

RAPP Platform Tests - Hazard Detection
v0.6.0

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| 7.2.1.7 | TEST_F | 21 |
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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:

| | | |
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| 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.

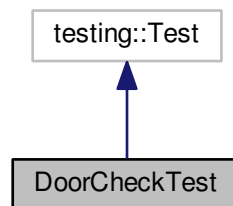
Chapter 6

Class Documentation

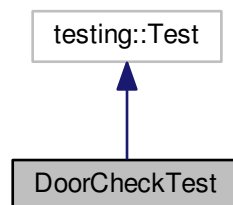
6.1 DoorCheckTest Class Reference

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 allocated 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 allocated 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

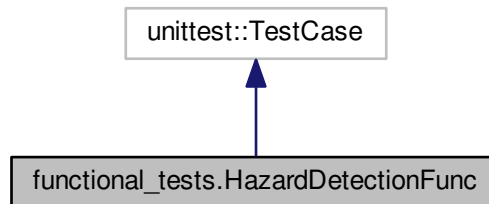
Definition at line 138 of file unit_tests.cpp.

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

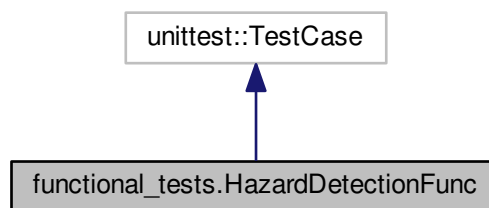
- /home/travis/rapp_temp/rapp-platform/rapp_hazard_detection/tests/hazard_detection/unit_tests.cpp

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`.

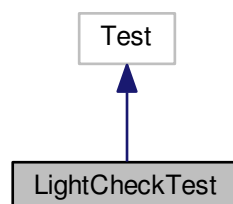
The documentation for this class was generated from the following file:

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

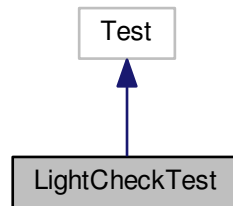
6.3 LightCheckTest Class Reference

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 allocated 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 allocated 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`

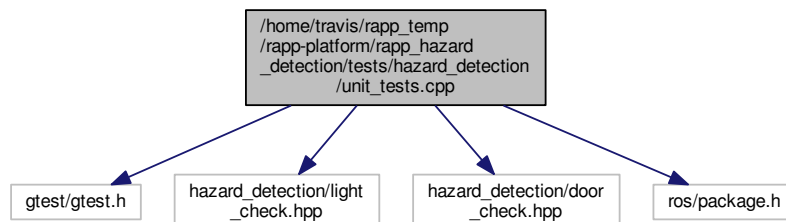
Variables

- 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.

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