

Thesis Project - OpenFrameworks Part

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Chapter 1

Hierarchical Index

1.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

Calculations	7
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ofBaseApp	
testApp	9
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Chapter 2

Class Index

2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

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NoteInformation	8
POIs	9
testApp	9

Chapter 3

File Index

3.1 File List

Here is a list of all documented files with brief descriptions:

src/ Calculations.h	??
src/ GUIStuff.h	??
src/ Models.h	??
src/ NoteInformation.h	??
src/ POIS.h	??
src/ ProcessReceivedData.h	??
src/ testApp.cpp	
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Chapter 4

Class Documentation

4.1 Calculations Class Reference

Public Member Functions

- float **convertDegreestoRadians** (float val)
- float **convertRadianstoDegrees** (float val)
- float **calculateHaversineDistance** (float dlat, float dlong, float lat1_rad, float lat2_rad)
- void **Calculate2dCoordinates** (float lat1, float long1, float lat2, float long2)
- void **check_intersection** (float [yaw](#), vector< [POIs](#) > &[scenes](#))
- bool **ray_sphere_intersect** (ofVec3f p1, ofVec3f p2, ofVec3f sc, double r)

Public Attributes

- float **lat1**
- float **lat2**
- float **long1**
- float **long2**
- float **lat1_rad**
- float **lat2_rad**
- float **long1_rad**
- float **long2_rad**
- float **dlong**
- float **dlat**
- float **bearing**
- float **bearing_correction**
- float **xpos**
- float **ypos**
- float **x_temp_poi**
- float **y_temp_poi**
- float **Hdistance**
- int **selected_model**
- int **selected_note**
- float **intersection_pt1**
- float **intersection_pt2**
- ofVec3f **test**
- ofVec3f **origin**
- ofVec3f **Bbay**
- ofVec3f **receiver**

- ofVec3f **destination1**
- ofVec3f **friend_loc**

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

- src/Calculations.h

4.2 GUIStuff Class Reference

Public Member Functions

- void **drawAxes** ()
- void **drawPlane** ()
- void **drawAugmentedPlane** (float xPosition, float yPosition, ofColor textColor, ofColor bgColor, int i, string note_heading, string note_text)

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

- src/GUIStuff.h

4.3 Models Class Reference

Public Member Functions

- void **ModelsDraw** ()

Public Attributes

- float **y**

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

- src/Models.h

4.4 NoteInformation Class Reference

Public Member Functions

- **NoteInformation** (string textheading, string notetext, ofColor tcolor, ofColor bgcolor)

Public Attributes

- string **note_heading**
- string **note_text**
- ofColor **text_color**
- ofColor **bg_color**

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

- src/NoteInformation.h

4.5 POIs Class Reference

Public Member Functions

- **POIs** (float a, float b)

Public Attributes

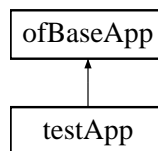
- float **x**
- float **y**

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

- src/POIS.h

4.6 testApp Class Reference

Inheritance diagram for testApp:



Public Member Functions

- void **setup** ()
Setups this object.
- void **update** ()
- void **draw** ()
- void **keyPressed** (int key)
- void **keyReleased** (int key)
- void **mouseMoved** (int x, int y)
- void **mouseDragged** (int x, int y, int button)
- void **mousePressed** (int x, int y, int button)
Mouse pressed.
- void **mouseReleased** (int x, int y, int button)
Mouse released.
- void **windowResized** (int w, int h)
- void **UpdateTracking** ()
- void **setupTracker** ()
- void **setupModels** ()
- void **drawModels** ()
- void **drawAxes** ()
- void **drawPlane** ()
Draw plane.
- void **UDPReceive** ()
- void **addObjecttoScene** (string)
- ofColor **Returncolor** (string)
- void **drawAugmentedPlane** (float, float, ofColor, ofColor, int, string, string)
Draw augmented plane.

Public Attributes

- ofxUDPManager **udpConnection**
- ofTrueTypeFont **mono**
- ofTrueTypeFont **monosm**
The monosm.
- ofxAssimpModelLoader **bb_model**
- ofxAssimpModelLoader **cr_model**
- ofxAssimpModelLoader **lr_model**
- ofxAssimpModelLoader **ls_model**
- ofxAssimpModelLoader **pgn_model**
- ofxAssimpModelLoader **pgy_model**
Gets the tbox model.
- ofxAssimpModelLoader **pog_model**
- ofxAssimpModelLoader **rc_model**
- ofxAssimpModelLoader **sr_model**
- ofxAssimpModelLoader **tbox_model**
- ofxAssimpModelLoader **squirrelModel**
The squirrel model.

4.6.1 Member Function Documentation

4.6.1.1 void testApp::addObjecttoScene (string *message*)

4.6.1.2 void testApp::draw ()

Constructor.

Author

Rahul

Date

9/21/2012

Parameters

<i>parameter1</i>	The first parameter.
-------------------	----------------------

4.6.1.3 void testApp::drawAugmentedPlane (float *xPosition*, float *yPosition*, ofColor *textColor*, ofColor *bgColor*, int *i*, string *note_heading*, string *note_text*)

Draw augmented plane.

Author

Rahul

Date

9/21/2012

Parameters

<i>xPosition</i>	The position.
<i>yPosition</i>	The position.
<i>textColor</i>	The text color.
<i>bgColor</i>	The background color.
<i>i</i>	Zero-based index of the.
<i>note_heading</i>	The note heading.
<i>note_text</i>	The note text.

4.6.1.4 void testApp::drawAxes ()

Constructor.

Author

Rahul

Date

9/21/2012

Parameters

<i>parameter1</i>	The first parameter.
<i>parameter2</i>	The second parameter.
<i>parameter3</i>	The third parameter.

4.6.1.5 void testApp::drawModels ()

Constructor.

Author

Rahul

Date

9/21/2012

Parameters

<i>parameter1</i>	The first parameter.
<i>parameter2</i>	The second parameter.

4.6.1.6 void testApp::drawPlane ()

Draw plane.

Author

Rahul

Date

9/21/2012

4.6.1.7 void testApp::keyPressed (int *key*)

Key released.

Author

Rahul

Date

9/21/2012

Parameters

<i>key</i>	The key.
------------	----------

4.6.1.8 void testApp::mousePressed (int *x*, int *y*, int *button*)

Mouse pressed.

This function will be called when the mouse is pressed

Author

Rahul

Date

9/21/2012

Parameters

<i>x</i>	The x coordinate.
<i>y</i>	The y coordinate.
<i>button</i>	The button.

4.6.1.9 void testApp::mouseReleased (int *x*, int *y*, int *button*)

Mouse released.

Author

Rahul

Date

9/21/2012

Parameters

<i>x</i>	The x coordinate.
<i>y</i>	The y coordinate.
<i>button</i>	The button.

4.6.1.10 void testApp::setup ()

Setups this object.

Author

Rahul

Date

9/21/2012

Constructor.

Author

Rahul

Date

9/21/2012

Parameters

<i>parameter1</i>	The first parameter.
-------------------	----------------------

4.6.1.11 void testApp::setupModels ()

Constructor.

Author

Rahul

Date

9/21/2012

Parameters

<i>parameter1</i>	The first parameter.
<i>parameter2</i>	The second parameter.
<i>parameter3</i>	The third parameter.

4.6.1.12 void testApp::UDPReceive ()

Default constructor.

Author

Rahul

Date

9/21/2012

4.6.1.13 void testApp::UpdateTracking ()

Gets the.

.

4.6.2 Member Data Documentation

4.6.2.1 ofxAssimpModelLoader bb_model cr_model lr_model ls_model pgn_model testApp::pgy_model

Gets the tbox model.

pog_model,rc_model,sr_model,tbox_model

Returns

The tbox model.

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

- [src/testApp.h](#)
- [src/testApp.cpp](#)

Chapter 5

File Documentation

5.1 src/testApp.cpp File Reference

Implements the test application class.

```
#include "testApp.h"
#include "stdafx.h"
#include "IWRsdk.h"
#include <stdio.h>
#include <fcntl.h>
#include <io.h>
#include <sys\stat.h>
#include <iostream>
```

Macros

- `#define IWR_OK 0`
Vuzix Trackers Macros .
- `#define IWR_NO_TRACKER 1`
- `#define IWR_OFFLINE 2`
- `#define IWR_TRACKER_CORRUPT 3`
- `#define IWR_NOTRACKER_INSTANCE 4`
- `#define IWR_NO_STEREO 5`
- `#define IWR_STEREO_CORRUPT 6`

Enumerations

- `enum { NO_FILTER =0, APPLICATION_FILTER, INTERNAL_FILTER }`

Functions

- `void IWRFilterTracking (long *yaw, long *pitch, long *roll)`
The Filtered tracking output.

Variables

- `bool g_tracking = false`
- `float g_fYaw = 0.0f`

The roll.

- float **g_fPitch** = 0.0f
- float **g_fRoll** = 0.0f
- long **iwr_status**

The iwr status.

- int **g_Filtering** = 0

The filtering.

- int **Pid** = 0
- HMODULE **hMod**
- ofCamera **cam**
- float **yaw** =0

– Processing ...

- float **roll** =0
- vector< **POIs** > **scenes**

The scenes.

- vector< **NoteInformation** > **Notes**
- float **rotX**
- float **rotY**

Gets the rot y coordinate.

- float **rotAngle** =0

The rot angle.

- ofImage **crosshair**

The crosshair.

- float **initialyaw** =0

The initialyaw.

- int **i**
- **Calculations calc**
- vector< string > **result**

- ofColor **white** =ofColor::fromHex(0xffffffff)

The white.

- ofColor **green** = ofColor::fromHex(0x00ff00)
- ofColor **blue** =ofColor::fromHex(0x0000ff)

The blue.

- ofColor **yellow** =ofColor::fromHex(0xffff00)
- ofColor **red** =ofColor::fromHex(0xff0000)

The red.

- ofColor **black** =ofColor::fromHex(0x000000)
- ofTrueTypeFont **Serif_15**

The fifth serif 1.

- ofTrueTypeFont **Serif_10**

5.1.1 Detailed Description

Implements the test application class.

5.1.2 Macro Definition Documentation

5.1.2.1 #define IWR_OK 0

Vuzix Trackers Macros .

Author

Rahul

Date

9/21/2012

5.1.3 Function Documentation

5.1.3.1 IWRFilterTracking (long * *yaw*, long * *pitch*, long * *roll*)

The Filtered tracking output.

Author

Rahul

Date

9/21/2012

Parameters

<i>in</i> , <i>out</i>	<i>yaw</i>	the yaw.
<i>in</i> , <i>out</i>	<i>pitch</i>	the pitch.
<i>in</i> , <i>out</i>	<i>roll</i>	the roll.

5.1.4 Variable Documentation

5.1.4.1 float rotX rotY

Gets the rot y coordinate.

Returns

The rot y coordinate.

5.1.4.2 vector<POIs> scenes

The scenes.

This Vector stores the Scene Information

5.1.4.3 float yaw =0

– Processing ...

The roll.

5.2 src/testApp.h File Reference

Declares the test application class.

```
#include "ofMain.h"
#include "ofxNetwork.h"
#include "ofVec3f.h"
#include "ofxAssimpModelLoader.h"
#include "ofCamera.h"
#include "Calculations.h"
#include "NoteInformation.h"
```

Classes

- class [testApp](#)

Macros

- [#define _TEST_APP](#)
A macro that defines test application.

5.2.1 Detailed Description

Declares the test application class.

5.2.2 Macro Definition Documentation

5.2.2.1 [#define _TEST_APP](#)

A macro that defines test application.

Author

Rahul

Date

9/21/2012

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