RAPP Platform Tests - Hazard Detection

v0.6.0

Generated by Doxygen 1.8.6

Fri Jul 22 2016 10:11:32

Contents

1 Namespace Index **1**

1.1 Namespace List . . . 1

2 Hierarchical Index **3**

2.1 Class Hierarchy . . . 3

3 Class Index **5**

3.1 Class List . . . 5

4 File Index **7**

4.1 File List . . . 7

5 Namespace Documentation **9**

5.1 functional_tests Namespace Reference . . . 9

5.1.1 Variable Documentation . . . 9

5.1.1.1 PKG . . . 9

6 Class Documentation **11**

6.1 DoorCheckTest Class Reference . . . 11

6.1.1 Detailed Description . . . 12

6.1.2 Constructor & Destructor Documentation . . . 12

6.1.2.1 DoorCheckTest . . . 12

6.1.3 Member Function Documentation . . . 12

6.1.3.1 SetUp . . . 12

6.1.3.2 TearDown . . . 12

6.1.4 Member Data Documentation . . . 12

6.1.4.1 door_check_ . . . 12

6.2 functional_tests.HazardDetectionFunc Class Reference . . . 13

6.2.1 Detailed Description . . . 14

6.2.2 Member Function Documentation . . . 14

6.2.2.1 test_door_fileDoesNotExist . . . 14

6.2.2.2 test_door_fileExistsButItAudio . . . 14

6.2.2.3 test_door_stress . . . 14

6.2.2.4 test_doorClosed . . . 14
6.2.2.5 test_doorOpen . . . 14
6.2.2.6 test_light_fileDoesNotExist . . . 14
6.2.2.7 test_light_fileExistsButItAudio . . . 15
6.2.2.8 test_light_stress . . . 15
6.2.2.9 test_lightOff . . . 15
6.2.2.10 test_lightOn . . . 15
6.3 LightCheckTest Class Reference . . . 15
6.3.1 Detailed Description . . . 16
6.3.2 Constructor & Destructor Documentation . . . 16
6.3.2.1 LightCheckTest . . . 16
6.3.3 Member Function Documentation . . . 16
6.3.3.1 SetUp . . . 16
6.3.3.2 TearDown . . . 17
6.3.4 Member Data Documentation . . . 17
6.3.4.1 light_check_ . . . 17

7 File Documentation **19**

7.1 /home/travis/rapp_temp/rapp-platform/rapp_hazard_detection/tests/hazard_detection/functional_-tests.py File Reference . . . 19
7.2 /home/travis/rapp_temp/rapp-platform/rapp_hazard_detection/tests/hazard_detection/unit_tests.cpp File Reference . . . 19
7.2.1 Function Documentation . . . 20
7.2.1.1 main . . . 20
7.2.1.2 TEST_F . . . 20
7.2.1.3 TEST_F . . . 20
7.2.1.4 TEST_F . . . 20
7.2.1.5 TEST_F . . . 20
7.2.1.6 TEST_F . . . 21
7.2.1.7 TEST_F . . . 21

Index **22**

Chapter 1

Namespace Index

1.1 Namespace List

Here is a list of all namespaces with brief descriptions:

functional_tests 9

Chapter 2

Hierarchical Index

2.1 Class Hierarchy

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

Test
- DoorCheckTest 11
- LightCheckTest 15

TestCase
- functional_tests.HazardDetectionFunc 13

Chapter 3

Class Index

3.1 Class List

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

DoorCheckTest
Handles the door angle detection unit testing using gtests 11
functional_tests.HazardDetectionFunc 13
LightCheckTest
Handles the light cheking unit testing using gtests 15

Chapter 4

File Index

4.1 File List

Here is a list of all files with brief descriptions:

/home/travis/rapp_temp/rapp-platform/rapp_hazard_detection/tests/hazard_detection/functional_tests.py 19
/home/travis/rapp_temp/rapp-platform/rapp_hazard_detection/tests/hazard_detection/unit_tests.cpp . . 19

Chapter 5

Namespace Documentation

5.1 functional_tests Namespace Reference

Classes

- class HazardDetectionFunc

Variables

- string PKG = 'ros_nodes'

5.1.1 Variable Documentation

5.1.1.1 string functional_tests.PKG = 'ros_nodes'

Definition at line 18 of file functional_tests.py.

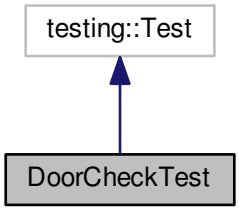
Chapter 6

Class Documentation

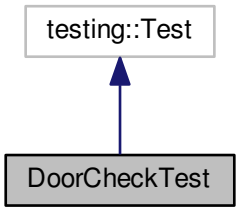
6.1 DoorCheckTest Class Reference

Handles the door angle detection unit testing using gtests.

Inheritance diagram for DoorCheckTest:



Collaboration diagram for DoorCheckTest:



Protected Member Functions

- DoorCheckTest ()

Default constructor.

- virtual void SetUp ()

  Sets up the class variables for each unit test call.

- virtual void TearDown ()

  This function is called after the termination of each test. Destroys the dynamically alloced variables.

Protected Attributes

- DoorCheck * door_check_

6.1.1 Detailed Description

Handles the door angle detection unit testing using gtests.

Definition at line 112 of file unit_tests.cpp.

6.1.2 Constructor & Destructor Documentation

6.1.2.1 DoorCheckTest::DoorCheckTest ( ) [inline], [protected]

Default constructor.

Definition at line 119 of file unit_tests.cpp.

6.1.3 Member Function Documentation

6.1.3.1 virtual void DoorCheckTest::SetUp ( ) [inline], [protected], [virtual]

Sets up the class variables for each unit test call.

Definition at line 125 of file unit_tests.cpp.

6.1.3.2 virtual void DoorCheckTest::TearDown ( ) [inline], [protected], [virtual]

This function is called after the termination of each test. Destroys the dynamically alloced variables.

Definition at line 133 of file unit_tests.cpp.

6.1.4 Member Data Documentation

6.1.4.1 DoorCheck* DoorCheckTest::door_check_ [protected]

Pointer of type DoorCheck. Used to check its functions

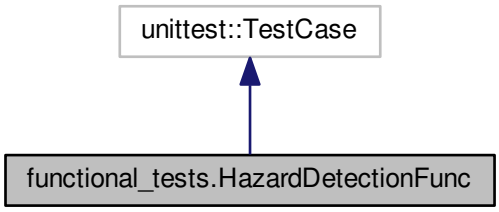
Definition at line 138 of file unit_tests.cpp.

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

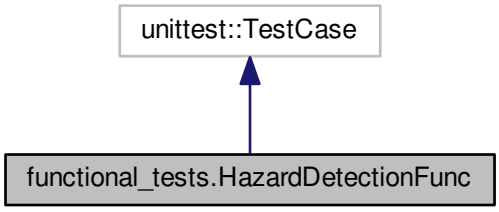
- /home/travis/rapp_temp/rapp-platform/rapp_hazard_detection/tests/hazard_detection/unit_tests.cpp

6.2 functional_tests.HazardDetectionFunc Class Reference

Inheritance diagram for functional_tests.HazardDetectionFunc:



Collaboration diagram for functional_tests.HazardDetectionFunc:



Public Member Functions

- def test_door_fileDoesNotExist

  Tests door detection with a non existent image.
- def test_door_fileExistsButItAudio

  Tests door detection with an audio file.
- def test_door_stress

  Stress test for door detection.
- def test_doorClosed

  Tests door detection with door closed.
- def test_doorOpen

  Tests door detection with door opened.
- def test_light_fileDoesNotExist

  Tests light detection with a non existent image.
- def test_light_fileExistsButItAudio

  Tests light detection with an audio file.
- def test_light_stress

  Stress test for light detection.

- def test_lightOff

  Tests light detection with lamp turned off.
- def test_lightOn

  Tests light detection with lamp turned on.

6.2.1 Detailed Description

```
Handles the hazard detection functional tests
```

Definition at line 34 of file functional_tests.py.

6.2.2 Member Function Documentation

6.2.2.1 def functional_tests.HazardDetectionFunc.test_door_fileDoesNotExist (*self*)

Tests door detection with a non existent image.

Should return -1

Definition at line 145 of file functional_tests.py.

6.2.2.2 def functional_tests.HazardDetectionFunc.test_door_fileExistsButItAudio (*self*)

Tests door detection with an audio file.

Should not crush an return -1

Definition at line 158 of file functional_tests.py.

6.2.2.3 def functional_tests.HazardDetectionFunc.test_door_stress (*self*)

Stress test for door detection.

20 calls in a row

Definition at line 131 of file functional_tests.py.

6.2.2.4 def functional_tests.HazardDetectionFunc.test_doorClosed (*self*)

Tests door detection with door closed.

Definition at line 118 of file functional_tests.py.

6.2.2.5 def functional_tests.HazardDetectionFunc.test_doorOpen (*self*)

Tests door detection with door opened.

Definition at line 105 of file functional_tests.py.

6.2.2.6 def functional_tests.HazardDetectionFunc.test_light_fileDoesNotExist (*self*)

Tests light detection with a non existent image.

Should return -1

Definition at line 79 of file functional_tests.py.

6.2.2.7 def functional_tests.HazardDetectionFunc.test_light_fileExistsButItAudio (*self*)

Tests light detection with an audio file.

Should not crush an return -1

Definition at line 92 of file functional_tests.py.

6.2.2.8 def functional_tests.HazardDetectionFunc.test_light_stress (*self*)

Stress test for light detection.

20 calls in a row

Definition at line 65 of file functional_tests.py.

6.2.2.9 def functional_tests.HazardDetectionFunc.test_lightOff (*self*)

Tests light detection with lamp turned off.

Definition at line 52 of file functional_tests.py.

6.2.2.10 def functional_tests.HazardDetectionFunc.test_lightOn (*self*)

Tests light detection with lamp turned on.

Definition at line 39 of file functional_tests.py.

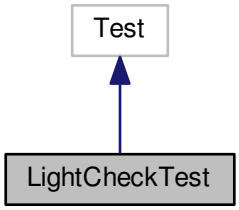
The documentation for this class was generated from the following file:

- /home/travis/rapp_temp/rapp-platform/rapp_hazard_detection/tests/hazard_detection/functional_tests.py

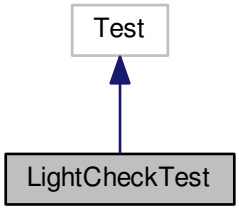
6.3 LightCheckTest Class Reference

Handles the light cheking unit testing using gtests.

Inheritance diagram for LightCheckTest:



Collaboration diagram for LightCheckTest:



Protected Member Functions

- LightCheckTest ()

  Default constructor.
- virtual void SetUp ()

  Sets up the class variables for each unit test call.
- virtual void TearDown ()

  This function is called after the termination of each test. Destroys the dynamically alloced variables.

Protected Attributes

- LightCheck * light_check_

6.3.1 Detailed Description

Handles the light cheking unit testing using gtests.

Definition at line 28 of file unit_tests.cpp.

6.3.2 Constructor & Destructor Documentation

6.3.2.1 LightCheckTest::LightCheckTest ( ) [inline], [protected]

Default constructor.

Definition at line 35 of file unit_tests.cpp.

6.3.3 Member Function Documentation

6.3.3.1 virtual void LightCheckTest::SetUp ( ) [inline], [protected], [virtual]

Sets up the class variables for each unit test call.

Definition at line 41 of file unit_tests.cpp.

6.3.3.2 virtual void LightCheckTest::TearDown ( ) [inline], [protected], [virtual]

This function is called after the termination of each test. Destroys the dynamically alloced variables.

Definition at line 49 of file unit_tests.cpp.

6.3.4 Member Data Documentation

6.3.4.1 LightCheck* LightCheckTest::light_check_ [protected]

Pointer of type LightCheck. Used to check its functions

Definition at line 54 of file unit_tests.cpp.

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

- /home/travis/rapp_temp/rapp-platform/rapp_hazard_detection/tests/hazard_detection/unit_tests.cpp

Chapter 7

File Documentation

7.1 /home/travis/rapp_temp/rapp-platform/rapp_hazard_detection/tests/hazard_detection/functional-_tests.py File Reference

Classes

- class functional_tests.HazardDetectionFunc

Namespaces

- functional_tests

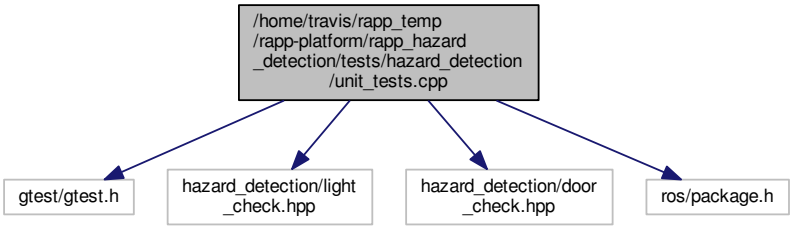
Variables

- string functional_tests.PKG = 'ros_nodes'

7.2 /home/travis/rapp_temp/rapp-platform/rapp_hazard_detection/tests/hazard_detection/unit-_tests.cpp File Reference

```
#include <gtest/gtest.h>
#include <hazard_detection/light_check.hpp>
#include <hazard_detection/door_check.hpp>
#include <ros/package.h>
```

Include dependency graph for unit_tests.cpp:



Classes

- class DoorCheckTest

  Handles the door angle detection unit testing using gtests.
- class LightCheckTest

  Handles the light cheking unit testing using gtests.

Functions

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

  The main function. Initialized the unit tests.
- TEST_F (LightCheckTest, test_on)

  Tests light detection with the lamp turned on. Should be successful.
- TEST_F (LightCheckTest, test_off)

  Tests light detection with the lamp turned off. Should be successful.
- TEST_F (LightCheckTest, test_size)

  Tests light detection on the same image with different scales.
- TEST_F (LightCheckTest, file_not_exists_test)

  Tests light detection with a missing file. Should return 0.
- TEST_F (DoorCheckTest, file_not_exists_test)

  Tests door angle detection with a missing file. Should return 0.
- TEST_F (DoorCheckTest, door_open_test)

  Tests door angle detection with a example file. Should return positive value.

7.2.1 Function Documentation

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

The main function. Initialized the unit tests.

Definition at line 167 of file unit_tests.cpp.

7.2.1.2 TEST_F (LightCheckTest , test_on)

Tests light detection with the lamp turned on. Should be successful.

Definition at line 61 of file unit_tests.cpp.

7.2.1.3 TEST_F (LightCheckTest , test_off)

Tests light detection with the lamp turned off. Should be successful.

Definition at line 72 of file unit_tests.cpp.

7.2.1.4 TEST_F (LightCheckTest , test_size)

Tests light detection on the same image with different scales.

Definition at line 84 of file unit_tests.cpp.

7.2.1.5 TEST_F (LightCheckTest , file_not_exists_test)

Tests light detection with a missing file. Should return 0.

Definition at line 97 of file unit_tests.cpp.

7.2.1.6 TEST_F (DoorCheckTest , file_not_exists_test)

Tests door angle detection with a missing file. Should return 0.

Definition at line 145 of file unit_tests.cpp.

7.2.1.7 TEST_F (DoorCheckTest , door_open_test)

Tests door angle detection with a example file. Should return positive value.

Definition at line 156 of file unit_tests.cpp.

Index

/home/travis/rapp_temp/rapp-platform/rapp_hazard_-
detection/tests/hazard_detection/functional_-
tests.py, 19
/home/travis/rapp_temp/rapp-platform/rapp_hazard_-
detection/tests/hazard_detection/unit_tests.-
cpp, 19

door_check_
DoorCheckTest, 12
DoorCheckTest, 11
door_check_, 12
DoorCheckTest, 12
DoorCheckTest, 12
SetUp, 12
TearDown, 12

functional_tests, 9
PKG, 9
functional_tests.HazardDetectionFunc, 13
functional_tests::HazardDetectionFunc
test_door_fileDoesNotExist, 14
test_door_fileExistsButItAudio, 14
test_door_stress, 14
test_doorClosed, 14
test_doorOpen, 14
test_light_fileDoesNotExist, 14
test_light_fileExistsButItAudio, 14
test_light_stress, 15
test_lightOff, 15
test_lightOn, 15

light_check_
LightCheckTest, 17
LightCheckTest, 15
light_check_, 17
LightCheckTest, 16
LightCheckTest, 16
SetUp, 16
TearDown, 16

main
unit_tests.cpp, 20

PKG
functional_tests, 9

SetUp
DoorCheckTest, 12
LightCheckTest, 16

TEST_F
unit_tests.cpp, 20, 21
TearDown
DoorCheckTest, 12
LightCheckTest, 16
test_door_fileDoesNotExist
functional_tests::HazardDetectionFunc, 14
test_door_fileExistsButItAudio
functional_tests::HazardDetectionFunc, 14
test_door_stress
functional_tests::HazardDetectionFunc, 14
test_doorClosed
functional_tests::HazardDetectionFunc, 14
test_doorOpen
functional_tests::HazardDetectionFunc, 14
test_light_fileDoesNotExist
functional_tests::HazardDetectionFunc, 14
test_light_fileExistsButItAudio
functional_tests::HazardDetectionFunc, 14
test_light_stress
functional_tests::HazardDetectionFunc, 15
test_lightOff
functional_tests::HazardDetectionFunc, 15
test_lightOn
functional_tests::HazardDetectionFunc, 15

unit_tests.cpp
main, 20
TEST_F, 20, 21