handles load game events triggered by main menu actors.

Parameters

actor	The actor who triggered the event.
value	A value corresponding to the event, if needed.

6.9.4.9 void Engine::onLoadLevel (BaseActorPtr *actor,* const int32_t *value*) [private]

Handles level change events triggered by LevelLink actors.

Parameters

actor	The actor who triggered the event.
value	A value corresponding to the event, if needed.

6.9.4.10 void Engine::onNewGame (BaseActorPtr *actor,* const int32_t *value*) [private]

Handles new game events triggered by main menu actors.

Parameters

actor	The actor who triggered the event.
value	A value corresponding to the event, if needed.

6.9.4.11 void Engine::onPlayAudio (BaseActorPtr *actor,* const int32_t *value*) [private]

Handles audio events triggered by actors.

Calls into the AudioEngine.

Parameters

actor	The actor who triggered the event.
value	A value corresponding to the event, if needed.

6.9.4.12 void Engine::onStreamAudio (BaseActorPtr *actor,* const int32_t *value*) [private]

Handles stream audio events triggered by actors, calls into AudioEngine.

Parameters

actor	The actor who triggered the event.
value	A value corresponding to the event, if needed.

6.9.4.13 void Engine::render (const ActorList & *actors*) [private]

Renders all actors in the scene.

6.9.4.14 void Engine::run (void)

Starts the game, runs until the player quits or there is an exception.

6.9.5 Member Data Documentation

6.9.5.1 std::vector<ActorEventHandler> teamusa::Engine::mActorEventHandlers [private]

6.9.5.2 std::shared_ptr<AudioEngine> teamusa::Engine::mAudioEngine [private]

6.9.5.3 int32_t teamusa::Engine::mCurrentLevelID [private]

6.9.5.4 bool teamusa::Engine::mIsRunning [private]

6.9.5.5 Level teamusa::Engine::mLevel [private]

6.9.5.6 bool teamusa::Engine::mMainMenu [private]

6.9.5.7 Player teamusa::Engine::mPlayer [private]

6.9.5.8 GameSaveSerializer teamusa::Engine::mSerializer [private]

6.9.5.9 std::shared_ptr<VideoEngine> teamusa::Engine::mVideoEngine [private]

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

- Engine.h
- Engine.cpp

6.10 teamusa::GameSaveSerializer Class Reference

Provides multithreaded save, single-thread load of save files.

`#include <GameSaveSerializer.h>`

Public Member Functions

- GameSaveSerializer (void)
- ~GameSaveSerializer (void)
- void setSlot (const int32_t slot)

    Sets the slot number to save/load in.
- bool load (int &levelID, int &sceneID, Player::Inventory &inventory)

    Loads a save file.
- void save (const int &levelID, const int &sceneID, const Player::Inventory &inventory)

    Saves a file.
- void saveInThread (const int levelID, const int sceneID, const Player::Inventory inventory)

    Saves a file in a separate thread.

Private Attributes

- std::mutex fileLock
- int32_t slot

6.10.1 Detailed Description

Provides multithreaded save, single-thread load of save files.

6.10.2 Constructor & Destructor Documentation

6.10.2.1 teamusa::GameSaveSerializer::GameSaveSerializer (void)

6.10.2.2 teamusa::GameSaveSerializer::~GameSaveSerializer (void)

6.10.3 Member Function Documentation

6.10.3.1 bool teamusa::GameSaveSerializer::load (int & *levelID,* int & *sceneID,* Player::Inventory & *inventory*)

Loads a save file.

Returns

True if save file was loaded successfully, false if it doesn't exist.

6.10.3.2 void teamusa::GameSaveSerializer::save (const int & *levelID,* const int & *sceneID,* const Player::Inventory & *inventory*)

Saves a file.

6.10.3.3 void teamusa::GameSaveSerializer::saveInThread (const int *levelID,* const int *sceneID,* const Player::Inventory *inventory*)

Saves a file in a separate thread.

6.10.3.4 void teamusa::GameSaveSerializer::setSlot (const int32_t *slot*)

Sets the slot number to save/load in.

6.10.4 Member Data Documentation

6.10.4.1 std::mutex teamusa::GameSaveSerializer::fileLock [private]

6.10.4.2 int32_t teamusa::GameSaveSerializer::slot [private]

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

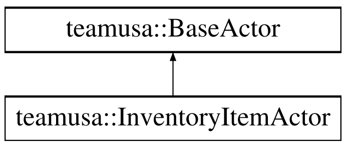
- GameSaveSerializer.h
- GameSaveSerializer.cpp

6.11 teamusa::InventoryItemActor Class Reference

IventoryItemActor creates a collectible item in the game environment.

`#include <InventoryItemActor.h>`

Inheritance diagram for teamusa::InventoryItemActor:



Public Member Functions

- InventoryItemActor (Region region, const int itemID=-1, const int textureID=-1, const int layer=-1)
- virtual ∼InventoryItemActor (void) override
- virtual const ActorEvent onHover (Player &player) override

  Generates an ActorEvent if the player hovers over the actors' region.
- virtual const ActorEvent onClick (Player &player) override

  Generates an ActorEvent if the player clicks in the actor's region.
- virtual const ActorEvent step (Player &player) override

  Advances the actor one frame and sends the appropriate ActorEvent.

Private Attributes

- int itemID
- bool pickedUp = false

Additional Inherited Members

6.11.1 Detailed Description

IventoryItemActor creates a collectible item in the game environment.

6.11.2 Constructor & Destructor Documentation

6.11.2.1 InventoryItemActor::InventoryItemActor (**Region** *region*, const int *itemID* = `-1`, const int *textureID* = `-1`, const int *layer* = `-1`) `[explicit]`

6.11.2.2 InventoryItemActor::∼InventoryItemActor (void) `[override]`, `[virtual]`

6.11.3 Member Function Documentation

6.11.3.1 const **ActorEvent** InventoryItemActor::onClick (**Player** & *player*) `[override]`, `[virtual]`

Generates an ActorEvent if the player clicks in the actor's region.

Parameters

Player	The player.

Returns

Returns an ActorEvent that triggers an actor to perform an action.

Reimplemented from teamusa::BaseActor.

6.11.3.2 const **ActorEvent** InventoryItemActor::onHover (**Player** & *player*) `[override]`, `[virtual]`

Generates an ActorEvent if the player hovers over the actors' region.

Parameters

Player	The player.

Returns

Returns an ActorEvent that triggers an actor to perform an action.

Reimplemented from teamusa::BaseActor.

6.11.3.3 const **ActorEvent** InventoryItemActor::step (**Player** & *player*) `[override]`, `[virtual]`

Advances the actor one frame and sends the appropriate ActorEvent.

Parameters

Player	The player.

Returns

Returns an ActorEvent that triggers an actor to perform an action.

Implements teamusa::BaseActor.

6.11.4 Member Data Documentation

6.11.4.1 int teamusa::InventoryItemActor::itemID `[private]`

6.11.4.2 bool teamusa::InventoryItemActor::pickedUp = false `[private]`

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

- InventoryItemActor.h
- InventoryItemActor.cpp

6.12 teamusa::Level Class Reference

A Level is a container of Scenes and Actors corresponding to those scenes.

`#include <Level.h>`

Classes

- class Scene

  A scene is a collection of images (Actors) that is displayed on the screen.

Public Member Functions

- Level (void)
- Level (int levelID, AudioEngine &audioEngine, VideoEngine &videoEngine)
- const ActorList & getActors (void) const

  Returns the list of actors in the current scene.
- const int getBGImageID (void) const

  Returns the textureID of the background image in the current scene.
- const int loadLevel (const std::string &path, AudioEngine &audioEngine, VideoEngine &videoEngine)

  Parses the specified level file, loads textures, audio samples, and stores the actors in a hash table.
- void changeScene (const int sceneID)

  Changes the currently active scene.
- const int getScene ()

  Returns the index of the currently active scene.
- void clearAll (void)

  Removes all loaded scenes and actors from memory.

Private Member Functions

- BaseActorPtr parseAudioStreamActor (std::fstream &fs)
- BaseActorPtr parseDelayedAudioActor (std::fstream &fs)
- BaseActorPtr parseDelayedVideoActor (std::fstream &fs)
- BaseActorPtr parseInventoryItemActor (std::fstream &fs)
- BaseActorPtr parseLevelLink (std::fstream &fs)
- BaseActorPtr parseMovingActor (std::fstream &fs)
- BaseActorPtr parseResponsiveAudioActor (std::fstream &fs)
- BaseActorPtr parseResponsiveVideoActor (std::fstream &fs)
- BaseActorPtr parseSceneLink (std::fstream &fs)
- BaseActorPtr parseTextboxSpawnActor (std::fstream &fs)
- BaseActorPtr parseVideoActor (std::fstream &fs)
- BaseActorPtr parseVideoEventActor (std::fstream &fs)

Private Attributes

- std::unordered_map< int, Scene > scenes
- int startScene
- int activeScene

6.12.1 Detailed Description

A Level is a container of Scenes and Actors corresponding to those scenes.

6.12.2 Constructor & Destructor Documentation

6.12.2.1 Level::Level (void)

6.12.2.2 Level::Level (int *levelID*, AudioEngine & *audioEngine*, VideoEngine & *videoEngine*)

6.12.3 Member Function Documentation

6.12.3.1 void Level::changeScene (const int *sceneID*)

Changes the currently active scene.

Subsequent calls to getActors() will return the actors in that scene.

Parameters

sceneID	The ID of the new scene.

6.12.3.2 void Level::clearAll (void)

Removes all loaded scenes and actors from memory.

6.12.3.3 const ActorList & Level::getActors (void) const

Returns the list of actors in the current scene.

6.12.3.4 const int Level::getBGImageID (void) const

Returns the textureID of the background image in the current scene.

6.12.3.5 const int Level::getScene ( )

Returns the index of the currently active scene.

6.12.3.6 const int Level::loadLevel (const std::string & *path,* AudioEngine & *audioEngine,* VideoEngine & *videoEngine*)

Parses the specified level file, loads textures, audio samples, and stores the actors in a hash table.

Parameters

path	The file path to the .lvl file.
audioEngine	A reference to the audio engine being used.
videoEngine	A reference to the video engine being used.

6.12.3.7 BaseActorPtr Level::parseAudioStreamActor (std::fstream & *fs*) [private]

6.12.3.8 BaseActorPtr Level::parseDelayedAudioActor (std::fstream & *fs*) [private]

6.12.3.9 BaseActorPtr Level::parseDelayedVideoActor (std::fstream & *fs*) [private]

6.12.3.10 BaseActorPtr Level::parseInventoryItemActor (std::fstream & *fs*) [private]

6.12.3.11 BaseActorPtr Level::parseLevelLink (std::fstream & *fs*) [private]

6.12.3.12 BaseActorPtr Level::parseMovingActor (std::fstream & *fs*) [private]

6.12.3.13 BaseActorPtr Level::parseResponsiveAudioActor (std::fstream & *fs*) [private]

6.12.3.14 BaseActorPtr Level::parseResponsiveVideoActor (std::fstream & *fs*) [private]

6.12.3.15 BaseActorPtr Level::parseSceneLink (std::fstream & *fs*) [private]

6.12.3.16 BaseActorPtr Level::parseTextboxSpawnActor (std::fstream & *fs*) [private]

6.12.3.17 BaseActorPtr Level::parseVideoActor (std::fstream & *fs*) [private]

6.12.3.18 BaseActorPtr Level::parseVideoEventActor (std::fstream & *fs*) [private]

6.12.4 Member Data Documentation

6.12.4.1 int teamusa::Level::activeScene [private]

6.12.4.2 std::unordered_map<int, Scene> teamusa::Level::scenes [private]

6.12.4.3 int teamusa::Level::startScene [private]

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

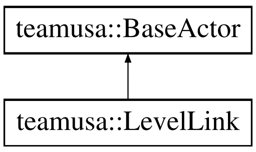
- Level.h
- Level.cpp

6.13 teamusa::LevelLink Class Reference

Allows the player to transition between levels.

`#include <LevelLink.h>`

Inheritance diagram for teamusa::LevelLink:



Public Member Functions

- LevelLink (Region region, const int Level_ID, const int sceneID, const std::string itemRequired_Text, const int item_ID=-1)
- virtual ∼LevelLink (void) override
- virtual const ActorEvent onClick (Player &player) override

  Returns an actor event when the actor's region is clicked on.
- virtual const ActorEvent onHover (Player &player) override

  Returns an actor event when the actor's region is hovered over.
- virtual const ActorEvent step (Player &player) override

  Advances the actor one frame.
- const int getSceneID (void) const

  Gets the appropriate SceneID.
- virtual const std::string getText ()

  Generates text when the player attempts to traverse a scene without a required item.

Private Attributes

- int sceneID
- int levelID
- std::string itemRequiredText
- int requiredItemID = -1

Additional Inherited Members

6.13.1 Detailed Description

Allows the player to transition between levels.

6.13.2 Constructor & Destructor Documentation

6.13.2.1 LevelLink::LevelLink (Region *region*, const int *Level_ID*, const int *sceneID*, const std::string *itemRequired_Text*, const int *item_ID* = -1) [explicit]

6.13.2.2 LevelLink::∼LevelLink (void) [override], [virtual]

6.13.3 Member Function Documentation

6.13.3.1 const int LevelLink::getSceneID (void) const

Gets the appropriate SceneID.

Returns

Returns an integer representing the scene ID.

6.13.3.2 const std::string LevelLink::getText ( ) `[virtual]`

Generates text when the player attempts to traverse a scene without a required item.

6.13.3.3 const ActorEvent LevelLink::onClick (Player & *player*) `[override]`, `[virtual]`

Returns an actor event when the actor's region is clicked on.

Parameters

Player	The player.

Returns

Returns an ActorEvent that triggers an actor to perform an action.

Reimplemented from teamusa::BaseActor.

6.13.3.4 const ActorEvent LevelLink::onHover (Player & *player*) `[override]`, `[virtual]`

Returns an actor event when the actor's region is hovered over.

Parameters

Player	The player.

Returns

Returns an ActorEvent that triggers an actor to perform an action.

Reimplemented from teamusa::BaseActor.

6.13.3.5 const ActorEvent LevelLink::step (Player & *player*) `[override]`, `[virtual]`

Advances the actor one frame.

Parameters

Player	The player.

Returns

Returns an ActorEvent that triggers an actor to perform an action.

Implements teamusa::BaseActor.

6.13.4 Member Data Documentation

6.13.4.1 std::string teamusa::LevelLink::itemRequiredText [private]

6.13.4.2 int teamusa::LevelLink::levelID [private]

6.13.4.3 int teamusa::LevelLink::requiredItemID = -1 [private]

6.13.4.4 int teamusa::LevelLink::sceneID [private]

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

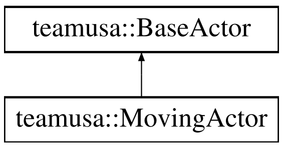
- LevelLink.h
- LevelLink.cpp

6.14 teamusa::MovingActor Class Reference

Will transition from one region to the next by calculating the distance to move each frame for a set number of frames.

`#include <MovingActor.h>`

Inheritance diagram for teamusa::MovingActor:



Public Member Functions

- MovingActor (Region startRegion, Region endregion, int textureId, int layer, int transitionsteps, bool move↩ OnSpawn)
- virtual ∼MovingActor (void) override
- virtual const ActorEvent onClick (Player &player) override

  Generates an ActorEvent when the actor's region is clicked.
- virtual const ActorEvent onHover (Player &player) override

  Generates an ActorEvent when the actor's region is hovered over.
- virtual const ActorEvent step (Player &player)

  Advances the actor one frame.

Private Attributes

- Region endRegion
- int transitionSteps = 1
- int currentStep = 0
- int xSpeed = 0
- int ySpeed = 0
- int hGrowth = 0
- int wGrowth = 0
- bool isActive = false

Additional Inherited Members

6.14.1 Detailed Description

Will transition from one region to the next by calculating the distance to move each frame for a set number of frames.

This allows for movement across the X and Y axis as well as scaling of the size of textures.

6.14.2 Constructor & Destructor Documentation

6.14.2.1 MovingActor::MovingActor (**Region** *startRegion,* **Region** *endregion,* int *textureId,* int *layer,* int *transitionsteps,* bool *moveOnSpawn*) `[explicit]`

6.14.2.2 MovingActor::∼MovingActor (void) `[override], [virtual]`

6.14.3 Member Function Documentation

6.14.3.1 const **ActorEvent** MovingActor::onClick (**Player** & *player*) `[override], [virtual]`

Generates an ActorEvent when the actor's region is clicked.

Parameters

Player	The player.

Returns

Returns an ActorEvent that triggers an actor to perform an action.

Reimplemented from teamusa::BaseActor.

6.14.3.2 const **ActorEvent** MovingActor::onHover (**Player** & *player*) `[override], [virtual]`

Generates an ActorEvent when the actor's region is hovered over.

Parameters

Player	The player.

Returns

Returns an ActorEvent that triggers an actor to perform an action.

Reimplemented from teamusa::BaseActor.

6.14.3.3 const **ActorEvent** MovingActor::step (**Player** & *player*) `[virtual]`

Advances the actor one frame.

Parameters

Player	The player

Returns

Returns an ActorEvent that triggers an actor to perform an action.

Implements teamusa::BaseActor.

6.14.4 Member Data Documentation

6.14.4.1 int teamusa::MovingActor::currentStep = 0 `[private]`

6.14.4.2 Region teamusa::MovingActor::endRegion `[private]`

6.14.4.3 int teamusa::MovingActor::hGrowth = 0 `[private]`

6.14.4.4 bool teamusa::MovingActor::isActive = false `[private]`

6.14.4.5 int teamusa::MovingActor::transitionSteps = 1 `[private]`

6.14.4.6 int teamusa::MovingActor::wGrowth = 0 `[private]`

6.14.4.7 int teamusa::MovingActor::xSpeed = 0 `[private]`

6.14.4.8 int teamusa::MovingActor::ySpeed = 0 `[private]`

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

- MovingActor.h
- MovingActor.cpp

6.15 teamusa::Player Class Reference

Handles all data relevant to the player engaging the game.

`#include <Player.h>`

Public Types

- typedef std::vector< int32_t > Inventory

  Player inventory - an array of integer IDs.

Public Member Functions

- Player (void)
- ∼Player (void)
- const bool hasItem (const int32_t itemType) const

  Tests if the player has an item in their inventory.
- void addItem (const int32_t itemType)

  Inserts an item into the player's inventory.
- void setCursor (const CursorStyle style)

  Sets the visual style of the player's mouse cursor.
- const int getCursorTextureID (void) const

  Returns the current cursor texture ID associated with the cursor style.
- void setPosition (const int32_t x, const int32_t y)

  Sets the position of the player's cursor.
- void setPosition (const Point &position)

  Sets the position of the player's cursor.
- const Point getPosition (void) const

  Gets the player's cursor position.

- const Inventory & getInventory () const

  Returns the player's inventory.
- void setInventory (const Inventory &inventory)

  Clears the player's current inventory and assigns the new one.

Static Public Attributes

- static const int FLASHLIGHT_ID = 1666
- static const int CURSOR_DEFAULT_ID = 1667
- static const int CURSOR_SELECT_ID = 1668
- static const int CURSOR_UP_ID = 1669
- static const int CURSOR_DOWN_ID = 1670
- static const int CURSOR_LEFT_ID = 1671
- static const int CURSOR_RIGHT_ID = 1672
- static const int MOUSE_CLICK_ID = 1700

Private Attributes

- Region mRegion
- int32_t mLayer
- int32_t mTextureID
- Point mPosition
- Inventory mInventory
- CursorStyle mCursorStyle

6.15.1 Detailed Description

Handles all data relevant to the player engaging the game.

6.15.2 Member Typedef Documentation

6.15.2.1 typedef std::vector<int32_t> teamusa::Player::Inventory

Player inventory - an array of integer IDs.

6.15.3 Constructor & Destructor Documentation

6.15.3.1 Player::Player (void) `[explicit]`

6.15.3.2 Player::~Player (void)

6.15.4 Member Function Documentation

6.15.4.1 void Player::addItem (const int32_t *itemType*)

Inserts an item into the player's inventory.

Parameters

itemType	The item identifier to insert.

6.15.4.2 const int Player::getCursorTextureID (void) const

Returns the current cursor texture ID associated with the cursor style.

6.15.4.3 const Player::Inventory & Player::getInventory ( ) const

Returns the player's inventory.

6.15.4.4 const Point Player::getPosition (void) const

Gets the player's cursor position.

Returns

A Point struct containing the cursor position.

6.15.4.5 const bool Player::hasItem (const int32_t *itemType*) const

Tests if the player has an item in their inventory.

Parameters

itemType	The item type identifier.

Returns

True if the player has the item.

6.15.4.6 void Player::setCursor (const CursorStyle *style*)

Sets the visual style of the player's mouse cursor.

Parameters

style	The style type for the cursor.

6.15.4.7 void Player::setInventory (const Inventory & *inventory*)

Clears the player's current inventory and assigns the new one.

Parameters

inventory	The inventory to assign to the player.

6.15.4.8 void Player::setPosition (const int32_t *x*, const int32_t *y*)

Sets the position of the player's cursor.

Parameters

x	The x-coordinate of the cursor.
y	The y-coordinate of the cursor.

6.15.4.9 void Player::setPosition (const Point & *position*)

Sets the position of the player's cursor.

Parameters

position	A Point struct containing the cursor position.

6.15.5 Member Data Documentation

6.15.5.1 const int Player::CURSOR_DEFAULT_ID = 1667 `[static]`

6.15.5.2 const int Player::CURSOR_DOWN_ID = 1670 `[static]`

6.15.5.3 const int Player::CURSOR_LEFT_ID = 1671 `[static]`

6.15.5.4 const int Player::CURSOR_RIGHT_ID = 1672 `[static]`

6.15.5.5 const int Player::CURSOR_SELECT_ID = 1668 `[static]`

6.15.5.6 const int Player::CURSOR_UP_ID = 1669 `[static]`

6.15.5.7 const int Player::FLASHLIGHT_ID = 1666 `[static]`

6.15.5.8 CursorStyle teamusa::Player::mCursorStyle `[private]`

6.15.5.9 Inventory teamusa::Player::mInventory `[private]`

6.15.5.10 int32_t teamusa::Player::mLayer `[private]`

6.15.5.11 const int Player::MOUSE_CLICK_ID = 1700 `[static]`

6.15.5.12 Point teamusa::Player::mPosition `[private]`

6.15.5.13 Region teamusa::Player::mRegion `[private]`

6.15.5.14 int32_t teamusa::Player::mTextureID `[private]`

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

- Player.h
- Player.cpp

6.16 teamusa::Point Class Reference

An (x,y) coordinate within the rendering window.

`#include <Point.h>`

Public Member Functions

- Point (void)
- Point (int32_t x, const int32_t y)

Public Attributes

- int32_t x
- int32_t y

6.16.1 Detailed Description

An (x,y) coordinate within the rendering window.

6.16.2 Constructor & Destructor Documentation

6.16.2.1 teamusa::Point::Point (void) `[inline]`

6.16.2.2 teamusa::Point::Point (int32_t *x*, const int32_t *y*) `[inline]`

6.16.3 Member Data Documentation

6.16.3.1 int32_t teamusa::Point::x

6.16.3.2 int32_t teamusa::Point::y

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

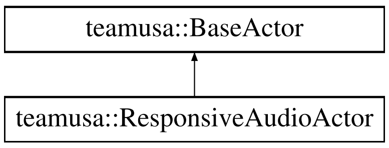
- Point.h

6.17 teamusa::ResponsiveAudioActor Class Reference

Will increment the value of stepCount until it is equal to durationSteps for each call to the step method.

`#include <ResponsiveAudioActor.h>`

Inheritance diagram for teamusa::ResponsiveAudioActor:



Public Member Functions

- ResponsiveAudioActor (Region region, int hoverAudioId, int clickAudioId)
- virtual ~ResponsiveAudioActor (void) override
- virtual const ActorEvent onClick (Player &player) override

  Generates an ActorEvent when the actor's region is clicked.
- virtual const ActorEvent onHover (Player &player) override

  Generates an ActorEvent when the actor's region is hovered over.

- virtual const ActorEvent step (Player &player) override

    Advances the actor one frame.

Private Attributes

- int hoverAudioId
- int clickAudioId

Additional Inherited Members

6.17.1 Detailed Description

Will increment the value of stepCount until it is equal to durationSteps for each call to the step method.

A call to onClick or onHover will set the value of stepCount to zero and emit an AudioID and value if stepCount is equal to durationSteps. The hoverAudioID or clickAudioID can be set to an invalid AudioID value to prevent sound from being played.

6.17.2 Constructor & Destructor Documentation

6.17.2.1 ResponsiveAudioActor::ResponsiveAudioActor (Region *region*, int *hoverAudioId* = `-1`, int *clickAudioId* = `-1`) `[explicit]`

6.17.2.2 ResponsiveAudioActor::∼ResponsiveAudioActor (void) `[override]`, `[virtual]`

6.17.3 Member Function Documentation

6.17.3.1 const ActorEvent ResponsiveAudioActor::onClick (Player & *player*) `[override]`, `[virtual]`

Generates an ActorEvent when the actor's region is clicked.

Parameters

Player	The player.

Returns

Returns an ActorEvent that triggers an actor to perform an action.

Reimplemented from teamusa::BaseActor.

6.17.3.2 const ActorEvent ResponsiveAudioActor::onHover (Player & *player*) `[override]`, `[virtual]`

Generates an ActorEvent when the actor's region is hovered over.

Parameters

Player	The player.

Returns

Returns an ActorEvent that triggers an actor to perform an action.

Reimplemented from teamusa::BaseActor.

6.17.3.3 const ActorEvent ResponsiveAudioActor::step (Player & *player*) [override], [virtual]

Advances the actor one frame.

Parameters

Player	The player

Returns

Returns an ActorEvent that triggers an actor to perform an action.

Implements teamusa::BaseActor.

6.17.4 Member Data Documentation

6.17.4.1 int teamusa::ResponsiveAudioActor::clickAudioId `[private]`

6.17.4.2 int teamusa::ResponsiveAudioActor::hoverAudioId `[private]`

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

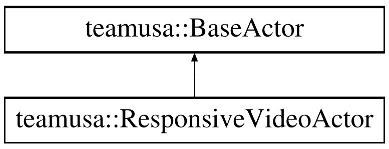
- ResponsiveAudioActor.h
- ResponsiveAudioActor.cpp

6.18 teamusa::ResponsiveVideoActor Class Reference

Changes its texture ID based on hovering and clicks.

```
#include <ResponsiveVideoActor.h>
```

Inheritance diagram for teamusa::ResponsiveVideoActor:



Public Member Functions

- ResponsiveVideoActor (Region region, int hoverTextureId, int clickTextureID, int defaulTextureID, int layer)
- virtual ∼ResponsiveVideoActor (void) override
- virtual const ActorEvent onClick (Player &player) override

  Generates an ActorEvent when the actor's region is clicked.
- virtual const ActorEvent onHover (Player &player) override

  Generates an ActorEvent when the actor's region is hovered over.
- virtual const ActorEvent step (Player &player) override

  Advances the actor one frame.
- void setTextureId (int TextureId)

  Sets the reqeusted texture ID.

Private Attributes

- int hoverTexture
- int clickTexture
- int defaultTextureId

Additional Inherited Members

6.18.1 Detailed Description

Changes its texture ID based on hovering and clicks.

6.18.2 Constructor & Destructor Documentation

6.18.2.1 ResponsiveVideoActor::ResponsiveVideoActor (**Region** *region*, int *hoverTextureId*, int *clickTextureID*, int *defaulTextureID*, int *layer*) [explicit]

6.18.2.2 ResponsiveVideoActor::∼ResponsiveVideoActor (void) [override], [virtual]

6.18.3 Member Function Documentation

6.18.3.1 const **ActorEvent** ResponsiveVideoActor::onClick (**Player** & *player*) [override], [virtual]

Generates an ActorEvent when the actor's region is clicked.

Parameters

Player	The player.

Returns

Returns an ActorEvent that triggers an actor to perform an action.

Reimplemented from teamusa::BaseActor.

6.18.3.2 const **ActorEvent** ResponsiveVideoActor::onHover (**Player** & *player*) [override], [virtual]

Generates an ActorEvent when the actor's region is hovered over.

Parameters

Player	The player.

Returns

Returns an ActorEvent that triggers an actor to perform an action

Reimplemented from teamusa::BaseActor.

6.18.3.3 void ResponsiveVideoActor::setTextureId (int *TextureId*)

Sets the reqeusted texture ID.

Parameters

TextureID	The integer ID of the requested texture.

6.18.3.4 const **ActorEvent** ResponsiveVideoActor::step (**Player** & *player*) [override], [virtual]

Advances the actor one frame.

Parameters

Player	The player

Returns

Returns an ActorEvent that triggers an actor to perform an action.

Implements teamusa::BaseActor.

6.18.4 Member Data Documentation

6.18.4.1 int teamusa::ResponsiveVideoActor::clickTexture `[private]`

6.18.4.2 int teamusa::ResponsiveVideoActor::defaultTextureId `[private]`

6.18.4.3 int teamusa::ResponsiveVideoActor::hoverTexture `[private]`

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

- ResponsiveVideoActor.h
- ResponsiveVideoActor.cpp

6.19 teamusa::Level::Scene Class Reference

A scene is a collection of images (Actors) that is displayed on the screen.

Public Attributes

- ActorList actors
- int bgImageID

6.19.1 Detailed Description

A scene is a collection of images (Actors) that is displayed on the screen.

6.19.2 Member Data Documentation

6.19.2.1 ActorList teamusa::Level::Scene::actors

6.19.2.2 int teamusa::Level::Scene::bgImageID

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

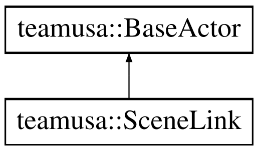
- Level.h

6.20 teamusa::SceneLink Class Reference

Allows the player to transition between scenes.

`#include <SceneLink.h>`

Inheritance diagram for teamusa::SceneLink:



Public Member Functions

- SceneLink (Region region, const int scene_ID, const std::string &itemRequired_Text, const int item_ID=-1)
- virtual ∼SceneLink (void) override
- virtual const ActorEvent onClick (Player &player) override

  Generates an ActorEvent when the actor's region is clicked.
- virtual const ActorEvent onHover (Player &player) override

  Generates an ActorEvent when the actor's region is hovered over.
- virtual const ActorEvent step (Player &player) override

  Advances the actor one frame.
- virtual const std::string getText ()

  Displays the appropriate text when a player attempts to traverse a scene without the required item.

Private Attributes

- int sceneID
- std::string itemRequiredText
- int requiredItemID
- CursorStyle cursorStyle

Additional Inherited Members

6.20.1 Detailed Description

Allows the player to transition between scenes.

6.20.2 Constructor & Destructor Documentation

6.20.2.1 SceneLink::SceneLink (Region *region,* const int *scene_ID,* const std::string & *itemRequired_Text,* const int *item_ID* = -1) [explicit]

6.20.2.2 SceneLink::∼SceneLink (void) [override], [virtual]

6.20.3 Member Function Documentation

6.20.3.1 const std::string SceneLink::getText ( ) [virtual]

Displays the appropriate text when a player attempts to traverse a scene without the required item.

6.20.3.2 const ActorEvent SceneLink::onClick (Player & *player*) [override], [virtual]

Generates an ActorEvent when the actor's region is clicked.

Parameters

Player	The player.

Returns

Returns an ActorEvent that triggers an actor to perform an action.

Reimplemented from teamusa::BaseActor.

6.20.3.3 const ActorEvent SceneLink::onHover (Player & *player*) [override], [virtual]

Generates an ActorEvent when the actor's region is hovered over.

Parameters

Player	The player.

Returns

Returns an ActorEvent that triggers an actor to perform an action.

Reimplemented from teamusa::BaseActor.

6.20.3.4 const ActorEvent SceneLink::step (Player & *player*) [override], [virtual]

Advances the actor one frame.

Parameters

Player	The player

Returns

Returns an ActorEvent that triggers an actor to perform an action.

Implements teamusa::BaseActor.

6.20.4 Member Data Documentation

6.20.4.1 CursorStyle teamusa::SceneLink::cursorStyle [private]

6.20.4.2 std::string teamusa::SceneLink::itemRequiredText [private]

6.20.4.3 int teamusa::SceneLink::requiredItemID [private]

6.20.4.4 int teamusa::SceneLink::sceneID [private]

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

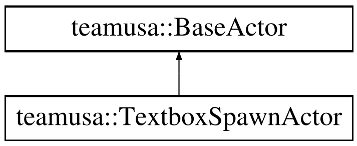
- SceneLink.h
- SceneLink.cpp

6.21 teamusa::TextboxSpawnActor Class Reference

Will emit a DisplayText event when the onClick method is called.

`#include <TextboxSpawnActor.h>`

Inheritance diagram for teamusa::TextboxSpawnActor:



Public Member Functions

- TextboxSpawnActor (Region region, std::string text)
- virtual ~TextboxSpawnActor (void)
- virtual const ActorEvent onClick (Player &player)

  Generates an ActorEvent when the actor's region is clicked.
- virtual const ActorEvent step (Player &player)

  Generates an ActorEvent when the actor's region is hovered over.
- std::string getText (void)

  Retrieves the text for the textbox from the level file.

Private Attributes

- std::string text
- bool activated

Additional Inherited Members

6.21.1 Detailed Description

Will emit a DisplayText event when the onClick method is called.

The actor can then have its text accessed by the engine for display through a call to the getText method.

6.21.2 Constructor & Destructor Documentation

6.21.2.1 TextboxSpawnActor::TextboxSpawnActor (Region *region*, std::string *text*) [explicit]

6.21.2.2 TextboxSpawnActor::~TextboxSpawnActor (void) [virtual]

6.21.3 Member Function Documentation

6.21.3.1 std::string TextboxSpawnActor::getText (void)

Retrieves the text for the textbox from the level file.

6.21.3.2 const ActorEvent TextboxSpawnActor::onClick (Player & *player*) [virtual]

Generates an ActorEvent when the actor's region is clicked.

Parameters

Player	The player.

Returns

Returns an ActorEvent that triggers an actor to perform an action.

Reimplemented from teamusa::BaseActor.

6.21.3.3 const ActorEvent TextboxSpawnActor::step (Player & *player*) [virtual]

Generates an ActorEvent when the actor's region is hovered over.

Parameters

Player	The player.

Returns

Returns an ActorEvent that triggers an actor to perform an action.

Implements teamusa::BaseActor.

6.21.4 Member Data Documentation

6.21.4.1 bool teamusa::TextboxSpawnActor::activated [private]

6.21.4.2 std::string teamusa::TextboxSpawnActor::text [private]

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

- TextboxSpawnActor.h
- TextboxSpawnActor.cpp

6.22 teamusa::Timer Class Reference

A timer that counts up from zero in milliseconds.

`#include <Timer.h>`

Public Member Functions

- Timer (void)
- ∼Timer (void)
- const uint32_t start (void)

  Starts the timer.
- void stop (void)

  Stops the timer.
- void pause (void)

  Pauses the timer.
- void unpause (void)

  Unpauses the timer.
- const uint32_t getTicks (void) const

  Gets the time in milliseconds since the timer was started.

Private Attributes

- uint32_t mStartTicks
- uint32_t mPauseTicks
- bool mPaused
- bool mStarted

6.22.1 Detailed Description

A timer that counts up from zero in milliseconds.

6.22.2 Constructor & Destructor Documentation

6.22.2.1 Timer::Timer (void) [explicit]

6.22.2.2 Timer::∼Timer (void)

6.22.3 Member Function Documentation

6.22.3.1 const uint32_t Timer::getTicks (void) const

Gets the time in milliseconds since the timer was started.

Returns

The elapsed time.

6.22.3.2 void Timer::pause (void)

Pauses the timer.

6.22.3.3 const uint32_t Timer::start (void)

Starts the timer.

6.22.3.4 void Timer::stop (void)

Stops the timer.

6.22.3.5 void Timer::unpause (void)

Unpauses the timer.

6.22.4 Member Data Documentation

6.22.4.1 bool teamusa::Timer::mPaused [private]

6.22.4.2 uint32_t teamusa::Timer::mPauseTicks [private]

6.22.4.3 bool teamusa::Timer::mStarted [private]

6.22.4.4 uint32_t teamusa::Timer::mStartTicks [private]

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

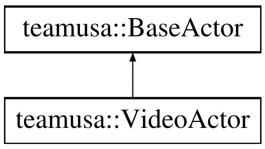
- Timer.h
- Timer.cpp

6.23 teamusa::VideoActor Class Reference

Displays a texture in a region and performs no other behavior.

`#include <VideoActor.h>`

Inheritance diagram for teamusa::VideoActor:



Public Member Functions

- VideoActor (Region region, int textureId, int layer)
- virtual ∼VideoActor (void) override
- virtual const ActorEvent step (Player &player) override

    Advances the actor one frame.

Additional Inherited Members

6.23.1 Detailed Description

Displays a texture in a region and performs no other behavior.

6.23.2 Constructor & Destructor Documentation

6.23.2.1 VideoActor::VideoActor (**Region** *region*, int *textureId* = −1, int *layer* = 1) [explicit]

6.23.2.2 VideoActor::∼VideoActor (void) [override], [virtual]

6.23.3 Member Function Documentation

6.23.3.1 const **ActorEvent** VideoActor::step (**Player** & *player*) [override], [virtual]

Advances the actor one frame.

Parameters

Player	The player

Returns

Returns an ActorEvent that triggers an actor to perform an action.

Implements teamusa::BaseActor.

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

- VideoActor.h
- VideoActor.cpp

6.24 mediawrap::VideoContext Class Reference

Provides basic 2D rendering capabilities.

`#include <VideoContext.hpp>`

Public Types

- enum Flip { FLIP_NONE = SDL_FLIP_NONE, FLIP_HORIZONTAL = SDL_FLIP_HORIZONTAL, FLIP_V↩ ERTICAL = SDL_FLIP_VERTICAL }

  Used to designate how an image should be flipped across an axis.
- enum BlendMode { BLENDMODE_NONE = SDL_BLENDMODE_NONE, BLENDMODE_BLEND = SDL_↩ BLENDMODE_BLEND, BLENDMODE_ADD = SDL_BLENDMODE_ADD, BLENDMODE_MOD = SDL_BL↩ ENDMODE_MOD }

  Used to specify how a texture should behave when objects are rendered onto it.
- enum DebugColor { RED = 0, GREEN, BLUE }
- typedef SDL_Rect Region

  Used to specify x, y, width, height of an texture source or destination region.
- typedef unsigned int TextureID

  Used to identify each texture uniquely.
- typedef std::unordered_map< TextureID, SDL_Texture ∗ >::iterator texture_iter

  Used to access elements in the texture map.

Public Member Functions

- VideoContext (const std::string &title, unsigned int width, unsigned int height)

  Constructs a new rendering context that includes a window and the renderer associated with it.
- ∼VideoContext (void)

  Deletes the renderer and window associated with this context.
- void display (void)

  Displays the rendered textures on screen.
- Region load_texture (TextureID id, const std::string &image_path, BlendMode blend=BLENDMODE_BLEND)

  Loads a texture from the filename into the specified texture id.
- Region create_texture (TextureID id, int width, int height, BlendMode blend=BLENDMODE_BLEND)

  Creates a blank texture, which should be filled completely or cleared before rendering to prevent old fragments from appearing.
- void delete_texture (TextureID id)

  The deletes the given texture from this context.
- void render (TextureID id, Region ∗dest, Region ∗src)

  Draws the given texture onto the canvas.
- void renderDebugBox (const Region &region, const DebugColor color, const TextureID layer)
- void render_onto (TextureID dest_id, TextureID src_id, const Region ∗dest_region, Region ∗src_region)

Draws the given source texture onto the destination texture.

- void render_rotate (TextureID dest_id, TextureID src_id, Region ∗dest_region, Region ∗src_region, double angle=0.0, Flip flip=FLIP_NONE)

  Draws the given source texture onto the destination texture after applying a rotate and flip operation.
- void render_clear ()

  Clears the canvas with the default clear color.
- void render_clear (TextureID id)

  Clears the given texture with the default clear color.
- void fill_texture (TextureID id, int r, int g, int b, int a)

  Fills the given texture with the given rgba value.
- void load_font (const std::string &font_path, int font_size)

  Loads the given font from the path specified.
- void render_text (TextureID dest_id, Region ∗dest_region, const std::string &text, Uint8 r, Uint8 g, Uint8 b, Uint8 a)

  Renders the given text onto the the destination texture.
- void swapFullscreen (void)

  Checks the state of the window and swaps to fullscreen or windowed mode.

Private Attributes

- std::unordered_map< TextureID, SDL_Texture ∗ > ∗ textures
- VideoDisplay ∗ video_display
- SDL_Renderer ∗ renderer
- TTF_Font ∗ font

6.24.1 Detailed Description

Provides basic 2D rendering capabilities.

Acts as an abstraction layer to the SDL2 video library.

6.24.2 Member Typedef Documentation

6.24.2.1 typedef SDL_Rect **mediawrap::VideoContext::Region**

Used to specify x, y, width, height of an texture source or destination region.

6.24.2.2 typedef std::unordered_map<**TextureID**, SDL_Texture∗>::iterator **mediawrap::VideoContext::texture_iter**

Used to access elements in the texture map.

6.24.2.3 typedef unsigned int **mediawrap::VideoContext::TextureID**

Used to identify each texture uniquely.

Each texture loaded is to be assigned a key of this type.

6.24.3 Member Enumeration Documentation

6.24.3.1 enum mediawrap::VideoContext::BlendMode

Used to specify how a texture should behave when objects are rendered onto it.

Enumerator

BLENDMODE_NONE

BLENDMODE_BLEND

BLENDMODE_ADD

BLENDMODE_MOD

6.24.3.2 enum mediawrap::VideoContext::DebugColor

Enumerator

RED

GREEN

BLUE

6.24.3.3 enum mediawrap::VideoContext::Flip

Used to designate how an image should be flipped across an axis.

These two values can be ORed together to achive both effects.

Enumerator

FLIP_NONE

FLIP_HORIZONTAL

FLIP_VERTICAL

6.24.4 Constructor & Destructor Documentation

6.24.4.1 VideoContext::VideoContext (const std::string & *title,* unsigned int *width,* unsigned int *height*)

Constructs a new rendering context that includes a window and the renderer associated with it.

Provides utilities for loading textures and storing them in an internal mapping.

Parameters

title	The title to display at the top of the window.
width	The width of the window created.
height	The height of the window created.

6.24.4.2 VideoContext::∼VideoContext (void)

Deletes the renderer and window associated with this context.

Also deletes all textures currently loaded by this context.

6.24.5 Member Function Documentation

6.24.5.1 VideoContext::Region VideoContext::create_texture (TextureID *id,* int *width,* int *height,* BlendMode *blend =* BLENDMODE_BLEND)

Creates a blank texture, which should be filled completely or cleared before rendering to prevent old fragments from appearing.

Must be deleted using delete_texture.

Parameters

id	The id to assign to this texture. If this id is already in use, it deletes the existing texture first before loading this new one.
width	The width of the new texture
height	The height of the next texture
blend	The blending mode which decides how to react with other textures. Defaults to BLENDMO↩ DE_BLEND.

Returns

The source region of the new texture created.

6.24.5.2 void VideoContext::delete_texture (TextureID *id*)

The deletes the given texture from this context.

Parameters

id	The id of the texture to delete.

6.24.5.3 void VideoContext::display (void)

Displays the rendered textures on screen.

6.24.5.4 void VideoContext::fill_texture (TextureID *id,* int *r,* int *g,* int *b,* int *a*)

Fills the given texture with the given rgba value.

Parameters

id	The id of the texture to fill with the specified color.
r	The red value 0-255
g	The green value 0-255
b	The blue value 0-255
a	The alpha value 0-255

6.24.5.5 void VideoContext::load_font (const std::string & *font_path,* int *font_size*)

Loads the given font from the path specified.

Only one font may be loaded at any given time. Repeated calls to this function will delete the previous font before creating a new one.

Parameters

font_path	The path to the ttf file to load as a font.
font_size	The size of the font to load.

6.24.5.6 VideoContext::Region VideoContext::load_texture (TextureID *id,* const std::string & *image_path,* BlendMode *blend* = BLENDMODE_BLEND)

Loads a texture from the filename into the specified texture id.

Must be deleted using delete_texture.

Parameters

id	The id to assign to this texture. If this id is already in use, it deletes the existing texture first before loading this new one.
image_path	The path of the file to load as a texture.
blend	The blending mode which decides how to react with other textures. Defaults to BLENDMO←DE_BLEND.

Returns

The auto-detected source rectangle for this image.

6.24.5.7 void VideoContext::render (TextureID *id,* Region ∗ *dest,* Region ∗ *src*)

Draws the given texture onto the canvas.

Parameters

id	The id of the texture to draw onto the canvas.
dest	The destination region to draw onto the canvas.
src	The source region to copy from when drawing.

6.24.5.8 void VideoContext::render_clear ( )

Clears the canvas with the default clear color.

6.24.5.9 void VideoContext::render_clear (TextureID *id*)

Clears the given texture with the default clear color.

Parameters

id	The id of the texture to clear.

6.24.5.10 void VideoContext::render_onto (TextureID *dest_id,* TextureID *src_id,* const Region ∗ *dest_region,* Region ∗ *src_region*)

Draws the given source texture onto the destination texture.

Parameters

dest_id	The id of the texture that will act as a canvas and be drawn on.
src_id	The id of the texture to draw over the destination Texture.
dest_region	The region to draw the source texture into.
src_region	The region to copy the source texture from.

6.24.5.11 void VideoContext::render_rotate (TextureID *dest_id*, TextureID *src_id*, Region ∗ *dest_region*, Region ∗ *src_region*, double *angle* = `0.0`, Flip *flip* = FLIP_NONE)

Draws the given source texture onto the destination texture after applying a rotate and flip operation.

Parameters

dest_id	The id of the texture that will act as a canvas and be drawn on.
src_id	The id of the texture to draw over the destination Texture.
dest_region	The region to draw the source texture into.
src_region	The region to copy the source texture from.
angle	The angle in degrees to rotate the source image. Defaults to zero.
flip	The direction to flip the source texture in. Defaults to none.

6.24.5.12 void VideoContext::render_text (TextureID *dest_id*, Region ∗ *dest_region*, const std::string & *text*, Uint8 *r*, Uint8 *g*, Uint8 *b*, Uint8 *a*)

Renders the given text onto the the destination texture.

A successful call to load_font must be performed before this method should be called.

Parameters

dest_id	The destination texture to render onto.
dest_region	The region on the destination texture to render the font into.
text	The string to render.
r	The red value 0-255
g	The green value 0-255
b	The blue value 0-255
a	The alpha value 0-255

6.24.5.13 void VideoContext::renderDebugBox (const Region & *region*, const DebugColor *color*, const TextureID *layer*)

6.24.5.14 void VideoContext::swapFullscreen (void)

Checks the state of the window and swaps to fullscreen or windowed mode.

6.24.6 Member Data Documentation

6.24.6.1 TTF_Font∗ mediawrap::VideoContext::font `[private]`

6.24.6.2 SDL_Renderer∗ mediawrap::VideoContext::renderer `[private]`

6.24.6.3 std::unordered_map<TextureID, SDL_Texture∗>∗ mediawrap::VideoContext::textures `[private]`

6.24.6.4 VideoDisplay∗ mediawrap::VideoContext::video_display `[private]`

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

- VideoContext.hpp
- VideoContext.cpp

6.25 mediawrap::VideoDisplay Class Reference

Creates a window and initializes SDL2 and SDL2_IMG.

`#include <VideoDisplay.hpp>`

Public Member Functions

- VideoDisplay (const std::string &title, unsigned int width, unsigned int height)

  Attempts to init SDL2 and SDL2_IMG and create a window.
- ∼VideoDisplay (void)

  Destroys the window and renderer.
- SDL_Renderer ∗ get_renderer (void)

  Creates a renderer attached to this window.
- void swapFullscreen (void)

Private Attributes

- SDL_Window ∗ window

6.25.1 Detailed Description

Creates a window and initializes SDL2 and SDL2_IMG.

Must be destroyed after use.

6.25.2 Constructor & Destructor Documentation

6.25.2.1 mediawrap::VideoDisplay::VideoDisplay (const std::string & *title,* unsigned int *width,* unsigned int *height*)

Attempts to init SDL2 and SDL2_IMG and create a window.

Throws runtime_error if unable to set up any of these.

Parameters

title	The title to display at the top of the window.
width	The width of the window created.
height	The height of the window created.

6.25.2.2 mediawrap::VideoDisplay::∼VideoDisplay (void)

Destroys the window and renderer.

Uninitializes SDL and SDL_Image.

6.25.3 Member Function Documentation

6.25.3.1 SDL_Renderer ∗ mediawrap::VideoDisplay::get_renderer (void)

Creates a renderer attached to this window.

Must be deleted after use.

Returns

An SDL2 renderer for this window.

6.25.3.2 void mediawrap::VideoDisplay::swapFullscreen (void)

6.25.4 Member Data Documentation

6.25.4.1 SDL_Window∗ mediawrap::VideoDisplay::window `[private]`

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

- VideoDisplay.hpp
- VideoDisplay.cpp

6.26 teamusa::VideoEngine Class Reference

Provides video capabilities that are specific to Legend of the Great Unwashed.

`#include <VideoEngine.hpp>`

Public Member Functions

- VideoEngine (const std::string &title, unsigned int width, unsigned int height)

  Creates a new window that provides basic 2D drawing capabilities.
- ∼VideoEngine ()

  Destroys the video engine after freeing all associated textures.
- void loadTexture (const std::string &path, TextureID id, ResourceGroup group)

  Loads the image file from the given path, transforms it into a surface, and pushes it onto the graphics card as a texture.
- void render (const Region &region, const unsigned int layer, const TextureID id)

  Renders the texture onto the given layer in the given region.
- void renderDebugBox (const Region &region, const VideoContext::DebugColor=VideoContext::Debug←Color::BLUE)
- void renderRotate (Region &region, unsigned int layer, TextureID id, float angle=0.0)

  Renders the texture onto the given layer in the given region with the given rotation angle.
- void swapFullscreen (void)

  Calls swapFullscreen() on VideoDisplay.
- bool isShowingTextbox ()

  States whether a textbox is currently being displayed or not.
- void showTextbox (const std::string &text)

  Displays the given text in a textbox.
- void hideTextbox ()

  Clears the current textbox so it does not appear.
- void deleteTexture (TextureID id)

Removes the current texture from graphics memory.

- void deleteResourceGroup (ResourceGroup resourceGroup)

  Deletes all textures associated with the given resource group.
- void display ()

  Displays all rendered textures on screen.

Private Member Functions

- void clearLayers ()

  Clears all layers with the default clear color.

Private Attributes

- bool textboxActive
- TextureID layers [NUM_LAYERS]
- std::vector< TextureID > coreResources
- std::vector< TextureID > levelResources
- VideoContext $*$ videoContext
- Region textboxPadding
- Region textboxRegion

Static Private Attributes

- static const unsigned int NUM_LAYERS = 7
- static const unsigned int SHADOW_LAYER = 4
- static const TextureID TEXT_LAYER = 8
- static const TextureID MAX_RESERVED_ID = 1000

6.26.1 Detailed Description

Provides video capabilities that are specific to Legend of the Great Unwashed.

Utilizes VideoContext to perform rendering.

6.26.2 Constructor & Destructor Documentation

6.26.2.1 VideoEngine::VideoEngine (const std::string & *title*, unsigned int *width*, unsigned int *height*)

Creates a new window that provides basic 2D drawing capabilities.

Parameters

title	The title to be displayed at the top of the window.
width	The width of the window in pixels.
height	The height of the window in pixels.

6.26.2.2 VideoEngine::∼VideoEngine ( )

Destroys the video engine after freeing all associated textures.

6.26.3 Member Function Documentation

6.26.3.1 void VideoEngine::clearLayers ( ) [private]

Clears all layers with the default clear color.

Does not modify the textbox layer.

6.26.3.2 void VideoEngine::deleteResourceGroup (ResourceGroup *resourceGroup*)

Deletes all textures associated with the given resource group.

Parameters

resourceGroup	The group of textures to delete from video memory.

6.26.3.3 void VideoEngine::deleteTexture (TextureID *id*)

Removes the current texture from graphics memory.

Parameters

id	The id of the texture to delete.

6.26.3.4 void VideoEngine::display (void)

Displays all rendered textures on screen.

6.26.3.5 void VideoEngine::hideTextbox ( )

Clears the current textbox so it does not appear.

6.26.3.6 bool VideoEngine::isShowingTextbox ( )

States whether a textbox is currently being displayed or not.

Returns

The status of the textbox.

6.26.3.7 void VideoEngine::loadTexture (const std::string & *path,* TextureID *id,* ResourceGroup *group*)

Loads the image file from the given path, transforms it into a surface, and pushes it onto the graphics card as a texture.

Parameters

path	The relative location of the image to load.
id	The id to assign to the loaded texture.
resGroup	The group to load the resource into.

6.26.3.8 void VideoEngine::render (const Region & *region,* const unsigned int *layer,* const TextureID *id*)

Renders the texture onto the given layer in the given region.

Parameters

region	The region to draw the texture into.
layer	The layer to render the image onto (0-6) are valid.
id	The id of the texture to draw.

6.26.3.9 void VideoEngine::renderDebugBox (const Region & *region*, const VideoContext::DebugColor *color* = `VideoContext::DebugColor::BLUE`)

6.26.3.10 void VideoEngine::renderRotate (Region & *region*, unsigned int *layer*, TextureID *id*, float *angle* = `0.0`)

Renders the texture onto the given layer in the given region with the given rotation angle.

Parameters

region	The region to draw the texture into.
layer	The layer to render the image onto (0-6) are valid.
id	The id of the texture to draw.
angle	The angle in degrees to rotate the image. Defaults to 0.

6.26.3.11 void VideoEngine::showTextbox (const std::string & *text*)

Displays the given text in a textbox.

Parameters

text	The text to display on screen.

6.26.3.12 void VideoEngine::swapFullscreen (void)

Calls swapFullscreen() on VideoDisplay.

6.26.4 Member Data Documentation

6.26.4.1 std::vector<TextureID> teamusa::VideoEngine::coreResources `[private]`

6.26.4.2 TextureID teamusa::VideoEngine::layers[NUM_LAYERS] `[private]`

6.26.4.3 std::vector<TextureID> teamusa::VideoEngine::levelResources `[private]`

6.26.4.4 const TextureID teamusa::VideoEngine::MAX_RESERVED_ID = 1000 `[static]`, `[private]`

6.26.4.5 const unsigned int teamusa::VideoEngine::NUM_LAYERS = 7 `[static]`, `[private]`

6.26.4.6 const unsigned int teamusa::VideoEngine::SHADOW_LAYER = 4 `[static]`, `[private]`

6.26.4.7 const TextureID teamusa::VideoEngine::TEXT_LAYER = 8 `[static]`, `[private]`

6.26.4.8 bool teamusa::VideoEngine::textboxActive `[private]`

6.26.4.9 Region teamusa::VideoEngine::textboxPadding `[private]`

6.26.4.10 Region teamusa::VideoEngine::textboxRegion `[private]`

6.26.4.11 VideoContext∗ teamusa::VideoEngine::videoContext [private]

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

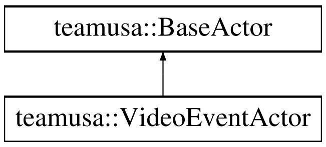
- VideoEngine.hpp
- VideoEngine.cpp

6.27 teamusa::VideoEventActor Class Reference

Will display a texture and perform no action until clicked.

`#include <VideoEventActor.h>`

Inheritance diagram for teamusa::VideoEventActor:



Public Member Functions

- VideoEventActor (Region region, int textureID, ActorEventType eventType, int eventValue, int layer)
- virtual ∼VideoEventActor (void) override
- virtual const ActorEvent onClick (Player &player) override

    Generates an ActorEvent when the actor's region is clicked.
- virtual const ActorEvent onHover (Player &player) override

    Generates an ActorEvent when the actor's region is hovered over.
- virtual const ActorEvent step (Player &player)

    Advances the actor one frame.

Private Attributes

- ActorEvent actorEvent

Additional Inherited Members

6.27.1 Detailed Description

Will display a texture and perform no action until clicked.

The TextureID can be set to an invalid value during construction if no image needs to be displayed.

6.27.2 Constructor & Destructor Documentation

6.27.2.1 VideoEventActor::VideoEventActor (Region *region,* int *textureID,* ActorEventType *eventType,* int *eventValue,* int *layer*) [explicit]

6.27.2.2 VideoEventActor::∼VideoEventActor (void) [override], [virtual]

6.27.3 Member Function Documentation

6.27.3.1 const ActorEvent VideoEventActor::onClick (Player & *player*) [override], [virtual]

Generates an ActorEvent when the actor's region is clicked.

Parameters

Player	The player.

Returns

Returns an ActorEvent that triggers an actor to perform an action.

Reimplemented from teamusa::BaseActor.

6.27.3.2 const ActorEvent VideoEventActor::onHover (Player & *player*) [override], [virtual]

Generates an ActorEvent when the actor's region is hovered over.

Parameters

Player	The player.

Returns

Returns an ActorEvent that triggers an actor to perform an action.

Reimplemented from teamusa::BaseActor.

6.27.3.3 const ActorEvent VideoEventActor::step (Player & *player*) [virtual]

Advances the actor one frame.

Parameters

Player	The player

Returns

Returns an ActorEvent that triggers an actor to perform an action.

Implements teamusa::BaseActor.

6.27.4 Member Data Documentation

6.27.4.1 ActorEvent teamusa::VideoEventActor::actorEvent [private]

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

- VideoEventActor.h
- VideoEventActor.cpp

Chapter 7

File Documentation

7.1 ActorEvent.h File Reference

Declares ActorEvent struct.

```
#include "Headers.h"
```

Classes

- class teamusa::ActorEvent

    Event data generated by Actors, handled by Engine.

Namespaces

- teamusa

Enumerations

- enum teamusa::ActorEventType {
  teamusa::Nil = -1, teamusa::ChangeScene, teamusa::LoadLevel, teamusa::PlayAudio,
  teamusa::NewGame, teamusa::LoadGame, teamusa::DisplayText, teamusa::ExitGame,
  teamusa::StreamAudio }

    Events that actors can trigger.

7.1.1 Detailed Description

Declares ActorEvent struct.

7.2 Assert.h File Reference

Declares custom Assert macro.

Namespaces

- teamusa

Macros

- #define Assert(exp) ;

7.2.1 Detailed Description

Declares custom Assert macro.

7.2.2 Macro Definition Documentation

7.2.2.1 #define Assert(*exp*) ;

7.3 AudioEngine.cpp File Reference

Declares the AudioEngine class.

```
#include "AudioEngine.hpp"
```

7.3.1 Detailed Description

Declares the AudioEngine class.

7.4 AudioEngine.hpp File Reference

Declares the AudioEngine class.

```
#include <string>
#include <vector>
#include "AudioPlayer.hpp"
#include "Engine/ResourceGroup.hpp"
```

Classes

- class teamusa::AudioEngine

  Provides project-specific audio functionality for Legend of the Great Unwashed.

Namespaces

- teamusa

Typedefs

- typedef mediawrap::AudioPlayer::AudioID teamusa::AudioID

7.4.1 Detailed Description

Declares the AudioEngine class.

7.5 AudioPlayer.cpp File Reference

Implements the AudioPlayer class.

```
#include "AudioPlayer.hpp"
```

7.5.1 Detailed Description

Implements the AudioPlayer class.

7.6 AudioPlayer.hpp File Reference

Declares the AudioPlayer class.

```
#include <stdexcept>
#include <string>
#include <unordered_map>
#include "SDL2/SDL.h"
#include "SDL2/SDL_mixer.h"
```

Classes

- class mediawrap::AudioPlayer

  Provides basic audio playing capabilities with WAV files.

Namespaces

- mediawrap

7.6.1 Detailed Description

Declares the AudioPlayer class.

7.7 AudioStreamActor.cpp File Reference

Implements AudioStreamActor class.

```
#include "AudioStreamActor.h"
```

7.7.1 Detailed Description

Implements AudioStreamActor class.

7.8 AudioStreamActor.h File Reference

Declares AudioStreamActor class.

```
#include "BaseActor.h"
```

Classes

- class teamusa::AudioStreamActor

  If this actor is not activated, it will emit a StreamAudio event and set its status to activated when the step method is called.

Namespaces

- teamusa

7.8.1 Detailed Description

Declares AudioStreamActor class.

7.9 BaseActor.cpp File Reference

Implements BaseActor class.

```
#include "BaseActor.h"
#include "Engine/Assert.h"
#include "Engine/Point.h"
```

7.9.1 Detailed Description

Implements BaseActor class.

7.10 BaseActor.h File Reference

Declares BaseActor class.

```
#include "ActorEvent.h"
#include "Audio/AudioEngine.hpp"
#include "Video/VideoEngine.hpp"
```

Classes

- class teamusa::ActorVideo

  Contains data for rendering actor.
- class teamusa::BaseActor

  Abstract class which all actors must derive from.

Namespaces

- teamusa

7.10.1 Detailed Description

Declares BaseActor class.

7.11 CursorStyle.h File Reference

Declares CursorStyle enumerations.

Namespaces

- teamusa

Enumerations

- enum teamusa::CursorStyle {
  teamusa::CursorStyle::CURSOR_DEFAULT, teamusa::CursorStyle::CURSOR_SELECT, teamusa::↩
  CursorStyle::CURSOR_LEFT, teamusa::CursorStyle::CURSOR_RIGHT,
  teamusa::CursorStyle::CURSOR_UP, teamusa::CursorStyle::CURSOR_DOWN }

  The possible styles for the mouse cursor.

7.11.1 Detailed Description

Declares CursorStyle enumerations.

7.12 DelayedAudioActor.cpp File Reference

Implements DelayedAudioActor class.

```
#include "DelayedAudioActor.h"
```

7.12.1 Detailed Description

Implements DelayedAudioActor class.

7.13 DelayedAudioActor.h File Reference

Declares DelayedAudioActor class.

```
#include "BaseActor.h"
```

Classes

- class teamusa::DelayedAudioActor

  Will increment a counter every time the step method is called.

Namespaces

- teamusa

7.13.1 Detailed Description

Declares DelayedAudioActor class.

7.14 DelayedVideoActor.cpp File Reference

Implements the DelayedVideoActor class.

```
#include "DelayedVideoActor.h"
#include <iostream>
```

7.14.1 Detailed Description

Implements the DelayedVideoActor class.

7.15 DelayedVideoActor.h File Reference

Declares DelayedVideoActor class.

```
#include "BaseActor.h"
```

Classes

- class teamusa::DelayedVideoActor

    Will increment a counter every time the step method is called.

Namespaces

- teamusa

7.15.1 Detailed Description

Declares DelayedVideoActor class.

7.16 Engine.cpp File Reference

Implements Engine class.

```
#include "Engine.h"
#include "Actor/AudioStreamActor.h"
#include "Actor/SceneLink.h"
#include "Actor/TextboxSpawnActor.h"
#include "Actor/VideoActor.h"
#include "Audio/AudioEngine.hpp"
#include "Engine/Assert.h"
#include "Engine/ResourceGroup.hpp"
#include "Engine/Timer.h"
#include "Video/VideoEngine.hpp"
```

Macros

- #define BIND(function) (std::bind(function, this, std::placeholders::_1, std::placeholders::_2))

Variables

- static const double FRAME_TIME = 16.67

7.16.1 Detailed Description

Implements Engine class.

7.16.2 Macro Definition Documentation

7.16.2.1 #define BIND(*function*) (std::bind(function, this, std::placeholders::_1, std::placeholders::_2))

7.16.3 Variable Documentation

7.16.3.1 const double FRAME_TIME = 16.67 `[static]`

7.17 Engine.h File Reference

Declares Engine class.

```
#include "Headers.h"
#include "Engine/Level.h"
#include "GameSaveSerializer/GameSaveSerializer.h"
#include "Player/Player.h"
```

Classes

- class teamusa::Engine

  Processes all components of the game each frame.

Namespaces

- teamusa

7.17.1 Detailed Description

Declares Engine class.

7.18 GameSaveSerializer.cpp File Reference

Implements save file serializer class.

```
#include "GameSaveSerializer.h"
#include "Engine/Assert.h"
```

Namespaces

- teamusa

7.18.1 Detailed Description

Implements save file serializer class.

7.19 GameSaveSerializer.h File Reference

Declares save file serializer class.

```
#include <vector>
#include <fstream>
#include <mutex>
#include <string>
#include <thread>
#include "Player/Player.h"
```

Classes

- class teamusa::GameSaveSerializer

  Provides multithreaded save, single-thread load of save files.

Namespaces

- teamusa

7.19.1 Detailed Description

Declares save file serializer class.

7.20 Headers.h File Reference

Easy way to include all headers needed.

```
#include <exception>
#include <fstream>
#include <functional>
#include <iostream>
#include <map>
#include <memory>
#include <stack>
#include <string>
#include <vector>
#include <stdint.h>
```

7.20.1 Detailed Description

Easy way to include all headers needed.

7.21 InventoryItemActor.cpp File Reference

Implements InventoryItemActor class.

```
#include "InventoryItemActor.h"
#include "Player/Player.h"
```

7.21.1 Detailed Description

Implements InventoryItemActor class.

7.22 InventoryItemActor.h File Reference

Declares InventoryItemActor class.

```
#include "BaseActor.h"
```

Classes

- class teamusa::InventoryItemActor

  IventoryItemActor creates a collectible item in the game environment.

Namespaces

- teamusa

7.22.1 Detailed Description

Declares InventoryItemActor class.

7.23 Level.cpp File Reference

Implements Level class.

```
#include "Assert.h"
#include "Level.h"
#include "Actor/ActorEvent.h"
#include "Actor/AudioStreamActor.h"
#include "Actor/DelayedAudioActor.h"
#include "Actor/DelayedVideoActor.h"
#include "Actor/InventoryItemActor.h"
#include "Actor/LevelLink.h"
#include "Actor/MovingActor.h"
#include "Actor/ResponsiveAudioActor.h"
#include "Actor/ResponsiveVideoActor.h"
#include "Actor/SceneLink.h"
#include "Actor/TextboxSpawnActor.h"
#include "Actor/VideoActor.h"
#include "Actor/VideoEventActor.h"
#include "Audio/AudioEngine.hpp"
#include "Video/VideoEngine.hpp"
```

Functions

- static std::istream & operator>> (std::istream &fs, Region &dst)
- static std::istream & operator>> (std::istream &fs, ActorEventType &dst)
- static void loadError (const std::string &msg)

7.23.1 Detailed Description

Implements Level class.

7.23.2 Function Documentation

7.23.2.1 static void loadError (const std::string & *msg*) [static]

7.23.2.2 static std::istream& operator>> (std::istream & *fs*, Region & *dst*) [inline], [static]

7.23.2.3 static std::istream& operator>> (std::istream & *fs*, ActorEventType & *dst*) [inline], [static]

7.24 Level.h File Reference

Declares Level class.

```
#include <unordered_map>
#include "Headers.h"
```

Classes

- class teamusa::Level

  A Level is a container of Scenes and Actors corresponding to those scenes.
- class teamusa::Level::Scene

A scene is a collection of images (Actors) that is displayed on the screen.

Namespaces

- teamusa

Typedefs

- typedef std::shared_ptr< BaseActor > teamusa::BaseActorPtr
- typedef std::vector< BaseActorPtr > teamusa::ActorList

7.24.1 Detailed Description

Declares Level class.

7.25 LevelLink.cpp File Reference

Implements LevelLink class.

```
#include "LevelLink.h"
#include "Player/Player.h"
```

7.25.1 Detailed Description

Implements LevelLink class.

7.26 LevelLink.h File Reference

Declares LevelLink class.

```
#include "BaseActor.h"
```

Classes

- class teamusa::LevelLink

    Allows the player to transition between levels.

Namespaces

- teamusa

7.26.1 Detailed Description

Declares LevelLink class.

7.27 main.cpp File Reference

Entry point of program.

```
#include "Headers.h"
#include "Engine/Engine.h"
```

Namespaces

- MainNS

Functions

- static void MainNS::logError (const std::string &desc)

    Writes an error message to the log file.
- int main (int argc, char **argv)

7.27.1 Detailed Description

Entry point of program.

7.27.2 Function Documentation

7.27.2.1 int main (int *argc,* char ** *argv*)

7.28 MovingActor.cpp File Reference

Implements the MovingActor class.

```
#include "MovingActor.h"
#include "Player/Player.h"
```

7.28.1 Detailed Description

Implements the MovingActor class.

7.29 MovingActor.h File Reference

Declares MovingActor class.

```
#include "BaseActor.h"
```

Classes

- class teamusa::MovingActor

    Will transition from one region to the next by calculating the distance to move each frame for a set number of frames.

Namespaces

- teamusa

7.29.1 Detailed Description

Declares MovingActor class.

7.30 Player.cpp File Reference

Implements Player class.

```
#include "Player.h"
#include "Engine/Assert.h"
```

7.30.1 Detailed Description

Implements Player class.

7.31 Player.h File Reference

Declares Player class.

```
#include "Headers.h"
#include "CursorStyle.h"
#include "Engine/Point.h"
#include "Video/VideoEngine.hpp"
```

Classes

- class teamusa::Player

  Handles all data relevant to the player engaging the game.

Namespaces

- teamusa

7.31.1 Detailed Description

Declares Player class.

7.32 Point.h File Reference

Declares Point struct.

```
#include <stdint.h>
```

Classes

- class teamusa::Point

    An (x,y) coordinate within the rendering window.

Namespaces

- teamusa

7.32.1 Detailed Description

Declares Point struct.

7.33 ResourceGroup.hpp File Reference

Declares the ResourceGroup enum types.

Enumerations

- enum ResourceGroup { CORE_RESOURCE, LEVEL_RESOURCE }

7.33.1 Detailed Description

Declares the ResourceGroup enum types.

7.33.2 Enumeration Type Documentation

7.33.2.1 enum **ResourceGroup**

Enumerator

CORE_RESOURCE

LEVEL_RESOURCE

7.34 ResponsiveAudioActor.cpp File Reference

Implements ResponsiveAudioActor class.

```
#include "ResponsiveAudioActor.h"
```

7.34.1 Detailed Description

Implements ResponsiveAudioActor class.

7.35 ResponsiveAudioActor.h File Reference

Declares ResponsiveAudioActor class.

```
#include "BaseActor.h"
```

Classes

- class teamusa::ResponsiveAudioActor

    Will increment the value of stepCount until it is equal to durationSteps for each call to the step method.

Namespaces

- teamusa

7.35.1 Detailed Description

Declares ResponsiveAudioActor class.

7.36 ResponsiveVideoActor.cpp File Reference

Implements the ResponsiveVideoActor class.

```
#include "ResponsiveVideoActor.h"
```

7.36.1 Detailed Description

Implements the ResponsiveVideoActor class.

7.37 ResponsiveVideoActor.h File Reference

Declares ResponsivevideoActor class.

```
#include "BaseActor.h"
```

Classes

- class teamusa::ResponsiveVideoActor

    Changes its texture ID based on hovering and clicks.

Namespaces

- teamusa

7.37.1 Detailed Description

Declares ResponsivevideoActor class.

7.38 SceneLink.cpp File Reference

Implements SceneLink class.

```
#include "SceneLink.h"
#include "Player/Player.h"
```

7.38.1 Detailed Description

Implements SceneLink class.

7.39 SceneLink.h File Reference

Declares SceneLink class.

```
#include "BaseActor.h"
#include "Player/CursorStyle.h"
```

Classes

- class teamusa::SceneLink

  Allows the player to transition between scenes.

Namespaces

- teamusa

7.39.1 Detailed Description

Declares SceneLink class.

7.40 TextboxSpawnActor.cpp File Reference

Implements TextboxSpawnActor class.

```
#include "TextboxSpawnActor.h"
```

7.40.1 Detailed Description

Implements TextboxSpawnActor class.

7.41 TextboxSpawnActor.h File Reference

Declares TextboxSpawnActor class.

```
#include "BaseActor.h"
#include <string>
```

Classes

- class teamusa::TextboxSpawnActor

  Will emit a DisplayText event when the onClick method is called.

Namespaces

- teamusa

7.41.1 Detailed Description

Declares TextboxSpawnActor class.

7.42 Timer.cpp File Reference

Implements Timer class.

```
#include "Engine/Timer.h"
#include <SDL2/SDL.h>
```

7.42.1 Detailed Description

Implements Timer class.

7.43 Timer.h File Reference

Declares Timer class.

```
#include "Headers.h"
```

Classes

- class teamusa::Timer

  A timer that counts up from zero in milliseconds.

Namespaces

- teamusa

7.43.1 Detailed Description

Declares Timer class.

7.44 VideoActor.cpp File Reference

Implements VideoActor class.

```
#include "VideoActor.h"
```

7.44.1 Detailed Description

Implements VideoActor class.

7.45 VideoActor.h File Reference

Declares the VideoActor class This module makes sure An actor that will only display a texture at a given region.

```
#include "BaseActor.h"
```

Classes

- class teamusa::VideoActor

  Displays a texture in a region and performs no other behavior.

Namespaces

- teamusa

7.45.1 Detailed Description

Declares the VideoActor class This module makes sure An actor that will only display a texture at a given region.

This actor will have no interation with the player.

7.46 VideoContext.cpp File Reference

Implements the VideoContext class.

```
#include "VideoContext.hpp"
```

7.46.1 Detailed Description

Implements the VideoContext class.

7.47 VideoContext.hpp File Reference

Declares the VideoContext class.

```
#include <unordered_map>
#include <string>
#include "SDL2/SDL.h"
#include "SDL2/SDL_image.h"
#include "SDL2/SDL_ttf.h"
#include "VideoDisplay.hpp"
```

Classes

- class mediawrap::VideoContext

  Provides basic 2D rendering capabilities.

Namespaces

- mediawrap

7.47.1 Detailed Description

Declares the VideoContext class.

7.48 VideoDisplay.cpp File Reference

Implements the VideoDisplay class.

```
#include "VideoDisplay.hpp"
```

7.48.1 Detailed Description

Implements the VideoDisplay class.

7.49 VideoDisplay.hpp File Reference

Declares the VideoDisplay class.

```
#include <stdexcept>
#include "SDL2/SDL.h"
#include "SDL2/SDL_image.h"
#include "SDL2/SDL_ttf.h"
```

Classes

- class mediawrap::VideoDisplay

  Creates a window and initializes SDL2 and SDL2_IMG.

Namespaces

- mediawrap

7.49.1 Detailed Description

Declares the VideoDisplay class.

7.50 VideoEngine.cpp File Reference

Implements the VideoEngine class.

```
#include "VideoEngine.hpp"
```

7.50.1 Detailed Description

Implements the VideoEngine class.

7.51 VideoEngine.hpp File Reference

Declares the VideoEngine class.

```
#include <stdexcept>
#include <string>
#include <vector>
#include "VideoContext.hpp"
#include "Engine/ResourceGroup.hpp"
```

Classes

- class teamusa::VideoEngine

  Provides video capabilities that are specific to Legend of the Great Unwashed.

Namespaces

- teamusa

Typedefs

- typedef mediawrap::VideoContext::TextureID teamusa::TextureID
- typedef mediawrap::VideoContext::Region teamusa::Region

7.51.1 Detailed Description

Declares the VideoEngine class.

7.52 VideoEventActor.cpp File Reference

Implements the VideoEventActor class.

```
#include "VideoEventActor.h"
#include "Player/Player.h"
```

7.52.1 Detailed Description

Implements the VideoEventActor class.

7.53 VideoEventActor.h File Reference

Declares VideoEventActor class.

```
#include "BaseActor.h"
```

Classes

- class teamusa::VideoEventActor

  Will display a texture and perform no action until clicked.

Namespaces

- teamusa

7.53.1 Detailed Description

Declares VideoEventActor class.

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