RAPP Platform

0.5.5

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Member rapp_speech_detection_sphinx4.greek_support.GreekSupport._generic_sphinx_configuration

Fix this according to the generic Greek model

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

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cognitive_exercise.CognitiveExercise
: The Cognitive exercise ros node . . . 20

rapp_audio_processing.rapp_detect_silence.DetectSilence
: Performs silence detection on an audio file . . . 22

rapp_audio_processing.rapp_energy_denoise.EnergyDenoise
: Performs energy denoising on an audio file . . . 22

rapp_speech_detection_sphinx4.english_support.EnglishSupport
: Allows the creation of configuration files for English Sphinx speech recognition . . . 23

FaceDetection
: Class FaceDetection uptakes the task of handling the ROS service callbacks . . . 26

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: Class that implements a face detection algorithm based on a Haar cascade classifier . . . 28

rapp_speech_detection_sphinx4.global_parameters.GlobalParams
: Contains global Sphinx parameters . . . 30

rapp_speech_detection_sphinx4.greek_support.GreekSupport
: Allows the creation of configuration files for Greek Sphinx speech recognition . . . 32

KnowrobWrapper
: Class KnowrobWrapperCommunications contains all the necessary knowrob wrapper functions 37

KnowrobWrapperCommunications
: Class KnowrobWrapperCommunications uptakes the task of handling the ROS service callbacks 45

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: Provides a RAPP specific exception . . . 76

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Chapter 6

Namespace Documentation

6.1 cognitive_exercise Namespace Reference

Classes

- class CognitiveExercise

  The Cognitive exercise ros node.

6.2 cognitive_exercise_main Namespace Reference

Variables

- tuple CognitiveExerciseNode = CognitiveExercise()

  The main function that initiates the CognitiveExercise ROS Node.

6.2.1 Variable Documentation

6.2.1.1 tuple cognitive_exercise_main.CognitiveExerciseNode = CognitiveExercise()

The main function that initiates the CognitiveExercise ROS Node.

Definition at line 27 of file cognitive_exercise_main.py.

6.3 mysql_wrapper Namespace Reference

Classes

- class MySQLdbWrapper

  The mysql wrapper ros node.

6.4 mysql_wrapper_main Namespace Reference

Variables

- tuple MySQLWrapperNode = MySQLdbWrapper()

  The main function that initiates the rapp mysql wrapper ROS Node.

6.4.1 Variable Documentation

6.4.1.1 tuple mysql_wrapper_main.MySQLWrapperNode = MySQLdbWrapper()

The main function that initiates the rapp mysql wrapper ROS Node.

Definition at line 26 of file mysql_wrapper_main.py.

6.5 rapp_audio_processing Namespace Reference

Namespaces

- rapp_audio_processing
- rapp_detect_silence
- rapp_energy_denoise
- rapp_set_noise_profile
- rapp_sox_denoise
- rapp_transform_audio
- rapp_utilities

6.6 rapp_audio_processing.rapp_audio_processing Namespace Reference

Classes

- class AudioProcessing

  Provides audio processing utilities.

Variables

- tuple AudioProcessingNode = AudioProcessing()

6.6.1 Variable Documentation

6.6.1.1 tuple rapp_audio_processing.rapp_audio_processing.AudioProcessingNode = AudioProcessing()

Definition at line 236 of file rapp_audio_processing.py.

6.7 rapp_audio_processing.rapp_detect_silence Namespace Reference

Classes

- class DetectSilence

  Performs silence detection on an audio file.

6.8 rapp_audio_processing.rapp_energy_denoise Namespace Reference

Classes

- class EnergyDenoise

  Performs energy denoising on an audio file.

6.9 rapp_audio_processing.rapp_set_noise_profile Namespace Reference

Classes

- class SetNoiseProfile

  Evaluates the noise profile for an audio file.

6.10 rapp_audio_processing.rapp_sox_denoise Namespace Reference

Classes

- class SoxDenoise

  Performs denoising on an audio file employing Sox application.

6.11 rapp_audio_processing.rapp_transform_audio Namespace Reference

Classes

- class TransformAudio

  Provides audio type tranformation functionalities.

6.12 rapp_audio_processing.rapp_utilities Namespace Reference

Classes

- class Utilities

  Provides audio processing utilities.

6.13 rapp_exceptions Namespace Reference

Classes

- class RappError

  Inherits Exception and is used to catch only RAPP-specific exceptions.

6.14 rapp_speech_detection_sphinx4 Namespace Reference

Namespaces

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- global_parameters
- greek_support
- limited_vocabulary_creator
- rapp_exceptions
- rapp_tools
- speech_recognition_sphinx4
- speech_recognition_sphinx4_handler_node
- sphinx4_configuration_params
- sphinx4_wrapper

6.15 rapp_speech_detection_sphinx4.english_support Namespace Reference

Classes

- class EnglishSupport

  Allows the creation of configuration files for English Sphinx speech recognition.

6.16 rapp_speech_detection_sphinx4.global_parameters Namespace Reference

Classes

- class GlobalParams

  Contains global Sphinx parameters.

6.17 rapp_speech_detection_sphinx4.greek_support Namespace Reference

Classes

- class GreekSupport

  Allows the creation of configuration files for Greek Sphinx speech recognition.

6.18 rapp_speech_detection_sphinx4.limited_vocabulary_creator Namespace Reference

Classes

- class LimitedVocabularyCreator

  Creates temporary configuration files for the input limited vocabulary.

6.19 rapp_speech_detection_sphinx4.rapp_exceptions Namespace Reference

Classes

- class RappError

  Provides a RAPP specific exception.

6.20 rapp_speech_detection_sphinx4.rapp_tools Namespace Reference

Functions

- def rapp_print

6.20.1 Function Documentation

6.20.1.1 def rapp_speech_detection_sphinx4.rapp_tools.rapp_print (*var*)

Definition at line 21 of file rapp_tools.py.

6.21 rapp_speech_detection_sphinx4.speech_recognition_sphinx4 Namespace Reference

Classes

- class SpeechRecognitionSphinx4

  Provides a complete Rapp Sphinx Entity.

Variables

- tuple SpeechRecognitionSphinx4Node = SpeechRecognitionSphinx4()

6.21.1 Variable Documentation

6.21.1.1 tuple rapp_speech_detection_sphinx4.speech_recognition_sphinx4.SpeechRecognitionSphinx4Node = SpeechRecognitionSphinx4()

Definition at line 283 of file speech_recognition_sphinx4.py.

6.22 rapp_speech_detection_sphinx4.speech_recognition_sphinx4_handler_node Namespace Reference

Classes

- class SpeechRecognitionSphinx4HandlerNode

  Maintains Sphinx instances to perform speech recognition.

Variables

- tuple SpeechRecognitionSphinx4HandlerNode = SpeechRecognitionSphinx4HandlerNode()

6.22.1 Variable Documentation

6.22.1.1 tuple rapp_speech_detection_sphinx4.speech_recognition_sphinx4_handler_node.SpeechRecognitionSphinx4HandlerNode = SpeechRecognitionSphinx4HandlerNode()

Definition at line 149 of file speech_recognition_sphinx4_handler_node.py.

6.23 rapp_speech_detection_sphinx4.sphinx4_configuration_params Namespace Reference

Classes

- class SphinxConfigurationParams

  Contains the parameters required for the Sphinx configuration.

6.24 rapp_speech_detection_sphinx4.sphinx4_wrapper Namespace Reference

Classes

- class Sphinx4Wrapper

  Contains the Sphinx subprocess and is responsible for configuring Sphinx and performing the recognition request.

6.25 speech_recognition_google Namespace Reference

Classes

- class SpeechToTextGoogle

  Implements calls the Google ASR API.

Variables

- tuple speech_to_text_node = SpeechToTextGoogle()

  The main function.

6.25.1 Variable Documentation

6.25.1.1 tuple speech_recognition_google.speech_to_text_node = SpeechToTextGoogle()

The main function.

Creates a SpeechToTextGoogle object

Definition at line 285 of file speech_recognition_google.py.

6.26 text_to_speech_espeak Namespace Reference

Classes

- class TextToSpeechEspeak

Variables

- tuple text_to_speech_espeak_ros_node = TextToSpeechEspeak()

6.26.1 Variable Documentation

6.26.1.1 tuple text_to_speech_espeak.text_to_speech_espeak_ros_node = TextToSpeechEspeak()

Definition at line 81 of file text_to_speech_espeak.py.

Chapter 7

Class Documentation

7.1 rapp_audio_processing.rapp_audio_processing.AudioProcessing Class Reference

Provides audio processing utilities.

Public Member Functions

- def __init__

  Constructor performing initializations.
- def denoiseCallback

  Service callback for denoising.
- def detectSilenceCallback

  Service callback for Detecting silence.
- def energyDenoiseCallback

  Service callback for Energy denoising.
- def setNoiseProfileCallback

  Service callback for setting noise profile.
- def transformAudioCallback

  Service callback for Audio transformation.

Private Attributes

- _detect_silence_module

  Instantiates rapp_detect_silence.DetectSilence.
- _energy_denoise_module

  Instantiates rapp_energy_denoise.EnergyDenoise.
- _energy_denoising_debug

  Energy denoising degug flag.
- _set_noise_profile_module

  Instantiates rapp_set_noise_profile.SetNoiseProfile.
- _sox_denoise_module

  Instantiates rapp_sox_denoise.SoxDenoise.
- _transform_audio_module

  Instantiates rapp_transform_audio.TransformAudio.
- _utilities_module

  Instantiates rapp_utilities.Utilities.

7.1.1 Detailed Description

Provides audio processing utilities.

Implements service servers to perform denoising, audio transformation etc.

Definition at line 66 of file rapp_audio_processing.py.

7.1.2 Constructor & Destructor Documentation

7.1.2.1 def rapp_audio_processing.rapp_audio_processing.AudioProcessing.__init__ (*self*)

Constructor performing initializations.

Definition at line 69 of file rapp_audio_processing.py.

7.1.3 Member Function Documentation

7.1.3.1 def rapp_audio_processing.rapp_audio_processing.AudioProcessing.denoiseCallback (*self, req*)

Service callback for denoising.

Parameters

req	[rapp_platform_ros_comminications::AudioProcessing::AudioProcessingDenoiseSrv] The denoise request

Returns

res [rapp_platform_ros_comminications::AudioProcessing::AudioProcessingDenoiseSrvResponse] The denoise response

Definition at line 177 of file rapp_audio_processing.py.

7.1.3.2 def rapp_audio_processing.rapp_audio_processing.AudioProcessing.detectSilenceCallback (*self, req*)

Service callback for Detecting silence.

Parameters

req	[rapp_platform_ros_comminications::AudioProcessing::AudioProcessingDetectSilence] The detect silence request

Returns

res [rapp_platform_ros_comminications::AudioProcessing::AudioProcessingDetectSilenceSrvResponse] The detect silence response

Definition at line 192 of file rapp_audio_processing.py.

7.1.3.3 def rapp_audio_processing.rapp_audio_processing.AudioProcessing.energyDenoiseCallback (*self, req*)

Service callback for Energy denoising.

Parameters

req	[rapp_platform_ros_comminications::AudioProcessing::AudioProcessingDenoiseSrv] The denoise request

Returns

res [rapp_platform_ros_comminications::AudioProcessing::AudioProcessingDenoiseSrvResponse] The energy denoise response

Definition at line 207 of file rapp_audio_processing.py.

7.1.3.4 def rapp_audio_processing.rapp_audio_processing.AudioProcessing.setNoiseProfileCallback (*self, req*)

Service callback for setting noise profile.

Parameters

req	[rapp_platform_ros_comminications::AudioProcessing::AudioProcessingSetNoiseProfileSrv] The set noise profile request

Returns

res [rapp_platform_ros_comminications::AudioProcessing::AudioProcessingSetNoiseProfileSrvResponse] The set noise profile response

Definition at line 142 of file rapp_audio_processing.py.

7.1.3.5 def rapp_audio_processing.rapp_audio_processing.AudioProcessing.transformAudioCallback (*self, req*)

Service callback for Audio transformation.

Parameters

req	[rapp_platform_ros_comminications::AudioProcessing::AudioProcessingTransformAudioSrv] The transform audio request

Returns

res [rapp_platform_ros_comminications::AudioProcessing::AudioProcessingTransformAudioSrvResponse] The transform audio response

Definition at line 223 of file rapp_audio_processing.py.

7.1.4 Member Data Documentation

7.1.4.1 rapp_audio_processing.rapp_audio_processing.AudioProcessing._detect_silence_module [private]

Instantiates rapp_detect_silence.DetectSilence.

Definition at line 72 of file rapp_audio_processing.py.

7.1.4.2 rapp_audio_processing.rapp_audio_processing.AudioProcessing._energy_denoise_module [private]

Instantiates rapp_energy_denoise.EnergyDenoise.

Definition at line 74 of file rapp_audio_processing.py.

7.1.4.3 rapp_audio_processing.rapp_audio_processing.AudioProcessing._energy_denoising_debug [private]

Energy denoising degug flag.

Definition at line 109 of file rapp_audio_processing.py.

7.1.4.4 rapp_audio_processing.rapp_audio_processing.AudioProcessing._set_noise_profile_module [private]

Instantiates rapp_set_noise_profile.SetNoiseProfile.

Definition at line 80 of file rapp_audio_processing.py.

7.1.4.5 rapp_audio_processing.rapp_audio_processing.AudioProcessing._sox_denoise_module [private]

Instantiates rapp_sox_denoise.SoxDenoise.

Definition at line 76 of file rapp_audio_processing.py.

7.1.4.6 rapp_audio_processing.rapp_audio_processing.AudioProcessing._transform_audio_module [private]

Instantiates rapp_transform_audio.TransformAudio.

Definition at line 82 of file rapp_audio_processing.py.

7.1.4.7 rapp_audio_processing.rapp_audio_processing.AudioProcessing._utilities_module [private]

Instantiates rapp_utilities.Utilities.

Definition at line 78 of file rapp_audio_processing.py.

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

- /home/travis/rapp_temp/rapp-platform/rapp_audio_processing/src/rapp_audio_processing/rapp_audio_processing.py

7.2 cognitive_exercise.CognitiveExercise Class Reference

The Cognitive exercise ros node.

Public Member Functions

- def __init__
  Default contructor.
- def chooserDataHandler
  The cognitive exercise chooser service callback.
- def cognitiveTestCreatorDataHandler
  The cognitive test creator service callback.
- def recordUserCognitiveTestPerformanceDataHandler
  The record user cognitive test performance service callback.

Public Attributes

- serv
- serv_topic

7.2.1 Detailed Description

The Cognitive exercise ros node.

Definition at line 57 of file cognitive_exercise.py.

7.2.2 Constructor & Destructor Documentation

7.2.2.1 def cognitive_exercise.CognitiveExercise.__init__ (*self*)

Default contructor.

Waits for services the node depends on and declares the callbacks of the node's services

Definition at line 62 of file cognitive_exercise.py.

7.2.3 Member Function Documentation

7.2.3.1 def cognitive_exercise.CognitiveExercise.chooserDataHandler (*self, req*)

The cognitive exercise chooser service callback.

Parameters

req	[rapp_platform_ros_communications::testSelectorSrvRequest::Request&] The ROS service request
res	[rapp_platform_ros_communications::testSelectorSrvResponse::Response&] The ROS service response

Definition at line 114 of file cognitive_exercise.py.

7.2.3.2 def cognitive_exercise.CognitiveExercise.cognitiveTestCreatorDataHandler (*self, req*)

The cognitive test creator service callback.

Parameters

req	[rapp_platform_ros_communications::cognitiveTestCreatorSrvRequest::Request&] The ROS service request
res	[rapp_platform_ros_communications::cognitiveTestCreatorSrvResponse::Response&] The ROS service response

Definition at line 131 of file cognitive_exercise.py.

7.2.3.3 def cognitive_exercise.CognitiveExercise.recordUserCognitiveTestPerformanceDataHandler (*self, req*)

The record user cognitive test performance service callback.

Parameters

req	[rapp_platform_ros_communications::recordUserCognitiveTestPerformanceSrvRequest::-Request&] The ROS service request
res	[rapp_platform_ros_communications::recordUserCognitiveTestPerformanceSrvResponse::-Response&] The ROS service response

Definition at line 123 of file cognitive_exercise.py.

7.2.4 Member Data Documentation

7.2.4.1 cognitive_exercise.CognitiveExercise.serv

Definition at line 99 of file cognitive_exercise.py.

7.2.4.2 cognitive_exercise.CognitiveExercise.serv_topic

Definition at line 65 of file cognitive_exercise.py.

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

- /home/travis/rapp_temp/rapp-platform/rapp_cognitive_exercise/src/cognitive_exercise.py

7.3 rapp_audio_processing.rapp_detect_silence.DetectSilence Class Reference

Performs silence detection on an audio file.

Public Member Functions

- def detectSilence
  Detects silence.

7.3.1 Detailed Description

Performs silence detection on an audio file.

Definition at line 29 of file rapp_detect_silence.py.

7.3.2 Member Function Documentation

7.3.2.1 def rapp_audio_processing.rapp_detect_silence.DetectSilence.detectSilence (*self, audio_file, threshold*)

Detects silence.

Handles service callback rapp_audio_processing.AudioProcessing::detectSilenceCallback

Parameters

audio_file	[string] Audio file path
threshold	[float] Silence threshold

Returns

rsd_sq [float] Noise relative standard deviation
has_silence [bool] Indicates the existence of silence

Definition at line 41 of file rapp_detect_silence.py.

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

- /home/travis/rapp_temp/rapp-platform/rapp_audio_processing/src/rapp_audio_processing/rapp_detect_silence.py

7.4 rapp_audio_processing.rapp_energy_denoise.EnergyDenoise Class Reference

Performs energy denoising on an audio file.

Public Member Functions

- def energyDenoise

  Performs energy-based denoising.

7.4.1 Detailed Description

Performs energy denoising on an audio file.

Definition at line 29 of file rapp_energy_denoise.py.

7.4.2 Member Function Documentation

7.4.2.1 def rapp_audio_processing.rapp_energy_denoise.EnergyDenoise.energyDenoise (*self, audio_file, scale, denoised_audio_file, energy_denoising_debug*)

Performs energy-based denoising.

Handles service callback rapp_audio_processing.AudioProcessing::energyDenoiseCallback

Parameters

audio_file	[string] Audio file path
scale	[float] Energy denoise scale
denoised_audio_file	[string] Path to write denoised audio file

Definition at line 39 of file rapp_energy_denoise.py.

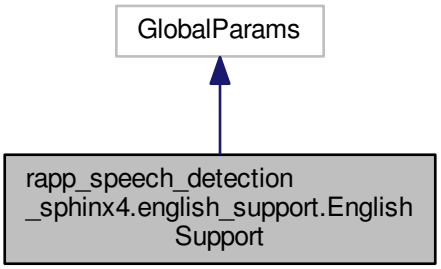
The documentation for this class was generated from the following file:

- /home/travis/rapp_temp/rapp-platform/rapp_audio_processing/src/rapp_audio_processing/rapp_energy_denoise.py

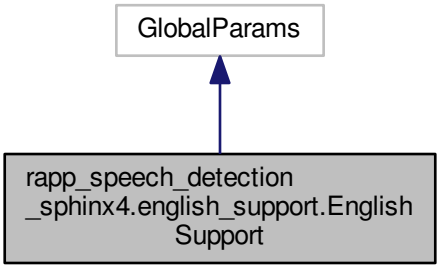
7.5 rapp_speech_detection_sphinx4.english_support.EnglishSupport Class Reference

Allows the creation of configuration files for English Sphinx speech recognition.

Inheritance diagram for rapp_speech_detection_sphinx4.english_support.EnglishSupport:



Collaboration diagram for rapp_speech_detection_sphinx4.english_support.EnglishSupport:



Public Member Functions

- def __init__
  Performs initializations.
- def getGenericConfiguration
  Returns the Generic English Configuration.
- def getLimitedVocebularyConfiguration
  Computes the Limited English Configuration.
- def getWordPhonemes
  Compute the English word phonemes.

Private Attributes

- _english_dict_file
  The English dictionary file.
- _english_dict_mapping
  The mmap of the English dictionary file contents.
- _generic_sphinx_configuration
  The generic Sphinx configuration.
- _vocabulary
  The limited vocabulary creator.

7.5.1 Detailed Description

Allows the creation of configuration files for English Sphinx speech recognition.

Definition at line 32 of file english_support.py.

7.5.2 Constructor & Destructor Documentation

7.5.2.1 def rapp_speech_detection_sphinx4.english_support.EnglishSupport.__init__ (*self*)

Performs initializations.

Definition at line 35 of file english_support.py.

7.5.3 Member Function Documentation

7.5.3.1 def rapp_speech_detection_sphinx4.english_support.EnglishSupport.getGenericConfiguration (*self*)

Returns the Generic English Configuration.

Returns

_generic_sphinx_configuration [dictionary] The Generic English configuration

Definition at line 149 of file english_support.py.

7.5.3.2 def rapp_speech_detection_sphinx4.english_support.EnglishSupport.getLimitedVocebularyConfiguration (*self, words, grammar, sentences*)

Computes the Limited English Configuration.

Parameters

words	[list::string] The set of words to be identified
grammar	[list::string] The Sphinx grammar parameter
sentences	[list::string] The Sphinx sentences parameter

Returns

limited_sphinx_configuration [dictionary] The Limited English configuration

Definition at line 133 of file english_support.py.

7.5.3.3 def rapp_speech_detection_sphinx4.english_support.EnglishSupport.getWordPhonemes (*self, words*)

Compute the English word phonemes.

Parameters

words	[list::string] The set of English words

Returns

enhanced_words [dictionary] The English word->phonemes mapping

Definition at line 89 of file english_support.py.

7.5.4 Member Data Documentation

7.5.4.1 rapp_speech_detection_sphinx4.english_support.EnglishSupport._english_dict_file [private]

The English dictionary file.

Located in path global_parameters.GlobalParams::_language_models_url + "/englishPack/cmudict-en-us.dict"

Definition at line 72 of file english_support.py.

7.5.4.2 rapp_speech_detection_sphinx4.english_support.EnglishSupport._english_dict_mapping [private]

The mmap of the English dictionary file contents.

Definition at line 74 of file english_support.py.

7.5.4.3 rapp_speech_detection_sphinx4.english_support.EnglishSupport._generic_sphinx_configuration [private]

The generic Sphinx configuration.

Note

Check acoustic model!!

Definition at line 57 of file english_support.py.

7.5.4.4 rapp_speech_detection_sphinx4.english_support.EnglishSupport._vocabulary [private]

The limited vocabulary creator.

Instantiates limited_vocabulary_creator.LimitedVocabularyCreator

Definition at line 41 of file english_support.py.

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

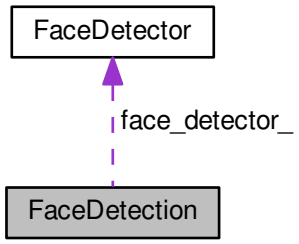
- /home/travis/rapp_temp/rapp-platform/rapp_speech_detection_sphinx4/src/rapp_speech_detection_sphinx4/english_support.py

7.6 FaceDetection Class Reference

Class FaceDetection uptakes the task of handling the ROS service callbacks.

`#include <face_detection.h>`

Collaboration diagram for FaceDetection:



Public Member Functions

- FaceDetection (void)

  Default constructor.

- bool faceDetectionCallback (rapp_platform_ros_communications::FaceDetectionRosSrv::Request &req, rapp_platform_ros_communications::FaceDetectionRosSrv::Response &res)

  Serves the face detection ROS service callback.

Private Attributes

- FaceDetector face_detector_
- ros::ServiceServer faceDetectionService_
- std::string faceDetectionTopic_
- ros::NodeHandle nh_

7.6.1 Detailed Description

Class FaceDetection uptakes the task of handling the ROS service callbacks.

Definition at line 31 of file face_detection.h.

7.6.2 Constructor & Destructor Documentation

7.6.2.1 FaceDetection::FaceDetection (void)

Default constructor.

Default constructor. Performs initializations.

Definition at line 24 of file face_detection.cpp.

7.6.3 Member Function Documentation

7.6.3.1 bool FaceDetection::faceDetectionCallback (rapp_platform_ros_communications::FaceDetectionRosSrv::Request & *req*, rapp_platform_ros_communications::FaceDetectionRosSrv::Response & *res*)

Serves the face detection ROS service callback.

Parameters

req	[rapp_platform_ros_communications::FaceDetectionRosSrv::Request&] The ROS service request
res	[rapp_platform_ros_communications::FaceDetectionRosSrv::Response&] The ROS service response

Returns

bool - The success status of the call

Definition at line 42 of file face_detection.cpp.

7.6.4 Member Data Documentation

7.6.4.1 FaceDetector FaceDetection::face_detector_ [private]

Definition at line 62 of file face_detection.h.

7.6.4.2 ros::ServiceServer FaceDetection::faceDetectionService_ [private]

Member variable holding the face detection ROS service topic

Definition at line 56 of file face_detection.h.

7.6.4.3 std::string FaceDetection::faceDetectionTopic_ [private]

Object of type FaceDetector

Definition at line 59 of file face_detection.h.

7.6.4.4 ros::NodeHandle FaceDetection::nh_ [private]

< The ROS node handle The face detection service server

Definition at line 53 of file face_detection.h.

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

- /home/travis/rapp_temp/rapp-platform/rapp_face_detection/include/face_detection/face_detection.h
- /home/travis/rapp_temp/rapp-platform/rapp_face_detection/src/face_detection.cpp

7.7 FaceDetector Class Reference

Class that implements a face detection algorithm based on a Haar cascade classifier.

`#include <face_detector.h>`

Public Member Functions

- FaceDetector (void)
  Default constructor.
- std::vector< cv::Rect > detectFaces (const cv::Mat &input_img)
  Detects faces from a cv::Mat.
- std::vector< cv::Rect > findFaces (std::string file_name)
  Finds faces in an image retrieved from a file URL.
- cv::Mat loadImage (std::string file_name)
  Loads an image from a file URL.

Private Member Functions

- std::vector< cv::Rect > detectFaces (const cv::Mat &input_img, const std::string &haar_path)
  Detects faces from a cv::Mat.
- std::vector< cv::Rect > identifyUniqueFaces (const std::vector< cv::Rect > firstFaceVector, const std::vector< cv::Rect > secondFaceVector)
  Identify unique faces from two sets of faces.

7.7.1 Detailed Description

Class that implements a face detection algorithm based on a Haar cascade classifier.

Definition at line 33 of file face_detector.h.

7.7.2 Constructor & Destructor Documentation

7.7.2.1 FaceDetector::FaceDetector (void)

Default constructor.

Definition at line 26 of file face_detector.cpp.

7.7.3 Member Function Documentation

7.7.3.1 std::vector< cv::Rect > FaceDetector::detectFaces (const cv::Mat & *input_img*)

Detects faces from a cv::Mat.

Parameters

input_img	[const cv::Mat&] The input image

Returns

[std::vector<cv::Rect>] A vector containing the detected faces. Each face is represented by a rectangle.

Definition at line 49 of file face_detector.cpp.

7.7.3.2 std::vector< cv::Rect > FaceDetector::detectFaces (const cv::Mat & *input_img,* const std::string & *haar_path*) [private]

Detects faces from a cv::Mat.

Parameters

input_img	[const cv::Mat&] The input image
haar_path	[const std::string] The Haar training model path

Returns

[std::vector<cv::Rect>] A vector containing the detected faces. Each face is represented by a rectangle.

Definition at line 82 of file face_detector.cpp.

7.7.3.3 std::vector< cv::Rect > FaceDetector::findFaces (std::string *file_name*)

Finds faces in an image retrieved from a file URL.

Parameters

file_name	[std::string] The image file's URL

Returns

[std::vector<cv::Rect>] A vector containing the detected faces. Each face is represented by a rectangle.

Definition at line 160 of file face_detector.cpp.

7.7.3.4 std::vector< cv::Rect > FaceDetector::identifyUniqueFaces (const std::vector< cv::Rect > *firstFaceVector,* const std::vector< cv::Rect > *secondFaceVector*) [private]

Identify unique faces from two sets of faces.

Parameters

frontFaceVector	[const std::vector<cv::Rect>&] The first set of faces

secondFaceVector	[const std::vector<cv::Rect>&] The second set of faces

Returns

[std::vector<cv::Rect>] A vector containing the unique faces. Each face is represented by a rectangle.

Definition at line 133 of file face_detector.cpp.

7.7.3.5 cv::Mat FaceDetector::loadImage (std::string *file_name*)

Loads an image from a file URL.

Parameters

file_name	[std::string] The image's file URL

Returns

[cv::Mat] The image in OpenCV representation

Definition at line 35 of file face_detector.cpp.

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

- /home/travis/rapp_temp/rapp-platform/rapp_face_detection/include/face_detection/face_detector.h
- /home/travis/rapp_temp/rapp-platform/rapp_face_detection/src/face_detector.cpp

7.8 rapp_speech_detection_sphinx4.global_parameters.GlobalParams Class Reference

Contains global Sphinx parameters.

Public Member Functions

- def __init__

Public Attributes

- rospack

Private Attributes

- _acoustic_models_url

  Acoustic models path.
- _allow_sphinx_output

  True if Sphinx is allowed output on STDIN, STDERR.
- _language_models_url

  Language models path.
- _noise_profiles_url

  Noise profiles path.
- _socket_host

  IPC socket HOST parameter.

- _sphinx_jar_file

  Sphinx jar file path.
- _sphinx_jar_files_url

  Java libraries path.
- _sphinx_package_url

  Sphinx package path.
- _tmp_language_models_url

  Temporary language models path.

7.8.1 Detailed Description

Contains global Sphinx parameters.

Definition at line 22 of file global_parameters.py.

7.8.2 Constructor & Destructor Documentation

7.8.2.1 def rapp_speech_detection_sphinx4.global_parameters.GlobalParams.__init__ (*self*)

Definition at line 23 of file global_parameters.py.

7.8.3 Member Data Documentation

7.8.3.1 rapp_speech_detection_sphinx4.global_parameters.GlobalParams._acoustic_models_url [private]

Acoustic models path.

Definition at line 38 of file global_parameters.py.

7.8.3.2 rapp_speech_detection_sphinx4.global_parameters.GlobalParams._allow_sphinx_output [private]

True if Sphinx is allowed output on STDIN, STDERR.

Definition at line 43 of file global_parameters.py.

7.8.3.3 rapp_speech_detection_sphinx4.global_parameters.GlobalParams._language_models_url [private]

Language models path.

Definition at line 31 of file global_parameters.py.

7.8.3.4 rapp_speech_detection_sphinx4.global_parameters.GlobalParams._noise_profiles_url [private]

Noise profiles path.

Definition at line 36 of file global_parameters.py.

7.8.3.5 rapp_speech_detection_sphinx4.global_parameters.GlobalParams._socket_host [private]

IPC socket HOST parameter.

Definition at line 45 of file global_parameters.py.

7.8.3.6 rapp_speech_detection_sphinx4.global_parameters.GlobalParams._sphinx_jar_file [private]

Sphinx jar file path.

Definition at line 41 of file global_parameters.py.

7.8.3.7 rapp_speech_detection_sphinx4.global_parameters.GlobalParams._sphinx_jar_files_url [private]

Java libraries path.

Definition at line 27 of file global_parameters.py.

7.8.3.8 rapp_speech_detection_sphinx4.global_parameters.GlobalParams._sphinx_package_url [private]

Sphinx package path.

Definition at line 29 of file global_parameters.py.

7.8.3.9 rapp_speech_detection_sphinx4.global_parameters.GlobalParams._tmp_language_models_url [private]

Temporary language models path.

Definition at line 33 of file global_parameters.py.

7.8.3.10 rapp_speech_detection_sphinx4.global_parameters.GlobalParams.rospack

Definition at line 24 of file global_parameters.py.

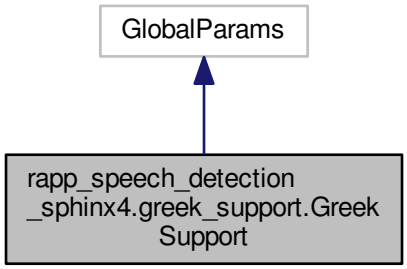
The documentation for this class was generated from the following file:

- /home/travis/rapp_temp/rapp-platform/rapp_speech_detection_sphinx4/src/rapp_speech_detection_sphinx4/global_parameters.py

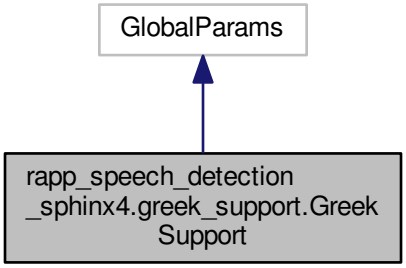
7.9 rapp_speech_detection_sphinx4.greek_support.GreekSupport Class Reference

Allows the creation of configuration files for Greek Sphinx speech recognition.

Inheritance diagram for rapp_speech_detection_sphinx4.greek_support.GreekSupport:



Collaboration diagram for rapp_speech_detection_sphinx4.greek_support.GreekSupport:



Public Member Functions

- def __init__

  Performs initializations.
- def getGenericConfiguration

  Returns the Generic Greek Configuration.
- def getLimitedVocebularyConfiguration

  Computes the Limited Greek Configuration.

Private Member Functions

- def _configureLetters

  Creates the basic Greek letter to English configuration.
- def _englify_words

  Englify Greek words.
- def _separateEngGrWords

  Separates English from Greek words.
- def _transformWords

  Transforms the Greek words into phonemes for the Sphinx configuration.

Private Attributes

- _all_special_two_digit_letters

  All special two digit Greek letter->English phonemes mapping.
- _capital_letters

  Greek uppercase to lowercase mapping.
- _english_support

  Allows the creation of configuration files for English words.
- _generic_sphinx_configuration

  The generic Sphinx configuration.
- _letters

  Standard Greek letter->English phonemes mapping.
- _literal_letters

Greek letters->English letters mapping.

- _phonemes

  Greek words->English standard phonemes mapping.

- _s_specific_rules

  Special Greek words ->English phonemes mapping.

- _special_two_digit_letters

  Special two digit Greek letter->English phonemes mapping.

- _two_digit_letters

  Two digit Greek letters->English phonemes mapping.

- _vocabulary

  The limited vocabulary creator.

7.9.1 Detailed Description

Allows the creation of configuration files for Greek Sphinx speech recognition.

Also supports multilanguage words (English/Greek) by utilizing english_support.EnglishSupport

Definition at line 38 of file greek_support.py.

7.9.2 Constructor & Destructor Documentation

7.9.2.1 def rapp_speech_detection_sphinx4.greek_support.GreekSupport.__init__ (*self*)

Performs initializations.

Definition at line 41 of file greek_support.py.

7.9.3 Member Function Documentation

7.9.3.1 def rapp_speech_detection_sphinx4.greek_support.GreekSupport._configureLetters (*self*) [private]

Creates the basic Greek letter to English configuration.

Definition at line 107 of file greek_support.py.

7.9.3.2 def rapp_speech_detection_sphinx4.greek_support.GreekSupport._englify_words (*self, words*) [private]

Englify Greek words.

Parameters

words	[list::string] The set of Greek words

Definition at line 346 of file greek_support.py.

7.9.3.3 def rapp_speech_detection_sphinx4.greek_support.GreekSupport._separateEngGrWords (*self, words, grammar, sentences*) [private]

Separates English from Greek words.

Parameters

words	[list::string] The set of words to be identified
grammar	[list::string] The Sphinx grammar parameter
sentences	[list::string] The Sphinx sentences parameter

Returns

english_words [list::string] The set of English words
english_grammar [list::string] The set of English grammar
english_sentences [list::string] The set of English sentences
greek_words [list::string] The set of Greek words
greek_grammar [list::string] The set of Greek words
greek_sentences [list::string] The set of Greek words

Definition at line 371 of file greek_support.py.

7.9.3.4 def rapp_speech_detection_sphinx4.greek_support.GreekSupport._transformWords (*self, words*) [private]

Transforms the Greek words into phonemes for the Sphinx configuration.

Parameters

words	[list::string] The set of Greek words

Returns

enhanced_words [dictionary] The Greek word->phonemes mapping
englified_words [dictionary] The Greek word->Englified Greek word mapping

Definition at line 297 of file greek_support.py.

7.9.3.5 def rapp_speech_detection_sphinx4.greek_support.GreekSupport.getGenericConfiguration (*self*)

Returns the Generic Greek Configuration.

Returns

_generic_sphinx_configuration [dictionary] The Generic Greek configuration

Definition at line 459 of file greek_support.py.

7.9.3.6 def rapp_speech_detection_sphinx4.greek_support.GreekSupport.getLimitedVocebularyConfiguration (*self, words, grammar, sentences*)

Computes the Limited Greek Configuration.

Parameters

words	[list::string] The set of words to be identified
grammar	[list::string] The Sphinx grammar parameter
sentences	[list::string] The Sphinx sentences parameter

Returns

limited_sphinx_configuration [dictionary] The Limited Greek configuration
englified_to_greek_dict [dictionary] A dictionary to transform the englified greek words to actual greek words

Definition at line 417 of file greek_support.py.

7.9.4 Member Data Documentation

7.9.4.1 rapp_speech_detection_sphinx4.greek_support.GreekSupport._all_special_two_digit_letters [private]

All special two digit Greek letter->English phonemes mapping.

Definition at line 96 of file greek_support.py.

7.9.4.2 rapp_speech_detection_sphinx4.greek_support.GreekSupport._capital_letters [private]

Greek uppercase to lowercase mapping.

Definition at line 88 of file greek_support.py.

7.9.4.3 rapp_speech_detection_sphinx4.greek_support.GreekSupport._english_support [private]

Allows the creation of configuration files for English words.

Instantiates english_support.EnglishSupport to identify english words

Definition at line 76 of file greek_support.py.

7.9.4.4 rapp_speech_detection_sphinx4.greek_support.GreekSupport._generic_sphinx_configuration [private]

The generic Sphinx configuration.

Grammar is dummy here..

Todo Fix this according to the generic Greek model

Definition at line 62 of file greek_support.py.

7.9.4.5 rapp_speech_detection_sphinx4.greek_support.GreekSupport._letters [private]

Standard Greek letter->English phonemes mapping.

Definition at line 100 of file greek_support.py.

7.9.4.6 rapp_speech_detection_sphinx4.greek_support.GreekSupport._literal_letters [private]

Greek letters->English letters mapping.

Definition at line 102 of file greek_support.py.

7.9.4.7 rapp_speech_detection_sphinx4.greek_support.GreekSupport._phonemes [private]

Greek words->English standard phonemes mapping.

Definition at line 90 of file greek_support.py.

7.9.4.8 rapp_speech_detection_sphinx4.greek_support.GreekSupport._s_specific_rules [private]

Special Greek words ->English phonemes mapping.

Definition at line 98 of file greek_support.py.

7.9.4.9 rapp_speech_detection_sphinx4.greek_support.GreekSupport._special_two_digit_letters [private]

Special two digit Greek letter->English phonemes mapping.

Definition at line 94 of file greek_support.py.

7.9.4.10 rapp_speech_detection_sphinx4.greek_support.GreekSupport._two_digit_letters [private]

Two digit Greek letters->English phonemes mapping.

Definition at line 92 of file greek_support.py.

7.9.4.11 rapp_speech_detection_sphinx4.greek_support.GreekSupport._vocabulary [private]

The limited vocabulary creator.

Instantiates limited_vocabulary_creator.LimitedVocabularyCreator

Definition at line 47 of file greek_support.py.

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

- /home/travis/rapp_temp/rapp-platform/rapp_speech_detection_sphinx4/src/rapp_speech_detection_sphinx4/greek_support.py

7.10 KnowrobWrapper Class Reference

Class KnowrobWrapperCommunications contains all the necessary knowrob wrapper functions.

`#include <knowrob_wrapper.h>`

Public Member Functions

- KnowrobWrapper (ros::NodeHandle nh)

  Default constructor.
- rapp_platform_ros_communications::assertRetractAttributeSrv::Response assertAttributeValue (rapp_platform_ros_communications::assertRetractAttributeSrv::Request req)

  Implements the assertRetractAttribute ROS service.
- rapp_platform_ros_communications::clearUserPerformanceCognitveTestsSrv::Response clear_user_cognitive_tests_performance_records (rapp_platform_ros_communications::clearUserPerformanceCognitveTestsSrv::Request req)

  Implements the clear_user_cognitive_tests_performance_records ROS service.
- rapp_platform_ros_communications::cognitiveTestsOfTypeSrv::Response cognitive_tests_of_type (rapp_platform_ros_communications::cognitiveTestsOfTypeSrv::Request req)

  Implements the cognitive_tests_of_type ROS service.
- rapp_platform_ros_communications::createCognitiveExerciseTestSrv::Response create_cognitve_tests (rapp_platform_ros_communications::createCognitiveExerciseTestSrv::Request req)

  Implements the create_cognitve_tests ROS service.
- rapp_platform_ros_communications::createOntologyAliasSrv::Response create_ontology_alias (rapp_platform_ros_communications::createOntologyAliasSrv::Request req)

  Implements the create_ontology_alias ROS service.
- std::string create_ontology_alias_for_new_user (std::string user_id)

  Creates a new ontology alias for a user.
- rapp_platform_ros_communications::createInstanceSrv::Response createInstanceQuery (rapp_platform_ros_communications::createInstanceSrv::Request req)

Implements the createInstance ROS service.

- rapp_platform_ros_communications::ontologyLoadDumpSrv::Response dumpOntologyQuery (rapp_platform_ros_communications::ontologyLoadDumpSrv::Request req)

  Implements the dumpOntology ROS service.

- std::string get_ontology_alias (std::string user_id)

  Returns the ontology alias of the user.

- rapp_platform_ros_communications::ontologyIsSubSuperClassOfSrv::Response isSubSuperclassOfQuery (rapp_platform_ros_communications::ontologyIsSubSuperClassOfSrv::Request req)

  Implements the isSubSuperclass ROS service.

- rapp_platform_ros_communications::ontologyLoadDumpSrv::Response loadOntologyQuery (rapp_platform_ros_communications::ontologyLoadDumpSrv::Request req)

  Implements the loadOntology ROS service.

- rapp_platform_ros_communications::recordUserPerformanceCognitiveTestsSrv::Response record_user_cognitive_tests_performance (rapp_platform_ros_communications::recordUserPerformanceCognitiveTestsSrv::Request req)

  Implements the record_user_cognitive_tests_performance ROS service.

- rapp_platform_ros_communications::ontologySubSuperClassesOfSrv::Response subclassesOfQuery (rapp_platform_ros_communications::ontologySubSuperClassesOfSrv::Request req)

  Implements the subclassesOf ROS service.

- rapp_platform_ros_communications::ontologySubSuperClassesOfSrv::Response superclassesOfQuery (rapp_platform_ros_communications::ontologySubSuperClassesOfSrv::Request req)

  Implements the superclassesOf ROS service.

- rapp_platform_ros_communications::returnUserInstancesOfClassSrv::Response user_instances_of_class (rapp_platform_ros_communications::returnUserInstancesOfClassSrv::Request req)

  Implements the returnUserInstancesOfClass ROS service.

- rapp_platform_ros_communications::userPerformanceCognitveTestsSrv::Response user_performance_cognitve_tests (rapp_platform_ros_communications::userPerformanceCognitveTestsSrv::Request req)

  Implements the user_performance_cognitve_tests ROS service.

Private Attributes

- ros::ServiceClient mysql_fetch_client
- ros::ServiceClient mysql_update_client
- ros::ServiceClient mysql_write_client
- ros::NodeHandle nh_
- json_prolog::Prolog pl

7.10.1 Detailed Description

Class KnowrobWrapperCommunications contains all the necessary knowrob wrapper functions.

Definition at line 46 of file knowrob_wrapper.h.

7.10.2 Constructor & Destructor Documentation

7.10.2.1 KnowrobWrapper::KnowrobWrapper (ros::NodeHandle *nh*)

Default constructor.

Definition at line 30 of file knowrob_wrapper.cpp.

7.10.3 Member Function Documentation

7.10.3.1 rapp_platform_ros_communications::assertRetractAttributeSrv::Response KnowrobWrapper::assertAttributeValue (rapp_platform_ros_communications::assertRetractAttributeSrv::Request *req*)

Implements the assertRetractAttribute ROS service.

Parameters

req	[rapp_platform_ros_communications::assertRetractAttributeSrv::Request&] The ROS service request

Returns

res [rapp_platform_ros_communications::assertRetractAttributeSrv::Response&] The ROS service response

7.10.3.2 rapp_platform_ros_communications::clearUserPerformanceCognitveTestsSrv::Response KnowrobWrapper::clear_user_cognitive_tests_performance_records (rapp_platform_ros_communications::clearUserPerformanceCognitveTestsSrv::Request *req*)

Implements the clear_user_cognitive_tests_performance_records ROS service.

Parameters

req	[rapp_platform_ros_communications::clearUserPerformanceCognitveTestsSrv::Request&] The ROS service request

Returns

res [rapp_platform_ros_communications::clearUserPerformanceCognitveTestsSrv::Response&] The ROS service response

Definition at line 458 of file knowrob_wrapper.cpp.

7.10.3.3 rapp_platform_ros_communications::cognitiveTestsOfTypeSrv::Response KnowrobWrapper::cognitive_tests_of_type (rapp_platform_ros_communications::cognitiveTestsOfTypeSrv::Request *req*)

Implements the cognitive_tests_of_type ROS service.

Parameters

req	[rapp_platform_ros_communications::cognitiveTestsOfTypeSrv::Request&] The ROS service request

Returns

res [rapp_platform_ros_communications::cognitiveTestsOfTypeSrv::Response&] The ROS service response

Definition at line 321 of file knowrob_wrapper.cpp.

7.10.3.4 rapp_platform_ros_communications::createCognitiveExerciseTestSrv::Response KnowrobWrapper::create_cognitve_tests (rapp_platform_ros_communications::createCognitiveExerciseTestSrv::Request *req*)

Implements the create_cognitve_tests ROS service.

Parameters

req	[rapp_platform_ros_communications::createCognitiveExerciseTestSrv::Request&] The ROS service request

Returns

res [rapp_platform_ros_communications::createCognitiveExerciseTestSrv::Response&] The ROS service response

Definition at line 248 of file knowrob_wrapper.cpp.

7.10.3.5 rapp_platform_ros_communications::createOntologyAliasSrv::Response KnowrobWrapper::create_ontology_alias (rapp_platform_ros_communications::createOntologyAliasSrv::Request *req*)

Implements the create_ontology_alias ROS service.

Parameters

req	[rapp_platform_ros_communications::createOntologyAliasSrv::Request&] The ROS service request

Returns

res [rapp_platform_ros_communications::createOntologyAliasSrv::Response&] The ROS service response

Definition at line 513 of file knowrob_wrapper.cpp.

7.10.3.6 std::string KnowrobWrapper::create_ontology_alias_for_new_user (std::string *user_id*)

Creates a new ontology alias for a user.

Parameters

user_id	[string] The username of the user

Returns

ontology_alias [string] The ontology_alias of the user or possible error

Definition at line 134 of file knowrob_wrapper.cpp.

7.10.3.7 rapp_platform_ros_communications::createInstanceSrv::Response KnowrobWrapper::createInstanceQuery (rapp_platform_ros_communications::createInstanceSrv::Request *req*)

Implements the createInstance ROS service.

Parameters

req	[rapp_platform_ros_communications::createInstanceSrv::Request&] The ROS service request

Returns

res [rapp_platform_ros_communications::createInstanceSrv::Response&] The ROS service response

Definition at line 757 of file knowrob_wrapper.cpp.

7.10.3.8 rapp_platform_ros_communications::ontologyLoadDumpSrv::Response KnowrobWrapper::dumpOntologyQuery (rapp_platform_ros_communications::ontologyLoadDumpSrv::Request *req*)

Implements the dumpOntology ROS service.

Parameters

req	[rapp_platform_ros_communications::ontologyLoadDumpSrv::Request&] The ROS service request

Returns

res [rapp_platform_ros_communications::ontologyLoadDumpSrv::Response&] The ROS service response

Definition at line 924 of file knowrob_wrapper.cpp.

7.10.3.9 std::string KnowrobWrapper::get_ontology_alias (std::string *user_id*)

Returns the ontology alias of the user.

Parameters

user_id	[string] The username of the user

Returns

ontology_alias [string] The ontology_alias of the user or possible error

Definition at line 95 of file knowrob_wrapper.cpp.

7.10.3.10 rapp_platform_ros_communications::ontologyIsSubSuperClassOfSrv::Response KnowrobWrapper::isSubSuperclassOfQuery (rapp_platform_ros_communications::ontologyIsSubSuperClassOfSrv::Request *req*)

Implements the isSubSuperclass ROS service.

Parameters

req	[rapp_platform_ros_communications::ontologyIsSubSuperClassOfSrv::Request&] The ROS service request

Returns

res [rapp_platform_ros_communications::ontologyIsSubSuperClassOfSrv::Response&] The ROS service response

Definition at line 687 of file knowrob_wrapper.cpp.

7.10.3.11 rapp_platform_ros_communications::ontologyLoadDumpSrv::Response KnowrobWrapper::loadOntologyQuery (rapp_platform_ros_communications::ontologyLoadDumpSrv::Request *req*)

Implements the loadOntology ROS service.

Parameters

req	[rapp_platform_ros_communications::ontologyLoadDumpSrv::Request&] The ROS service request

Returns

res [rapp_platform_ros_communications::ontologyLoadDumpSrv::Response&] The ROS service response

Definition at line 989 of file knowrob_wrapper.cpp.

7.10.3.12 rapp_platform_ros_communications::recordUserPerformanceCognitiveTestsSrv::Response KnowrobWrapper::record_user_cognitive_tests_performance (rapp_platform_ros_communications::recordUserPerformanceCognitiveTestsSrv::Request *req*)

Implements the record_user_cognitive_tests_performance ROS service.

Parameters

req	[rapp_platform_ros_communications::recordUserPerformanceCognitiveTestsSrv::Request&] The ROS service request

Returns

res [rapp_platform_ros_communications::recordUserPerformanceCognitiveTestsSrv::Response&] The ROS service response

Definition at line 195 of file knowrob_wrapper.cpp.

7.10.3.13 rapp_platform_ros_communications::ontologySubSuperClassesOfSrv::Response KnowrobWrapper::subclassesOfQuery (rapp_platform_ros_communications::ontologySubSuperClassesOfSrv::Request *req*)

Implements the subclassesOf ROS service.

Parameters

req	[rapp_platform_ros_communications::ontologySubSuperClassesOfSrv::Request&] The ROS service request

Returns

res [rapp_platform_ros_communications::ontologySubSuperClassesOfSrv::Response&] The ROS service response

Definition at line 546 of file knowrob_wrapper.cpp.

7.10.3.14 rapp_platform_ros_communications::ontologySubSuperClassesOfSrv::Response KnowrobWrapper::superclassesOfQuery (rapp_platform_ros_communications::ontologySubSuperClassesOfSrv::Request *req*)

Implements the superclassesOf ROS service.

Parameters

req	[rapp_platform_ros_communications::ontologySubSuperClassesOfSrv::Request&] The ROS service request

Returns

res [rapp_platform_ros_communications::ontologySubSuperClassesOfSrv::Response&] The ROS service response

Definition at line 617 of file knowrob_wrapper.cpp.

7.10.3.15 rapp_platform_ros_communications::returnUserInstancesOfClassSrv::Response KnowrobWrapper::user_instances_of_class (rapp_platform_ros_communications::returnUserInstancesOfClassSrv::Request *req*)

Implements the returnUserInstancesOfClass ROS service.

Parameters

req	[rapp_platform_ros_communications::returnUserInstancesOfClassSrv::Request&] The ROS service request

Returns

res [rapp_platform_ros_communications::returnUserInstancesOfClassSrv::Response&] The ROS service response

Definition at line 1037 of file knowrob_wrapper.cpp.

7.10.3.16 rapp_platform_ros_communications::userPerformanceCognitveTestsSrv::Response KnowrobWrapper::user_performance_cognitve_tests (rapp_platform_ros_communications::userPerformanceCognitveTestsSrv::Request *req*)

Implements the user_performance_cognitve_tests ROS service.

Parameters

req	[rapp_platform_ros_communications::userPerformanceCognitveTestsSrv::Request&] The ROS service request

Returns

res [rapp_platform_ros_communications::userPerformanceCognitveTestsSrv::Response&] The ROS service response

Definition at line 390 of file knowrob_wrapper.cpp.

7.10.4 Member Data Documentation

7.10.4.1 ros::ServiceClient KnowrobWrapper::mysql_fetch_client [private]

The mysql update tblUser client server

Definition at line 59 of file knowrob_wrapper.h.

7.10.4.2 ros::ServiceClient KnowrobWrapper::mysql_update_client [private]

Definition at line 62 of file knowrob_wrapper.h.

7.10.4.3 ros::ServiceClient KnowrobWrapper::mysql_write_client [private]

The mysql fetch from tblUser client server

Definition at line 56 of file knowrob_wrapper.h.

7.10.4.4 ros::NodeHandle KnowrobWrapper::nh_ [private]

< The ROS node handle The json prolog handle

Definition at line 50 of file knowrob_wrapper.h.

7.10.4.5 json_prolog::Prolog KnowrobWrapper::pl [private]

The mysql write to tblUser client server

Definition at line 53 of file knowrob_wrapper.h.

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

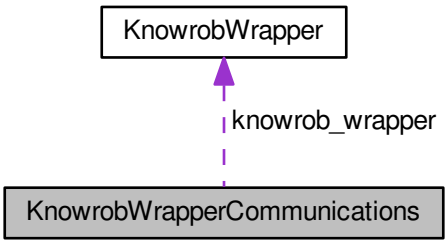
- /home/travis/rapp_temp/rapp-platform/rapp_knowrob_wrapper/include/knowrob_wrapper/knowrob_wrapper.h
- /home/travis/rapp_temp/rapp-platform/rapp_knowrob_wrapper/src/knowrob_wrapper.cpp

7.11 KnowrobWrapperCommunications Class Reference

Class KnowrobWrapperCommunications uptakes the task of handling the ROS service callbacks.

`#include <knowrob_wrapper_communications.h>`

Collaboration diagram for KnowrobWrapperCommunications:



Public Member Functions

- KnowrobWrapperCommunications ()

  Default constructor.
- bool clear_user_cognitive_tests_performance_records_callback (rapp_platform_ros_communications::clearUserPerformanceCognitveTestsSrv::Request &req, rapp_platform_ros_communications::clearUserPerformanceCognitveTestsSrv::Response &res)

  Serves the clear_user_cognitive_tests_performance_records ROS service callback.
- bool cognitive_tests_of_type_callback (rapp_platform_ros_communications::cognitiveTestsOfTypeSrv::Request &req, rapp_platform_ros_communications::cognitiveTestsOfTypeSrv::Response &res)

  Serves the cognitive_tests_of_type ROS service callback.
- bool create_cognitve_tests_callback (rapp_platform_ros_communications::createCognitiveExerciseTestSrv::Request &req, rapp_platform_ros_communications::createCognitiveExerciseTestSrv::Response &res)

  Serves the create_cognitve_tests ROS service callback.
- bool create_ontology_alias_callback (rapp_platform_ros_communications::createOntologyAliasSrv::Request &req, rapp_platform_ros_communications::createOntologyAliasSrv::Response &res)

  Serves the create_ontology_alias ROS service callback.
- bool createInstanceCallback (rapp_platform_ros_communications::createInstanceSrv::Request &req, rapp_platform_ros_communications::createInstanceSrv::Response &res)

  Serves the createInstance ROS service callback.

- bool dumpOntologyCallback (rapp_platform_ros_communications::ontologyLoadDumpSrv::Request &req, rapp_platform_ros_communications::ontologyLoadDumpSrv::Response &res)

  Serves the dumpOntology ROS service callback.
- bool isSubSuperclassOfCallback (rapp_platform_ros_communications::ontologyIsSubSuperClassOfSrv::-Request &req, rapp_platform_ros_communications::ontologyIsSubSuperClassOfSrv::Response &res)

  Serves the isSubSuperclassOf ROS service callback.
- bool loadOntologyCallback (rapp_platform_ros_communications::ontologyLoadDumpSrv::Request &req, rapp_platform_ros_communications::ontologyLoadDumpSrv::Response &res)

  Serves the loadOntology ROS service callback.
- bool record_user_cognitive_tests_performance_callback (rapp_platform_ros_communications::record-UserPerformanceCognitiveTestsSrv::Request &req, rapp_platform_ros_communications::recordUser-PerformanceCognitiveTestsSrv::Response &res)

  Serves the record_user_cognitive_tests_performance ROS service callback.
- bool subclassesOfCallback (rapp_platform_ros_communications::ontologySubSuperClassesOfSrv::Request &req, rapp_platform_ros_communications::ontologySubSuperClassesOfSrv::Response &res)

  Serves the subclassesOf ROS service callback.
- bool superclassesOfCallback (rapp_platform_ros_communications::ontologySubSuperClassesOfSrv::-Request &req, rapp_platform_ros_communications::ontologySubSuperClassesOfSrv::Response &res)

  Serves the superlassesOf ROS service callback.
- bool user_instances_of_class_callback (rapp_platform_ros_communications::returnUserInstancesOfClass-Srv::Request &req, rapp_platform_ros_communications::returnUserInstancesOfClassSrv::Response &res)

  Serves the user_instances_of_class ROS service callback.
- bool user_performance_cognitve_tests_callback (rapp_platform_ros_communications::userPerformance-CognitveTestsSrv::Request &req, rapp_platform_ros_communications::userPerformanceCognitveTestsSrv::-Response &res)

  Serves the user_performance_cognitve_tests ROS service callback.

Private Attributes

- ros::ServiceServer clear_user_cognitive_tests_performance_records_service_
- std::string clear_user_cognitive_tests_performance_records_topic_
- ros::ServiceServer cognitive_tests_of_type_service_
- std::string cognitive_tests_of_type_topic_
- ros::ServiceServer create_cognitve_tests_service_
- std::string create_cognitve_tests_topic_
- ros::ServiceServer create_ontology_alias_service_
- std::string create_ontology_alias_topic_
- ros::ServiceServer createInstanceService_
- std::string createInstanceServiceTopic_
- ros::ServiceServer dumpOntologyService_
- std::string dumpOntologyServiceTopic_
- ros::ServiceServer is_subsuperclass_of_service_
- std::string is_subsuperclass_of_service_topic_
- KnowrobWrapper knowrob_wrapper
- ros::ServiceServer loadOntologyService_
- std::string loadOntologyServiceTopic_
- ros::NodeHandle nh_
- ros::ServiceServer record_user_cognitive_tests_performance_service_
- std::string record_user_cognitive_tests_performance_topic_
- ros::ServiceServer subclasses_of_service_
- std::string subclasses_of_service_topic_
- ros::ServiceServer superclasses_of_service_
- std::string superclasses_of_service_topic_

- ros::ServiceServer user_instances_of_class_service_
- std::string user_instances_of_class_topic_
- ros::ServiceServer user_performance_cognitve_tests_service_
- std::string user_performance_cognitve_tests_topic_

7.11.1 Detailed Description

Class KnowrobWrapperCommunications uptakes the task of handling the ROS service callbacks.

Definition at line 28 of file knowrob_wrapper_communications.h.

7.11.2 Constructor & Destructor Documentation

7.11.2.1 KnowrobWrapperCommunications::KnowrobWrapperCommunications ( )

Default constructor.

Default constructor Waits for services it depends on and declares the knowrob wrapper services callbacks.

Definition at line 28 of file knowrob_wrapper_communications.cpp.

7.11.3 Member Function Documentation

7.11.3.1 bool KnowrobWrapperCommunications::clear_user_cognitive_tests_performance_records_callback (rapp_platform_ros_communications::clearUserPerformanceCognitveTestsSrv::Request & *req*, rapp_platform_ros_communications::clearUserPerformanceCognitveTestsSrv::Response & *res*)

Serves the clear_user_cognitive_tests_performance_records ROS service callback.

Parameters

req	[rapp_platform_ros_communications::clearUserPerformanceCognitveTestsSrv::Request&] The ROS service request
res	[rapp_platform_ros_communications::clearUserPerformanceCognitveTestsSrv::Response&] The ROS service response

Returns

bool - The success status of the call

Definition at line 332 of file knowrob_wrapper_communications.cpp.

7.11.3.2 bool KnowrobWrapperCommunications::cognitive_tests_of_type_callback (rapp_platform_ros_communications::cognitiveTestsOfTypeSrv::Request & *req*, rapp_platform_ros_communications::cognitiveTestsOfTypeSrv::Response & *res*)

Serves the cognitive_tests_of_type ROS service callback.

Parameters

req	[rapp_platform_ros_communications::cognitiveTestsOfTypeSrv::Request&] The ROS service request

res	[rapp_platform_ros_communications::cognitiveTestsOfTypeSrv::Response&] The ROS service response

Returns

bool - The success status of the call

Definition at line 304 of file knowrob_wrapper_communications.cpp.

7.11.3.3 bool KnowrobWrapperCommunications::create_cognitve_tests_callback (rapp_platform_ros_communications::createCognitiveExerciseTestSrv::Request & *req*, rapp_platform_ros_communications::createCognitiveExerciseTestSrv::Response & *res*)

Serves the create_cognitve_tests ROS service callback.

Parameters

req	[rapp_platform_ros_communications::createCognitiveExerciseTestSrv::Request&] The ROS service request
res	[rapp_platform_ros_communications::createCognitiveExerciseTestSrv::Response&] The ROS service response

Returns

bool - The success status of the call

Definition at line 290 of file knowrob_wrapper_communications.cpp.

7.11.3.4 bool KnowrobWrapperCommunications::create_ontology_alias_callback (rapp_platform_ros_communications::createOntologyAliasSrv::Request & *req*, rapp_platform_ros_communications::createOntologyAliasSrv::Response & *res*)

Serves the create_ontology_alias ROS service callback.

Parameters

req	[rapp_platform_ros_communications::createOntologyAliasSrv::Request&] The ROS service request
res	[rapp_platform_ros_communications::createOntologyAliasSrv::Response&] The ROS service response

Returns

bool - The success status of the call

Definition at line 248 of file knowrob_wrapper_communications.cpp.

7.11.3.5 bool KnowrobWrapperCommunications::createInstanceCallback (rapp_platform_ros_communications::createInstanceSrv::Request & *req*, rapp_platform_ros_communications::createInstanceSrv::Response & *res*)

Serves the createInstance ROS service callback.

Parameters

req	[rapp_platform_ros_communications::createInstanceSrv::Request&] The ROS service request
res	[rapp_platform_ros_communications::createInstanceSrv::Response&] The ROS service response

Returns

bool - The success status of the call

Definition at line 206 of file knowrob_wrapper_communications.cpp.

7.11.3.6 bool KnowrobWrapperCommunications::dumpOntologyCallback (rapp_platform_ros_communications::ontologyLoadDumpSrv::Request & *req*, rapp_platform_ros_communications::ontologyLoadDumpSrv::Response & *res*)

Serves the dumpOntology ROS service callback.

Parameters

req	[rapp_platform_ros_communications::ontologyLoadDumpSrv::Request&] The ROS service request
res	[rapp_platform_ros_communications::ontologyLoadDumpSrv::Response&] The ROS service response

Returns

bool - The success status of the call

Definition at line 220 of file knowrob_wrapper_communications.cpp.

7.11.3.7 bool KnowrobWrapperCommunications::isSubSuperclassOfCallback (rapp_platform_ros_communications::ontologyIsSubSuperClassOfSrv::Request & *req*, rapp_platform_ros_communications::ontologyIsSubSuperClassOfSrv::Response & *res*)

Serves the isSubSuperclassOf ROS service callback.

Parameters

req	[rapp_platform_ros_communications::ontologyIsSubSuperClassOfSrv::Request&] The ROS service request
res	[rapp_platform_ros_communications::ontologyIsSubSuperClassOfSrv::Response&] The ROS service response

Returns

bool - The success status of the call

Definition at line 192 of file knowrob_wrapper_communications.cpp.

7.11.3.8 bool KnowrobWrapperCommunications::loadOntologyCallback (rapp_platform_ros_communications::ontologyLoadDumpSrv::Request & *req*, rapp_platform_ros_communications::ontologyLoadDumpSrv::Response & *res*)

Serves the loadOntology ROS service callback.

Parameters

req	[rapp_platform_ros_communications::ontologyLoadDumpSrv::Request&] The ROS service request
res	[rapp_platform_ros_communications::ontologyLoadDumpSrv::Response&] The ROS service response

Returns

bool - The success status of the call

Definition at line 234 of file knowrob_wrapper_communications.cpp.

7.11.3.9 bool KnowrobWrapperCommunications::record_user_cognitive_tests_performance_callback (rapp_platform_ros_communications::recordUserPerformanceCognitiveTestsSrv::Request & *req*, rapp_platform_ros_communications::recordUserPerformanceCognitiveTestsSrv::Response & *res*)

Serves the record_user_cognitive_tests_performance ROS service callback.

Parameters

req	[rapp_platform_ros_communications::recordUserPerformanceCognitiveTestsSrv::Request&] The ROS service request
res	[rapp_platform_ros_communications::recordUserPerformanceCognitiveTestsSrv::-Response&] The ROS service response

Returns

bool - The success status of the call

Definition at line 318 of file knowrob_wrapper_communications.cpp.

7.11.3.10 bool KnowrobWrapperCommunications::subclassesOfCallback (rapp_platform_ros_communications::ontologySubSuperClassesOfSrv::Request & *req*, rapp_platform_ros_communications::ontologySubSuperClassesOfSrv::Response & *res*)

Serves the subclassesOf ROS service callback.

Parameters

req	[rapp_platform_ros_communications::ontologySubSuperClassesOfSrv::Request&] The ROS service request
res	[rapp_platform_ros_communications::ontologySubSuperClassesOfSrv::Response&] The R-OS service response

Returns

bool - The success status of the call

Definition at line 164 of file knowrob_wrapper_communications.cpp.

7.11.3.11 bool KnowrobWrapperCommunications::superclassesOfCallback (rapp_platform_ros_communications::ontologySubSuperClassesOfSrv::Request & *req*, rapp_platform_ros_communications::ontologySubSuperClassesOfSrv::-Response & *res*)

Serves the superlassesOf ROS service callback.

Parameters

req	[rapp_platform_ros_communications::ontologySubSuperClassesOfSrv::Request&] The ROS service request
res	[rapp_platform_ros_communications::ontologySubSuperClassesOfSrv::Response&] The ROS service response

Returns

bool - The success status of the call

Definition at line 178 of file knowrob_wrapper_communications.cpp.

7.11.3.12 bool KnowrobWrapperCommunications::user_instances_of_class_callback (rapp_platform_ros_communications::returnUserInstancesOfClassSrv::Request & *req*, rapp_platform_ros_communications::returnUserInstancesOfClassSrv::Response & *res*)

Serves the user_instances_of_class ROS service callback.

Parameters

req	[rapp_platform_ros_communications::returnUserInstancesOfClassSrv::Request&] The ROS service request
res	[rapp_platform_ros_communications::returnUserInstancesOfClassSrv::Response&] The ROS service response

Returns

bool - The success status of the call

Definition at line 262 of file knowrob_wrapper_communications.cpp.

7.11.3.13 bool KnowrobWrapperCommunications::user_performance_cognitve_tests_callback (rapp_platform_ros_communications::userPerformanceCognitveTestsSrv::Request & *req*, rapp_platform_ros_communications::userPerformanceCognitveTestsSrv::Response & *res*)

Serves the user_performance_cognitve_tests ROS service callback.

Parameters

req	[rapp_platform_ros_communications::userPerformanceCognitveTestsSrv::Request&] The ROS service request
res	[rapp_platform_ros_communications::userPerformanceCognitveTestsSrv::Response&] The ROS service response

Returns

bool - The success status of the call

Definition at line 276 of file knowrob_wrapper_communications.cpp.

7.11.4 Member Data Documentation

7.11.4.1 ros::ServiceServer KnowrobWrapperCommunications::clear_user_cognitive_tests_performance_records_service_ [private]

Member variable holding the clear_user_cognitive_tests_performance_records ROS service topic

Definition at line 99 of file knowrob_wrapper_communications.h.

7.11.4.2 std::string KnowrobWrapperCommunications::clear_user_cognitive_tests_performance_records_topic_ [private]

Definition at line 101 of file knowrob_wrapper_communications.h.

7.11.4.3 ros::ServiceServer KnowrobWrapperCommunications::cognitive_tests_of_type_service_ [private]

Member variable holding the cognitive_tests_of_type ROS service topic

Definition at line 89 of file knowrob_wrapper_communications.h.

7.11.4.4 std::string KnowrobWrapperCommunications::cognitive_tests_of_type_topic_ [private]

The record_user_cognitive_tests_performance service server

Definition at line 91 of file knowrob_wrapper_communications.h.

7.11.4.5 ros::ServiceServer KnowrobWrapperCommunications::create_cognitve_tests_service_ [private]

Member variable holding the create_cognitve_tests ROS service topic

Definition at line 84 of file knowrob_wrapper_communications.h.

7.11.4.6 std::string KnowrobWrapperCommunications::create_cognitve_tests_topic_ [private]

The cognitive_tests_of_type service server

Definition at line 86 of file knowrob_wrapper_communications.h.

7.11.4.7 ros::ServiceServer KnowrobWrapperCommunications::create_ontology_alias_service_ [private]

Member variable holding the create_ontology_alias ROS service topic

Definition at line 74 of file knowrob_wrapper_communications.h.

7.11.4.8 std::string KnowrobWrapperCommunications::create_ontology_alias_topic_ [private]

The user_performance_cognitve_tests service server

Definition at line 76 of file knowrob_wrapper_communications.h.

7.11.4.9 ros::ServiceServer KnowrobWrapperCommunications::createInstanceService_ [private]

Member variable holding the createInstanceServiceTopic ROS service topic

Definition at line 54 of file knowrob_wrapper_communications.h.

7.11.4.10 std::string KnowrobWrapperCommunications::createInstanceServiceTopic_ [private]

The dumpOntologyService service server

Definition at line 56 of file knowrob_wrapper_communications.h.

7.11.4.11 ros::ServiceServer KnowrobWrapperCommunications::dumpOntologyService_ [private]

Member variable holding the dumpOntologyServiceTopic ROS service topic

Definition at line 59 of file knowrob_wrapper_communications.h.

7.11.4.12 std::string KnowrobWrapperCommunications::dumpOntologyServiceTopic_ [private]

The loadOntologyService service server

Definition at line 61 of file knowrob_wrapper_communications.h.

7.11.4.13 ros::ServiceServer KnowrobWrapperCommunications::is_subsuperclass_of_service_ [private]

Member variable holding the is_subsuperclass ROS service topic

Definition at line 49 of file knowrob_wrapper_communications.h.

7.11.4.14 std::string KnowrobWrapperCommunications::is_subsuperclass_of_service_topic_ [private]

The createInstanceService service server

Definition at line 51 of file knowrob_wrapper_communications.h.

7.11.4.15 KnowrobWrapper KnowrobWrapperCommunications::knowrob_wrapper [private]

The subclasses_of service server

Definition at line 35 of file knowrob_wrapper_communications.h.

7.11.4.16 ros::ServiceServer KnowrobWrapperCommunications::loadOntologyService_ [private]

Member variable holding the loadOntologyServiceTopic ROS service topic

Definition at line 64 of file knowrob_wrapper_communications.h.

7.11.4.17 std::string KnowrobWrapperCommunications::loadOntologyServiceTopic_ [private]

The user_instances_of_class service server

Definition at line 66 of file knowrob_wrapper_communications.h.

7.11.4.18 ros::NodeHandle KnowrobWrapperCommunications::nh_ [private]

< The ROS node handle Object of type knowrob_wrapper

Definition at line 32 of file knowrob_wrapper_communications.h.

7.11.4.19 ros::ServiceServer KnowrobWrapperCommunications::record_user_cognitive_tests_performance_service_ [private]

Member variable holding the record_user_cognitive_tests_performance ROS service topic

Definition at line 94 of file knowrob_wrapper_communications.h.

7.11.4.20 std::string KnowrobWrapperCommunications::record_user_cognitive_tests_performance_topic_ [private]

The clear_user_cognitive_tests_performance_records service server

Definition at line 96 of file knowrob_wrapper_communications.h.

7.11.4.21 ros::ServiceServer KnowrobWrapperCommunications::subclasses_of_service_ [private]

Member variable holding the subclasses_of ROS service topic

Definition at line 38 of file knowrob_wrapper_communications.h.

7.11.4.22 std::string KnowrobWrapperCommunications::subclasses_of_service_topic_ [private]

The superclasses_of service server

Definition at line 41 of file knowrob_wrapper_communications.h.

7.11.4.23 ros::ServiceServer KnowrobWrapperCommunications::superclasses_of_service_ [private]

Member variable holding the superclasses_of ROS service topic

Definition at line 44 of file knowrob_wrapper_communications.h.

7.11.4.24 std::string KnowrobWrapperCommunications::superclasses_of_service_topic_ [private]

The is_subsuperclass service server

Definition at line 46 of file knowrob_wrapper_communications.h.

7.11.4.25 ros::ServiceServer KnowrobWrapperCommunications::user_instances_of_class_service_ [private]

Member variable holding the user_instances_of_class ROS service topic

Definition at line 69 of file knowrob_wrapper_communications.h.

7.11.4.26 std::string KnowrobWrapperCommunications::user_instances_of_class_topic_ [private]

The create_ontology_alias service server

Definition at line 71 of file knowrob_wrapper_communications.h.

7.11.4.27 ros::ServiceServer KnowrobWrapperCommunications::user_performance_cognitve_tests_service_ [private]

Member variable holding the user_performance_cognitve_tests ROS service topic

Definition at line 79 of file knowrob_wrapper_communications.h.

7.11.4.28 std::string KnowrobWrapperCommunications::user_performance_cognitve_tests_topic_ [private]

The create_cognitve_tests service server

Definition at line 81 of file knowrob_wrapper_communications.h.

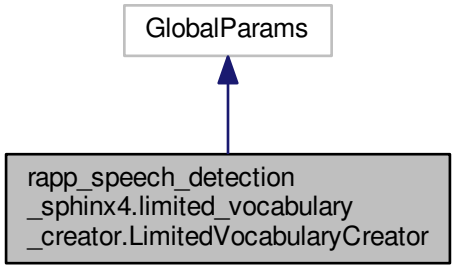
The documentation for this class was generated from the following files:

- /home/travis/rapp_temp/rapp-platform/rapp_knowrob_wrapper/include/knowrob_wrapper/knowrob_wrapper_communications.h
- /home/travis/rapp_temp/rapp-platform/rapp_knowrob_wrapper/src/knowrob_wrapper_communications.cpp

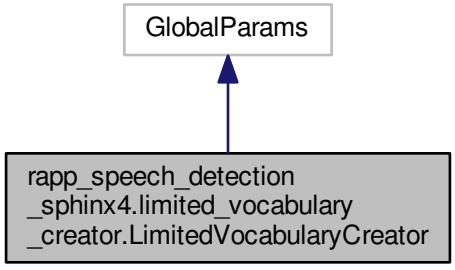
7.12 rapp_speech_detection_sphinx4.limited_vocabulary_creator.LimitedVocabularyCreator Class Reference

Creates temporary configuration files for the input limited vocabulary.

Inheritance diagram for rapp_speech_detection_sphinx4.limited_vocabulary_creator.LimitedVocabularyCreator:



Collaboration diagram for rapp_speech_detection_sphinx4.limited_vocabulary_creator.LimitedVocabularyCreator:



Public Member Functions

- def __init__

  Performs initializations.

- def createConfigurationFiles

  Creates temporary configuration files for the input limited vocabulary.

Public Attributes

- languages_package
- sphinx_configuration

Private Attributes

- _allow_sphinx_output

7.12.1 Detailed Description

Creates temporary configuration files for the input limited vocabulary.

Definition at line 35 of file limited_vocabulary_creator.py.

7.12.2 Constructor & Destructor Documentation

7.12.2.1 def rapp_speech_detection_sphinx4.limited_vocabulary_creator.LimitedVocabularyCreator.__init__ (*self*)

Performs initializations.

Definition at line 38 of file limited_vocabulary_creator.py.

7.12.3 Member Function Documentation

7.12.3.1 def rapp_speech_detection_sphinx4.limited_vocabulary_creator.LimitedVocabularyCreator.createConfigurationFiles (*self, words, grammar, sentences*)

Creates temporary configuration files for the input limited vocabulary.

The 'words' input argument is of the form: words = { 'word1_en_chars': [phonem1, phonem2,...], 'word2_en_chars': [phonem1, phonem2,...] ... }

Parameters

words	[list::string] The set of words to be identified
grammar	[list::string] The Sphinx grammar parameter
sentences	[list::string] The Sphinx sentences parameter

Returns

conf [dictionary] The final configuration
status [string] Either the error (string) or True (bool)

Definition at line 80 of file limited_vocabulary_creator.py.

7.12.4 Member Data Documentation

7.12.4.1 rapp_speech_detection_sphinx4.limited_vocabulary_creator.LimitedVocabularyCreator._allow_sphinx_output [private]

Definition at line 152 of file limited_vocabulary_creator.py.

7.12.4.2 rapp_speech_detection_sphinx4.limited_vocabulary_creator.LimitedVocabularyCreator.languages_package

Definition at line 46 of file limited_vocabulary_creator.py.

7.12.4.3 rapp_speech_detection_sphinx4.limited_vocabulary_creator.LimitedVocabularyCreator.sphinx_configuration

Definition at line 51 of file limited_vocabulary_creator.py.

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

- /home/travis/rapp_temp/rapp-platform/rapp_speech_detection_sphinx4/src/rapp_speech_detection_sphinx4/limited_vocabulary_creator.py

7.13 mysql_wrapper.MySQLdbWrapper Class Reference

The mysql wrapper ros node.

Public Member Functions

- def __init__

  Default contructor.
- def checkConnection

  Checks connectivity to the DB.
- def constructAndQuery

  Construcs the where= ..and where=...
- def constructCommaColumns

  Places commas between columns and constructs a string.
- def deleteData

  Implements the general delete data from table function.
- def fetchData

  Implements the general fetch data from table function.
- def getLogin

  Loads login details from file.
- def getTableColumnNames

  Gets the columns of the table.
- def tblAppsRobotsDeleteDataHandler

  The tbl appsRobots delete data service callback.
- def tblAppsRobotsFetchDataHandler

  The tbl appsRobots fetch data service callback.
- def tblAppsRobotsUpdateDataHandler

  The tbl appsRobots update data service callback.
- def tblAppsRobotsWriteDataHandler

  The tbl appsRobots write data service callback.
- def tblModelDeleteDataHandler

  The tbl model delete data service callback.
- def tblModelFetchDataHandler

  The tbl model fetch data service callback.
- def tblModelUpdateDataHandler

  The tbl model update data service callback.
- def tblModelWriteDataHandler

  The tbl model write data service callback.
- def tblRappDeleteDataHandler

  The tbl rapp delete data service callback.
- def tblRappFetchDataHandler

  The tbl rapp fetch data service callback.

- def tblRappUpdateDataHandler

  The tbl rapp update data service callback.
- def tblRappWriteDataHandler

  The tbl rapp write data service callback.
- def tblRobotDeleteDataHandler

  The tbl robot delete data service callback.
- def tblRobotFetchDataHandler

  The tbl robot fetch data service callback.
- def tblRobotUpdateDataHandler

  The tbl robot update data service callback.
- def tblRobotWriteDataHandler

  The tbl robot write data service callback.
- def tblUserDeleteDataHandler

  The tbl user delete data service callback.
- def tblUserFetchDataHandler

  The tbl user fetch data service callback.
- def tblUsersOntologyInstancesDeleteDataHandler

  The tbl usersOntologyInstances delete data service callback.
- def tblUsersOntologyInstancesFetchDataHandler

  The tbl usersOntologyInstances fetch data service callback.
- def tblUsersOntologyInstancesUpdateDataHandler

  The tbl usersOntologyInstances update data service callback.
- def tblUsersOntologyInstancesWriteDataHandler

  The tbl usersOntologyInstances write data service callback.
- def tblUserUpdateDataHandler

  The tbl user update data service callback.
- def tblUserWriteDataHandler

  The tbl user write data service callback.
- def updateData

  Implements the general update data from table function.
- def viewUsersRobotsAppsFetchDataHandler

  The view usersRobotsApps fetch data service callback.
- def whatRappsCanRun

  Implements the whatRappsCanRun service.
- def whatRappsCanRunDataHandler

  The what rappRappCanRun service callback.
- def writeData

  Implements the general write data to table function.

Public Attributes

- serv
- serv_topic

7.13.1 Detailed Description

The mysql wrapper ros node.

Definition at line 47 of file mysql_wrapper.py.

7.13.2 Constructor & Destructor Documentation

7.13.2.1 def mysql_wrapper.MySQLdbWrapper.__init__ (*self*)

Default contructor.

Declares the callbacks of the node's services

Definition at line 52 of file mysql_wrapper.py.

7.13.3 Member Function Documentation

7.13.3.1 def mysql_wrapper.MySQLdbWrapper.checkConnection (*self*)

Checks connectivity to the DB.

Returns

[void] Connection performed successfully

Definition at line 412 of file mysql_wrapper.py.

7.13.3.2 def mysql_wrapper.MySQLdbWrapper.constructAndQuery (*self, cols*)

Construcs the where= ..and where=...

clause

Parameters

cols	[list] the columns needed to construct the clause

Returns

returnquery [string] the And clause

Definition at line 371 of file mysql_wrapper.py.

7.13.3.3 def mysql_wrapper.MySQLdbWrapper.constructCommaColumns (*self, cols*)

Places commas between columns and constructs a string.

Parameters

cols	[list] the input columns

Returns

returncols [string] the output string

Definition at line 353 of file mysql_wrapper.py.

7.13.3.4 def mysql_wrapper.MySQLdbWrapper.deleteData (*self, req, tblName*)

Implements the general delete data from table function.

Parameters

req	[rapp_platform_ros_communications::deleteDataSrvRequest::Request&] The ROS service request
tblName	[string] the table name
res	[rapp_platform_ros_communications::deleteDataSrvResponse::Response&] The ROS service response

Definition at line 211 of file mysql_wrapper.py.

7.13.3.5 def mysql_wrapper.MySQLdbWrapper.fetchData (*self, req, tblName*)

Implements the general fetch data from table function.

Parameters

req	[rapp_platform_ros_communications::fetchDataSrvRequest::Request&] The ROS service request
tblName	[string] the table name
res	[rapp_platform_ros_communications::fetchDataSrvResponse::Response&] The ROS service response

Definition at line 275 of file mysql_wrapper.py.

7.13.3.6 def mysql_wrapper.MySQLdbWrapper.getLogin (*self*)

Loads login details from file.

Returns

[void] Login details loaded successfully

Definition at line 402 of file mysql_wrapper.py.

7.13.3.7 def mysql_wrapper.MySQLdbWrapper.getTableColumnNames (*self, tblName*)

Gets the columns of the table.

Returns

Columns [list] the columns of the table

Definition at line 386 of file mysql_wrapper.py.

7.13.3.8 def mysql_wrapper.MySQLdbWrapper.tblAppsRobotsDeleteDataHandler (*self, req*)

The tbl appsRobots delete data service callback.

Parameters

req	[rapp_platform_ros_communications::deleteDataSrvRequest::Request&] The ROS service request
res	[rapp_platform_ros_communications::deleteDataSrvResponse::Response&] The ROS service response

Definition at line 571 of file mysql_wrapper.py.

7.13.3.9 def mysql_wrapper.MySQLdbWrapper.tblAppsRobotsFetchDataHandler (*self, req*)

The tbl appsRobots fetch data service callback.

Parameters

req	[rapp_platform_ros_communications::fetchDataSrvRequest::Request&] The ROS service request
res	[rapp_platform_ros_communications::fetchDataSrvResponse::Response&] The ROS service response

Definition at line 555 of file mysql_wrapper.py.

7.13.3.10 def mysql_wrapper.MySQLdbWrapper.tblAppsRobotsUpdateDataHandler (*self, req*)

The tbl appsRobots update data service callback.

Parameters

req	[rapp_platform_ros_communications::updateDataSrvRequest::Request&] The ROS service request
res	[rapp_platform_ros_communications::updateDataSrvResponse::Response&] The ROS service response

Definition at line 579 of file mysql_wrapper.py.

7.13.3.11 def mysql_wrapper.MySQLdbWrapper.tblAppsRobotsWriteDataHandler (*self, req*)

The tbl appsRobots write data service callback.

Parameters

req	[rapp_platform_ros_communications::writeDataSrvRequest::Request&] The ROS service request
res	[rapp_platform_ros_communications::writeDataResponse::Response&] The ROS service response

Definition at line 563 of file mysql_wrapper.py.

7.13.3.12 def mysql_wrapper.MySQLdbWrapper.tblModelDeleteDataHandler (*self, req*)

The tbl model delete data service callback.

Parameters

req	[rapp_platform_ros_communications::deleteDataSrvRequest::Request&] The ROS service request
res	[rapp_platform_ros_communications::deleteDataSrvResponse::Response&] The ROS service response

Definition at line 475 of file mysql_wrapper.py.

7.13.3.13 def mysql_wrapper.MySQLdbWrapper.tblModelFetchDataHandler (*self, req*)

The tbl model fetch data service callback.

Parameters

req	[rapp_platform_ros_communications::fetchDataSrvRequest::Request&] The ROS service request

res	[rapp_platform_ros_communications::fetchDataSrvResponse::Response&] The ROS service response

Definition at line 459 of file mysql_wrapper.py.

7.13.3.14 def mysql_wrapper.MySQLdbWrapper.tblModelUpdateDataHandler (*self, req*)

The tbl model update data service callback.

Parameters

req	[rapp_platform_ros_communications::updateDataSrvRequest::Request&] The ROS service request
res	[rapp_platform_ros_communications::updateDataSrvResponse::Response&] The ROS service response

Definition at line 483 of file mysql_wrapper.py.

7.13.3.15 def mysql_wrapper.MySQLdbWrapper.tblModelWriteDataHandler (*self, req*)

The tbl model write data service callback.

Parameters

req	[rapp_platform_ros_communications::writeDataSrvRequest::Request&] The ROS service request
res	[rapp_platform_ros_communications::writeDataSrvResponse::Response&] The ROS service response

Definition at line 467 of file mysql_wrapper.py.

7.13.3.16 def mysql_wrapper.MySQLdbWrapper.tblRappDeleteDataHandler (*self, req*)

The tbl rapp delete data service callback.

Parameters

req	[rapp_platform_ros_communications::deleteDataSrvRequest::Request&] The ROS service request
res	[rapp_platform_ros_communications::deleteDataSrvResponse::Response&] The ROS service response

Definition at line 507 of file mysql_wrapper.py.

7.13.3.17 def mysql_wrapper.MySQLdbWrapper.tblRappFetchDataHandler (*self, req*)

The tbl rapp fetch data service callback.

Parameters

req	[rapp_platform_ros_communications::fetchDataSrvRequest::Request&] The ROS service request
res	[rapp_platform_ros_communications::fetchDataSrvResponse::Response&] The ROS service response

Definition at line 491 of file mysql_wrapper.py.

7.13.3.18 def mysql_wrapper.MySQLdbWrapper.tblRappUpdateDataHandler (*self, req*)

The tbl rapp update data service callback.

Parameters

req	[rapp_platform_ros_communications::updateDataSrvRequest::Request&] The ROS service request
res	[rapp_platform_ros_communications::updateDataSrvResponse::Response&] The ROS service response

Definition at line 515 of file mysql_wrapper.py.

7.13.3.19 def mysql_wrapper.MySQLdbWrapper.tblRappWriteDataHandler (*self, req*)

The tbl rapp write data service callback.

Parameters

req	[rapp_platform_ros_communications::writeDataSrvRequest::Request&] The ROS service request
res	[rapp_platform_ros_communications::writeDataResponse::Response&] The ROS service response

Definition at line 499 of file mysql_wrapper.py.

7.13.3.20 def mysql_wrapper.MySQLdbWrapper.tblRobotDeleteDataHandler (*self, req*)

The tbl robot delete data service callback.

Parameters

req	[rapp_platform_ros_communications::deleteDataSrvRequest::Request&] The ROS service request
res	[rapp_platform_ros_communications::deleteDataSrvResponse::Response&] The ROS service response

Definition at line 539 of file mysql_wrapper.py.

7.13.3.21 def mysql_wrapper.MySQLdbWrapper.tblRobotFetchDataHandler (*self, req*)

The tbl robot fetch data service callback.

Parameters

req	[rapp_platform_ros_communications::fetchDataSrvRequest::Request&] The ROS service request
res	[rapp_platform_ros_communications::fetchDataSrvResponse::Response&] The ROS service response

Definition at line 523 of file mysql_wrapper.py.

7.13.3.22 def mysql_wrapper.MySQLdbWrapper.tblRobotUpdateDataHandler (*self, req*)

The tbl robot update data service callback.

Parameters

req	[rapp_platform_ros_communications::updateDataSrvRequest::Request&] The ROS service request
res	[rapp_platform_ros_communications::updateDataSrvResponse::Response&] The ROS service response

Definition at line 547 of file mysql_wrapper.py.

7.13.3.23 def mysql_wrapper.MySQLdbWrapper.tblRobotWriteDataHandler (*self, req*)

The tbl robot write data service callback.

Parameters

req	[rapp_platform_ros_communications::writeDataSrvRequest::Request&] The ROS service request
res	[rapp_platform_ros_communications::writeDataResponse::Response&] The ROS service response

Definition at line 531 of file mysql_wrapper.py.

7.13.3.24 def mysql_wrapper.MySQLdbWrapper.tblUserDeleteDataHandler (*self, req*)

The tbl user delete data service callback.

Parameters

req	[rapp_platform_ros_communications::deleteDataSrvRequest::Request&] The ROS service request
res	[rapp_platform_ros_communications::deleteDataSrvResponse::Response&] The ROS service response

Definition at line 443 of file mysql_wrapper.py.

7.13.3.25 def mysql_wrapper.MySQLdbWrapper.tblUserFetchDataHandler (*self, req*)

The tbl user fetch data service callback.

Parameters

req	[rapp_platform_ros_communications::fetchDataSrvRequest::Request&] The ROS service request
res	[rapp_platform_ros_communications::fetchDataSrvResponse::Response&] The ROS service response

Definition at line 427 of file mysql_wrapper.py.

7.13.3.26 def mysql_wrapper.MySQLdbWrapper.tblUsersOntologyInstancesDeleteDataHandler (*self, req*)

The tbl usersOntologyInstances delete data service callback.

Parameters

req	[rapp_platform_ros_communications::deleteDataSrvRequest::Request&] The ROS service request
res	[rapp_platform_ros_communications::deleteDataSrvResponse::Response&] The ROS service response

Definition at line 603 of file mysql_wrapper.py.

7.13.3.27 def mysql_wrapper.MySQLdbWrapper.tblUsersOntologyInstancesFetchDataHandler (*self, req*)

The tbl usersOntologyInstances fetch data service callback.

Parameters

req	[rapp_platform_ros_communications::fetchDataSrvRequest::Request&] The ROS service request

res	[rapp_platform_ros_communications::fetchDataSrvResponse::Response&] The ROS service response

Definition at line 587 of file mysql_wrapper.py.

7.13.3.28 def mysql_wrapper.MySQLdbWrapper.tblUsersOntologyInstancesUpdateDataHandler (*self, req*)

The tbl usersOntologyInstances update data service callback.

Parameters

req	[rapp_platform_ros_communications::updateDataSrvRequest::Request&] The ROS service request
res	[rapp_platform_ros_communications::updateDataSrvResponse::Response&] The ROS service response

Definition at line 611 of file mysql_wrapper.py.

7.13.3.29 def mysql_wrapper.MySQLdbWrapper.tblUsersOntologyInstancesWriteDataHandler (*self, req*)

The tbl usersOntologyInstances write data service callback.

Parameters

req	[rapp_platform_ros_communications::writeDataSrvRequest::Request&] The ROS service request
res	[rapp_platform_ros_communications::writeDataResponse::Response&] The ROS service response

Definition at line 595 of file mysql_wrapper.py.

7.13.3.30 def mysql_wrapper.MySQLdbWrapper.tblUserUpdateDataHandler (*self, req*)

The tbl user update data service callback.

Parameters

req	[rapp_platform_ros_communications::updateDataSrvRequest::Request&] The ROS service request
res	[rapp_platform_ros_communications::updateDataSrvResponse::Response&] The ROS service response

Definition at line 451 of file mysql_wrapper.py.

7.13.3.31 def mysql_wrapper.MySQLdbWrapper.tblUserWriteDataHandler (*self, req*)

The tbl user write data service callback.

Parameters

req	[rapp_platform_ros_communications::writeDataSrvRequest::Request&] The ROS service request
res	[rapp_platform_ros_communications::writeDataResponse::Response&] The ROS service response

Definition at line 435 of file mysql_wrapper.py.

7.13.3.32 def mysql_wrapper.MySQLdbWrapper.updateData (*self, req, tblName*)

Implements the general update data from table function.

Parameters

req	[rapp_platform_ros_communications::updateDataSrvRequest::Request&] The ROS service request
tblName	[string] the table name
res	[rapp_platform_ros_communications::updateDataSrvResponse::Response&] The ROS service response

Definition at line 242 of file mysql_wrapper.py.

7.13.3.33 def mysql_wrapper.MySQLdbWrapper.viewUsersRobotsAppsFetchDataHandler (*self, req*)

The view usersRobotsApps fetch data service callback.

Parameters

req	[rapp_platform_ros_communications::fetchDataSrvRequest::Request&] The ROS service request
res	[rapp_platform_ros_communications::fetchDataSrvResponse::Response&] The ROS service response

Definition at line 619 of file mysql_wrapper.py.

7.13.3.34 def mysql_wrapper.MySQLdbWrapper.whatRappsCanRun (*self, req, tblName*)

Implements the whatRappsCanRun service.

Parameters

req	[rapp_platform_ros_communications::whatRappsCanRunSrvResponse::Request&] The ROS service request
tblName	[string] the table name
res	[rapp_platform_ros_communications::whatRappsCanRunSrvResponse::Response&] The ROS service response

Definition at line 318 of file mysql_wrapper.py.

7.13.3.35 def mysql_wrapper.MySQLdbWrapper.whatRappsCanRunDataHandler (*self, req*)

The what rappRappCanRun service callback.

Parameters

req	[rapp_platform_ros_communications::whatRappsCanRunSrvResponse::Request&] The ROS service request
res	[rapp_platform_ros_communications::whatRappsCanRunSrvRequest::Response&] The ROS service response

Definition at line 627 of file mysql_wrapper.py.

7.13.3.36 def mysql_wrapper.MySQLdbWrapper.writeData (*self, req, tblName*)

Implements the general write data to table function.

Parameters

req	[rapp_platform_ros_communications::writeDataSrvRequest::Request&] The ROS service request
tblName	[string] the table name
res	[rapp_platform_ros_communications::writeDataResponse::Response&] The ROS service response

Definition at line 170 of file mysql_wrapper.py.

7.13.4 Member Data Documentation

7.13.4.1 mysql_wrapper.MySQLdbWrapper.serv

Definition at line 57 of file mysql_wrapper.py.

7.13.4.2 mysql_wrapper.MySQLdbWrapper.serv_topic

Definition at line 54 of file mysql_wrapper.py.

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

- /home/travis/rapp_temp/rapp-platform/rapp_mysql_wrapper/src/mysql_wrapper.py

7.14 QrCode Class Reference

Structure holding the essential info for a QR code.

`#include <qr_detector.h>`

Public Attributes

- cv::Point center
- std::string message

7.14.1 Detailed Description

Structure holding the essential info for a QR code.

Definition at line 35 of file qr_detector.h.

7.14.2 Member Data Documentation

7.14.2.1 cv::Point QrCode::center

Definition at line 37 of file qr_detector.h.

7.14.2.2 std::string QrCode::message

Definition at line 38 of file qr_detector.h.

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

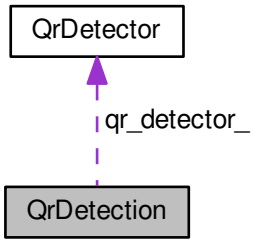
- /home/travis/rapp_temp/rapp-platform/rapp_qr_detection/include/qr_detection/qr_detector.h

7.15 QrDetection Class Reference

Uptakes the task of setting up the ROS service callbacks towards qr detection.

`#include <qr_detection.h>`

Collaboration diagram for QrDetection:



Public Member Functions

- QrDetection (void)

  Default constructor.
- bool qrDetectionCallback (rapp_platform_ros_communications::QrDetectionRosSrv::Request &req, rapp_platform_ros_communications::QrDetectionRosSrv::Response &res)

  The qr detection ROS service callback.

Private Attributes

- ros::NodeHandle nh_
- QrDetector qr_detector_
- ros::ServiceServer qrDetectionService_
- std::string qrDetectionTopic_

7.15.1 Detailed Description

Uptakes the task of setting up the ROS service callbacks towards qr detection.

Definition at line 31 of file qr_detection.h.

7.15.2 Constructor & Destructor Documentation

7.15.2.1 QrDetection::QrDetection (void)

Default constructor.

Definition at line 23 of file qr_detection.cpp.

7.15.3 Member Function Documentation

7.15.3.1 bool QrDetection::qrDetectionCallback (rapp_platform_ros_communications::QrDetectionRosSrv::Request & *req*, rapp_platform_ros_communications::QrDetectionRosSrv::Response & *res*)

The qr detection ROS service callback.

Parameters

req	[rapp_platform_ros_communications::QrDetectionRosSrv::Request&] The service request
res	[rapp_platform_ros_communications::QrDetectionRosSrv::Response&] The service response

Returns

bool - The success status of the call

Definition at line 40 of file qr_detection.cpp.

7.15.4 Member Data Documentation

7.15.4.1 ros::NodeHandle QrDetection::nh_ [private]

< The ROS node handle The service server

Definition at line 53 of file qr_detection.h.

7.15.4.2 QrDetector QrDetection::qr_detector_ [private]

Definition at line 62 of file qr_detection.h.

7.15.4.3 ros::ServiceServer QrDetection::qrDetectionService_ [private]

Topic nomeclarure. Holds the qr detection ROS service topic URI

Definition at line 56 of file qr_detection.h.

7.15.4.4 std::string QrDetection::qrDetectionTopic_ [private]

Object of QrDetection type

Definition at line 59 of file qr_detection.h.

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

- /home/travis/rapp_temp/rapp-platform/rapp_qr_detection/include/qr_detection/qr_detection.h
- /home/travis/rapp_temp/rapp-platform/rapp_qr_detection/src/qr_detection.cpp

7.16 QrDetector Class Reference

Provides the QR detection functionality.

`#include <qr_detector.h>`

Public Member Functions

- QrDetector (void)
  Default constructor.
- std::vector< QrCode > detectQrs (const cv::Mat &img)
  Detects QRs in a cv::Mat.
- std::vector< QrCode > findQrs (std::string file_name)
  Detects QRs in an image file.

Private Member Functions

- cv::Mat loadImage (std::string file_name)

  Loads an image into a cv::Mat structure.

7.16.1 Detailed Description

Provides the QR detection functionality.

Definition at line 45 of file qr_detector.h.

7.16.2 Constructor & Destructor Documentation

7.16.2.1 QrDetector::QrDetector (void)

Default constructor.

Definition at line 23 of file qr_detector.cpp.

7.16.3 Member Function Documentation

7.16.3.1 std::vector< QrCode > QrDetector::detectQrs (const cv::Mat & *input_frame*)

Detects QRs in a cv::Mat.

Parameters

img	[const cv::Mat&] The input image in cv::Mat form

Returns

std::vector<QrCode> The detected QR codes

< QrCode scanner

Definition at line 43 of file qr_detector.cpp.

7.16.3.2 std::vector< QrCode > QrDetector::findQrs (std::string *file_name*)

Detects QRs in an image file.

Parameters

file_name	[std::string] The input image URI

Returns

std::vector<QrCode> The detected QR codes

Definition at line 101 of file qr_detector.cpp.

7.16.3.3 cv::Mat QrDetector::loadImage (std::string *file_name*) [private]

Loads an image into a cv::Mat structure.

Parameters

file_name	[std::string] The file URI

Returns

cv::Mat

Definition at line 32 of file qr_detector.cpp.

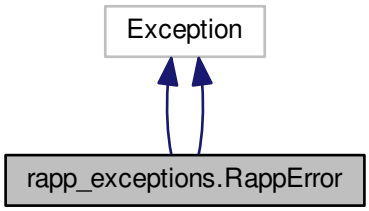
The documentation for this class was generated from the following files:

- /home/travis/rapp_temp/rapp-platform/rapp_qr_detection/include/qr_detection/qr_detector.h
- /home/travis/rapp_temp/rapp-platform/rapp_qr_detection/src/qr_detector.cpp

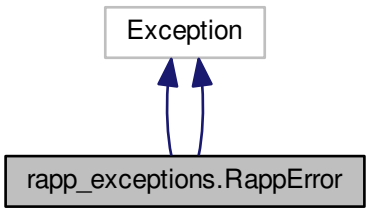
7.17 rapp_exceptions.RappError Class Reference

Inherits Exception and is used to catch only RAPP-specific exceptions.

Inheritance diagram for rapp_exceptions.RappError:



Collaboration diagram for rapp_exceptions.RappError:



Public Member Functions

- def __init__

- def __init__

  Default contructor.
- def __str__
- def __str__

  Returns the error in a string form.

Public Attributes

- value

7.17.1 Detailed Description

Inherits Exception and is used to catch only RAPP-specific exceptions.

```
Error handling in RAPP
```

Definition at line 21 of file rapp_exceptions.py.

7.17.2 Constructor & Destructor Documentation

7.17.2.1 def rapp_exceptions.RappError.__init__ (*self, value*)

Default contructor.

Definition at line 25 of file rapp_exceptions.py.

7.17.2.2 def rapp_exceptions.RappError.__init__ (*self, value*)

Definition at line 22 of file rapp_exceptions.py.

7.17.3 Member Function Documentation

7.17.3.1 def rapp_exceptions.RappError.__str__ (*self*)

Definition at line 25 of file rapp_exceptions.py.

7.17.3.2 def rapp_exceptions.RappError.__str__ (*self*)

Returns the error in a string form.

Definition at line 29 of file rapp_exceptions.py.

7.17.4 Member Data Documentation

7.17.4.1 rapp_exceptions.RappError.value

Definition at line 26 of file rapp_exceptions.py.

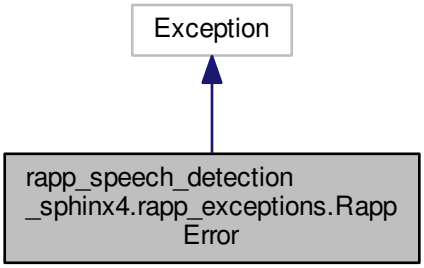
The documentation for this class was generated from the following file:

- /home/travis/rapp_temp/rapp-platform/rapp_speech_detection_google/src/rapp_exceptions.py

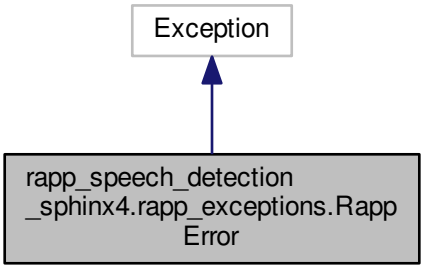
7.18 rapp_speech_detection_sphinx4.rapp_exceptions.RappError Class Reference

Provides a RAPP specific exception.

Inheritance diagram for rapp_speech_detection_sphinx4.rapp_exceptions.RappError:



Collaboration diagram for rapp_speech_detection_sphinx4.rapp_exceptions.RappError:



Public Member Functions

- def __init__
- def __str__

Public Attributes

- value

7.18.1 Detailed Description

Provides a RAPP specific exception.

```
Error handling in RAPP
```

Definition at line 21 of file rapp_exceptions.py.

7.18.2 Constructor & Destructor Documentation

7.18.2.1 def rapp_speech_detection_sphinx4.rapp_exceptions.RappError.__init__ (*self, value*)

Definition at line 24 of file rapp_exceptions.py.

7.18.3 Member Function Documentation

7.18.3.1 def rapp_speech_detection_sphinx4.rapp_exceptions.RappError.__str__ (*self*)

Definition at line 27 of file rapp_exceptions.py.

7.18.4 Member Data Documentation

7.18.4.1 rapp_speech_detection_sphinx4.rapp_exceptions.RappError.value

Definition at line 25 of file rapp_exceptions.py.

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

- /home/travis/rapp_temp/rapp-platform/rapp_speech_detection_sphinx4/src/rapp_speech_detection_sphinx4/rapp_exceptions.py

7.19 rapp_audio_processing.rapp_set_noise_profile.SetNoiseProfile Class Reference

Evaluates the noise profile for an audio file.

Public Member Functions

- def __init__

  Performs initializations.

- def setNoise_profile

  Evaluates the audio profile.

Public Attributes

- utilities

7.19.1 Detailed Description

Evaluates the noise profile for an audio file.

Definition at line 31 of file rapp_set_noise_profile.py.

7.19.2 Constructor & Destructor Documentation

7.19.2.1 def rapp_audio_processing.rapp_set_noise_profile.SetNoiseProfile.__init__ (*self*)

Performs initializations.

Definition at line 34 of file rapp_set_noise_profile.py.

7.19.3 Member Function Documentation

7.19.3.1 def rapp_audio_processing.rapp_set_noise_profile.SetNoiseProfile.setNoise_profile (*self, user, noise_audio_file, audio_file_type*)

Evaluates the audio profile.

Handles service callback rapp_audio_processing.AudioProcessing::setNoiseProfileCallback

Parameters

user	[string] The system user, for environmental variable access
noise_audio_file	[string] Noise audio file path
audio_type	[string] Noise audio file's type

Definition at line 45 of file rapp_set_noise_profile.py.

7.19.4 Member Data Documentation

7.19.4.1 rapp_audio_processing.rapp_set_noise_profile.SetNoiseProfile.utilities

Definition at line 35 of file rapp_set_noise_profile.py.

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

- /home/travis/rapp_temp/rapp-platform/rapp_audio_processing/src/rapp_audio_processing/rapp_set_noise_profile.py

7.20 rapp_audio_processing.rapp_sox_denoise.SoxDenoise Class Reference

Performs denoising on an audio file employing Sox application.

Public Member Functions

- def soxDenoise

  Performs denoising employing Sox apllication.

7.20.1 Detailed Description

Performs denoising on an audio file employing Sox application.

Definition at line 29 of file rapp_sox_denoise.py.

7.20.2 Member Function Documentation

7.20.2.1 def rapp_audio_processing.rapp_sox_denoise.SoxDenoise.soxDenoise (*self, user, audio_type, audio_file, denoised_audio_file, scale*)

Performs denoising employing Sox apllication.

Handles service callback rapp_audio_processing.AudioProcessing::denoiseCallback

Parameters

user	[string] The system user, for environmental variable access
audio_file	[string] Audio file path
audio_type	[string] Audio file's type
denoised_audio_file	[string] Path to write denoised audio file
scale	[float] Energy denoise scale

Definition at line 41 of file rapp_sox_denoise.py.

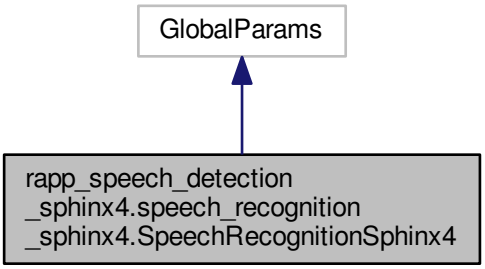
The documentation for this class was generated from the following file:

- /home/travis/rapp_temp/rapp-platform/rapp_audio_processing/src/rapp_audio_processing/rapp_sox_denoise.py

7.21 rapp_speech_detection_sphinx4.speech_recognition_sphinx4.SpeechRecognitionSphinx4 Class Reference

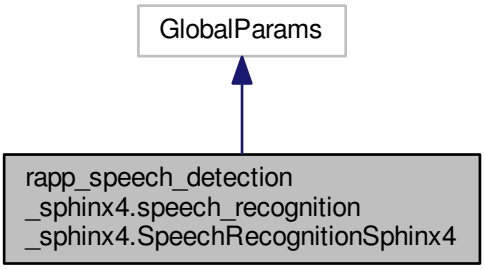
Provides a complete Rapp Sphinx Entity.

Inheritance diagram for rapp_speech_detection_sphinx4.speech_recognition_sphinx4.SpeechRecognitionSphinx4:



Collaboration diagram for rapp_speech_detection_sphinx4.speech_recognition_sphinx4.SpeechRecognition-

Sphinx4:



Public Member Functions

- def __init__

  Constructor performing initializations.
- def speechRecognitionBatch

  Performs Sphinx4 configuration and speech recognition.

Private Member Functions

- def _configureSpeechRecognition

  Performs Sphinx4 configuration.
- def _speechRecognition

  Performs Sphinx4 speech recognition.

Private Attributes

- _authentication_service

  The database authentication service client.
- _configuration_params

  The Sphinx configuration parameters.
- _english_support

  English creates necessary files for english speech recognition.
- _greek_support

  Greek_support creates necessary files for Greek speech recognition.
- _sphinx4

  The sphinx wrapper communicates with the actual Sphinx.java process.
- _use_db_authentication

  Defines whether database authentication should be used.
- _word_mapping

  A dictionary to transform the englified greek words to actual greek words.

7.21.1 Detailed Description

Provides a complete Rapp Sphinx Entity.

Maintains a complete Rapp Sphinx Entity for the speech_recognition_sphinx4_handler_node.SpeechRecognitionSphinx4HandlerNode to perform the speech recognition.

Definition at line 64 of file speech_recognition_sphinx4.py.

7.21.2 Constructor & Destructor Documentation

7.21.2.1 def rapp_speech_detection_sphinx4.speech_recognition_sphinx4.SpeechRecognitionSphinx4.__init__ (*self*)

Constructor performing initializations.

Definition at line 67 of file speech_recognition_sphinx4.py.

7.21.3 Member Function Documentation

7.21.3.1 def rapp_speech_detection_sphinx4.speech_recognition_sphinx4.SpeechRecognitionSphinx4._configureSpeechRecognition (*self, req*) [private]

Performs Sphinx4 configuration.

Parameters

req	[rapp_platform_ros_communications::SpeechDetectionSphinx4Wrapper::SpeechRecognitionSphinx4ConfigureSrvRequest] The sphinx configuration request

Returns

res [rapp_platform_ros_communications::SpeechDetectionSphinx4Wrapper::SpeechRecognitionSphinx4ConfigureSrvRequest] The sphinx configuration response

Definition at line 197 of file speech_recognition_sphinx4.py.

7.21.3.2 def rapp_speech_detection_sphinx4.speech_recognition_sphinx4.SpeechRecognitionSphinx4._speechRecognition (*self, req*) [private]

Performs Sphinx4 speech recognition.

Parameters

req	[rapp_platform_ros_communications::SpeechDetectionSphinx4Wrapper::SpeechRecognitionSphinx4SrvRequest] The speech recognition request

Returns

res [rapp_platform_ros_communications::SpeechDetectionSphinx4Wrapper::SpeechRecognitionSphinx4SrvResponse] The speech recognition response

Definition at line 172 of file speech_recognition_sphinx4.py.

7.21.3.3 def rapp_speech_detection_sphinx4.speech_recognition_sphinx4.SpeechRecognitionSphinx4.speechRecognitionBatch (*self, req*)

Performs Sphinx4 configuration and speech recognition.

Parameters

req	[rapp_platform_ros_communications::SpeechDetectionSphinx4Wrapper::Speech-RecognitionSphinx4TotalSrvRequest] The speech recognition request

Returns

res [rapp_platform_ros_communications::SpeechDetectionSphinx4Wrapper::SpeechRecognitionSphinx4-TotalSrvResponse] The speech recognition response

Definition at line 129 of file speech_recognition_sphinx4.py.

7.21.4 Member Data Documentation

7.21.4.1 rapp_speech_detection_sphinx4.speech_recognition_sphinx4.SpeechRecognitionSphinx4._authentication_service [private]

The database authentication service client.

Used to identify user performed the speech recognition request. (see mysql_wrapper.MySQLdbWrapper.fetchData)

Definition at line 102 of file speech_recognition_sphinx4.py.

7.21.4.2 rapp_speech_detection_sphinx4.speech_recognition_sphinx4.SpeechRecognitionSphinx4._configuration_params [private]

The Sphinx configuration parameters.

(see sphinx4_configuration_params.SphinxConfigurationParams)

Definition at line 85 of file speech_recognition_sphinx4.py.

7.21.4.3 rapp_speech_detection_sphinx4.speech_recognition_sphinx4.SpeechRecognitionSphinx4._english_support [private]

English creates necessary files for english speech recognition.

(see english_support.EnglishSupport)

Definition at line 81 of file speech_recognition_sphinx4.py.

7.21.4.4 rapp_speech_detection_sphinx4.speech_recognition_sphinx4.SpeechRecognitionSphinx4._greek_support [private]

Greek_support creates necessary files for Greek speech recognition.

(see greek_support.GreekSupport)

Definition at line 77 of file speech_recognition_sphinx4.py.

7.21.4.5 rapp_speech_detection_sphinx4.speech_recognition_sphinx4.SpeechRecognitionSphinx4._sphinx4 [private]

The sphinx wrapper communicates with the actual Sphinx.java process.

(see sphinx4_wrapper.Sphinx4Wrapper)

Definition at line 73 of file speech_recognition_sphinx4.py.

7.21.4.6 rapp_speech_detection_sphinx4.speech_recognition_sphinx4.SpeechRecognitionSphinx4._use_db_authentication [private]

Defines whether database authentication should be used.

Definition at line 91 of file speech_recognition_sphinx4.py.

7.21.4.7 rapp_speech_detection_sphinx4.speech_recognition_sphinx4.SpeechRecognitionSphinx4._word_mapping [private]

A dictionary to transform the englified greek words to actual greek words.

Definition at line 88 of file speech_recognition_sphinx4.py.

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

- /home/travis/rapp_temp/rapp-platform/rapp_speech_detection_sphinx4/src/rapp_speech_detection_sphinx4/speech_recognition_sphinx4.py

7.22 rapp_speech_detection_sphinx4.speech_recognition_sphinx4_handler_node.SpeechRecognitionSphinx4HandlerNode Class Reference

Maintains Sphinx instances to perform speech recognition.

Public Member Functions

- def __init__

  Initializes the subprocesses and the services (constructor)
- def handleSpeechRecognitionCallback

  The callback to perform speech recognition.

Private Member Functions

- def _calculateRequestHash

  Calculates the service request sha1 hash for process handling purposes.

Private Attributes

- _availableProcesses

  The subprocesses structure that contains information used for the subprocess handling.
- _lock

  Thread conditional variable used for the subprocess scheduling.
- _speech_recognition_batch_service

  Ros service server for sphinx speech recognition.
- _threadCounter

  Total service callback threads waiting to execute.
- _threads

  The number of child subprocesses.

7.22.1 Detailed Description

Maintains Sphinx instances to perform speech recognition.

Maintains a number of child processes to perform speech recognition utilizing Sphinx4 (rapp_speech_detection_sphinx4.speech_recognition_sphinx4.SpeechRecognitionSphinx4). Provides ros services and handles the requests according to the child processes' status.

Definition at line 43 of file speech_recognition_sphinx4_handler_node.py.

7.22.2 Constructor & Destructor Documentation

7.22.2.1 def rapp_speech_detection_sphinx4.speech_recognition_sphinx4_handler_node.SpeechRecognitionSphinx4HandlerNode.__init__ (*self*)

Initializes the subprocesses and the services (constructor)

Definition at line 46 of file speech_recognition_sphinx4_handler_node.py.

7.22.3 Member Function Documentation

7.22.3.1 def rapp_speech_detection_sphinx4.speech_recognition_sphinx4_handler_node.SpeechRecognitionSphinx4HandlerNode._calculateRequestHash (*self, req*) [private]

Calculates the service request sha1 hash for process handling purposes.

Hash is used to identify common request configurations for proper subprocess selection. (Requests with common requests do not require reconfiguration reducing computation time)

Parameters

req	[rapp_platform_ros_communications::SpeechDetectionSphinx4Wrapper::SpeechRecognitionSphinx4TotalSrvRequest] The service request

Returns

hexdigest [string] The hash digest containing only hexadecimal digits

Definition at line 135 of file speech_recognition_sphinx4_handler_node.py.

7.22.3.2 def rapp_speech_detection_sphinx4.speech_recognition_sphinx4_handler_node.SpeechRecognitionSphinx4HandlerNode.handleSpeechRecognitionCallback (*self, req*)

The callback to perform speech recognition.

Parameters

req	[rapp_platform_ros_communications::SpeechDetectionSphinx4Wrapper::SpeechRecognitionSphinx4TotalSrvRequest] The service request

Returns

res [rapp_platform_ros_communications::SpeechDetectionSphinx4Wrapper::SpeechRecognitionSphinx4TotalSrvResponse] The service response

Definition at line 79 of file speech_recognition_sphinx4_handler_node.py.

7.22.4 Member Data Documentation

7.22.4.1 rapp_speech_detection_sphinx4.speech_recognition_sphinx4_handler_node.SpeechRecognitionSphinx4HandlerNode._availableProcesses [private]

The subprocesses structure that contains information used for the subprocess handling.

Definition at line 54 of file speech_recognition_sphinx4_handler_node.py.

7.22.4.2 rapp_speech_detection_sphinx4.speech_recognition_sphinx4_handler_node.SpeechRecognitionSphinx4HandlerNode._lock [private]

Thread conditional variable used for the subprocess scheduling.

Definition at line 61 of file speech_recognition_sphinx4_handler_node.py.

7.22.4.3 rapp_speech_detection_sphinx4.speech_recognition_sphinx4_handler_node.SpeechRecognitionSphinx4HandlerNode._speech_recognition_batch_service [private]

Ros service server for sphinx speech recognition.

Definition at line 71 of file speech_recognition_sphinx4_handler_node.py.

7.22.4.4 rapp_speech_detection_sphinx4.speech_recognition_sphinx4_handler_node.SpeechRecognitionSphinx4HandlerNode._threadCounter [private]

Total service callback threads waiting to execute.

Definition at line 63 of file speech_recognition_sphinx4_handler_node.py.

7.22.4.5 rapp_speech_detection_sphinx4.speech_recognition_sphinx4_handler_node.SpeechRecognitionSphinx4HandlerNode._threads [private]

The number of child subprocesses.

Definition at line 49 of file speech_recognition_sphinx4_handler_node.py.

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

- /home/travis/rapp_temp/rapp-platform/rapp_speech_detection_sphinx4/src/rapp_speech_detection_sphinx4/speech_recognition_sphinx4_handler_node.py

7.23 speech_recognition_google.SpeechToTextGoogle Class Reference

Implements calls the Google ASR API.

Public Member Functions

- def __init__

  Default contructor.
- def speech_to_text

  Performs the call to Google API.
- def speech_to_text_callback

  The service callback.

Public Attributes

- serv
- serv_topic

7.23.1 Detailed Description

Implements calls the Google ASR API.

Definition at line 57 of file speech_recognition_google.py.

7.23.2 Constructor & Destructor Documentation

7.23.2.1 def speech_recognition_google.SpeechToTextGoogle.__init__ (*self*)

Default contructor.

Declares the service callback

Definition at line 60 of file speech_recognition_google.py.

7.23.3 Member Function Documentation

7.23.3.1 def speech_recognition_google.SpeechToTextGoogle.speech_to_text (*self, file_path, user, audio_file_type, language*)

Performs the call to Google API.

Parameters

file_path	[string] The audio file
user	[string] The username
audio_type	[string] Used to check if denoising is needed. Can be one of headset, nao_ogg, nao_wav_1-_ch, nao_wav_4_ch
language	[string] The language in which the ASR will be performed

Returns

The transcript from Google

Definition at line 123 of file speech_recognition_google.py.

7.23.3.2 def speech_recognition_google.SpeechToTextGoogle.speech_to_text_callback (*self, req*)

The service callback.

Parameters

req	[SpeechToTextSrvRequest] The ROS service request

Definition at line 71 of file speech_recognition_google.py.

7.23.4 Member Data Documentation

7.23.4.1 speech_recognition_google.SpeechToTextGoogle.serv

Definition at line 66 of file speech_recognition_google.py.

7.23.4.2 speech_recognition_google.SpeechToTextGoogle.serv_topic

Definition at line 62 of file speech_recognition_google.py.

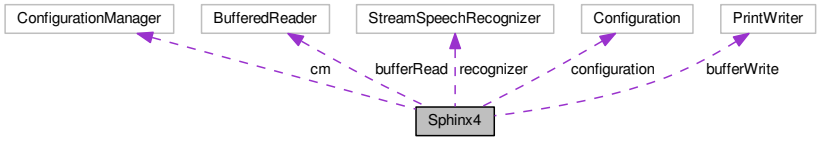
The documentation for this class was generated from the following file:

- /home/travis/rapp_temp/rapp-platform/rapp_speech_detection_google/src/speech_recognition_google.py

7.24 Sphinx4 Class Reference

Performs speech recognition employing Sphinx.

Collaboration diagram for Sphinx4:



Static Public Member Functions

- static void main (String[] args) throws IOException

  The main function.
- static void updateConfiguration () throws IOException

  Updates the Sphinx configuration.

Static Public Attributes

- static String acoustic_model_path = ""
- static String acoustic_model_path_prev = ""
- static BufferedReader bufferRead
- static PrintWriter bufferWrite
- static ConfigurationManager cm
- static Configuration configuration = new Configuration()
- static String configuration_model_path = ""
- static String configuration_model_path_prev = ""
- static String dictionary_path = ""
- static String dictionary_path_prev = ""
- static boolean grammar_enabled = false
- static boolean grammar_enabled_prev = false
- static String grammar_model_file_path = ""
- static String grammar_model_file_path_prev = ""
- static String grammar_model_folder_path = ""
- static String grammar_model_folder_path_prev = ""
- static String language_path = ""
- static String language_path_prev = ""
- static StreamSpeechRecognizer recognizer

7.24.1 Detailed Description

Performs speech recognition employing Sphinx.

Communicates with rapp_speech_detection_sphinx4.sphinx4_wrapper.Sphinx4Wrapper via socket to configure Sphinx and perform the speech recognition and returns the result.

Definition at line 49 of file Sphinx4.java.

7.24.2 Member Function Documentation

7.24.2.1 static void Sphinx4.main (String[] *args*) throws IOException [inline], [static]

The main function.

Creates the Sphinx process and awaits commands from rapp_speech_detection_sphinx4.sphinx4_wrapper.-Sphinx4Wrapper to update the cconfiguration or perform the recognition.

Definition at line 134 of file Sphinx4.java.

7.24.2.2 static void Sphinx4.updateConfiguration ( ) throws IOException [inline], [static]

Updates the Sphinx configuration.

Definition at line 79 of file Sphinx4.java.

7.24.3 Member Data Documentation

7.24.3.1 String Sphinx4.acoustic_model_path = "" [static]

Definition at line 57 of file Sphinx4.java.

7.24.3.2 String Sphinx4.acoustic_model_path_prev = "" [static]

Definition at line 58 of file Sphinx4.java.

7.24.3.3 BufferedReader Sphinx4.bufferRead [static]

Definition at line 72 of file Sphinx4.java.

7.24.3.4 PrintWriter Sphinx4.bufferWrite [static]

Definition at line 73 of file Sphinx4.java.

7.24.3.5 ConfigurationManager Sphinx4.cm [static]

Definition at line 69 of file Sphinx4.java.

7.24.3.6 Configuration Sphinx4.configuration = new Configuration() [static]

Definition at line 68 of file Sphinx4.java.

7.24.3.7 String Sphinx4.configuration_model_path = "" [static]

Definition at line 65 of file Sphinx4.java.

7.24.3.8 String Sphinx4.configuration_model_path_prev = "" [static]

Definition at line 66 of file Sphinx4.java.

7.24.3.9 String Sphinx4.dictionary_path = "" [static]

Definition at line 51 of file Sphinx4.java.

7.24.3.10 String Sphinx4.dictionary_path_prev = "" [static]

Definition at line 52 of file Sphinx4.java.

7.24.3.11 boolean Sphinx4.grammar_enabled = false [static]

Definition at line 75 of file Sphinx4.java.

7.24.3.12 boolean Sphinx4.grammar_enabled_prev = false [static]

Definition at line 76 of file Sphinx4.java.

7.24.3.13 String Sphinx4.grammar_model_file_path = "" [static]

Definition at line 60 of file Sphinx4.java.

7.24.3.14 String Sphinx4.grammar_model_file_path_prev = "" [static]

Definition at line 61 of file Sphinx4.java.

7.24.3.15 String Sphinx4.grammar_model_folder_path = "" [static]

Definition at line 62 of file Sphinx4.java.

7.24.3.16 String Sphinx4.grammar_model_folder_path_prev = "" [static]

Definition at line 63 of file Sphinx4.java.

7.24.3.17 String Sphinx4.language_path = "" [static]

Definition at line 54 of file Sphinx4.java.

7.24.3.18 String Sphinx4.language_path_prev = "" [static]

Definition at line 55 of file Sphinx4.java.

7.24.3.19 StreamSpeechRecognizer Sphinx4.recognizer [static]

Definition at line 70 of file Sphinx4.java.

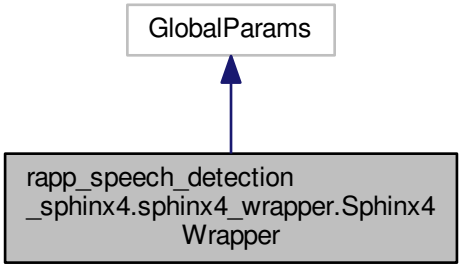
The documentation for this class was generated from the following file:

- /home/travis/rapp_temp/rapp-platform/rapp_speech_detection_sphinx4/src/Sphinx4.java

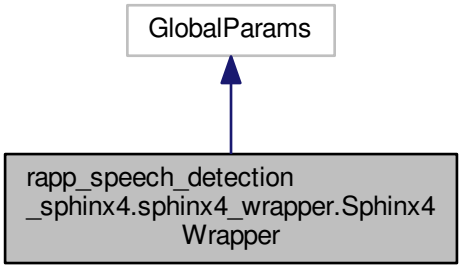
7.25 rapp_speech_detection_sphinx4.sphinx4_wrapper.Sphinx4Wrapper Class Reference

Contains the Sphinx subprocess and is responsible for configuring Sphinx and performing the recognition request.

Inheritance diagram for rapp_speech_detection_sphinx4.sphinx4_wrapper.Sphinx4Wrapper:



Collaboration diagram for rapp_speech_detection_sphinx4.sphinx4_wrapper.Sphinx4Wrapper:



Public Member Functions

- def __init__

  Constructor Initiates service clients.
- def configureSphinx

Perform Sphinx4 configuration.

- def initializeSphinx

  Perform Sphinx4 initialization Initiates Sphinx subprocess, sets up socket IPC and configures Sphinx subprocess.

- def performSpeechRecognition

  Performs the speech recognition and returns a list of words.

Private Member Functions

- def _callSphinxJava

  Communicate with Sphinx subprocess to initiate recognition and fetch results.

- def _createProcessingProfile

  Creates audio profile based on the audio type for processing purposes.

- def _createSocket

  Creates socket IPC between self and Sphinx subprocess Creates the socket server with a system provided port, which is pass as an argument to the created subprocess.

- def _performEnergyDenoising

  Perform energy denoise.

- def _readLine

  Helper function for getting input from IPC with Sphinx subprocess.

- def _respawnSphinx

  Respawns Sphinx subprocess, if it terminates abruptly.

Private Attributes

- _allow_sphinx_output
- _audio_transform_srv

  Transform audio service client.

- _conf

  Sphinx configuration.

- _denoise_service

  Denoise service client.

- _detect_silence_service

  Detect silence service client.

- _energy_denoise_service

  Energy denoise service client.

- _sphinx_socket

  The IPC socket.

- _sphinx_socket_PORT

  The IPC socket port.

- _sphinxDied

  Sphinx status flag.

- _sphinxSubprocess

  The Sphinx subprocess.

7.25.1 Detailed Description

Contains the Sphinx subprocess and is responsible for configuring Sphinx and performing the recognition request.

Initializes a Sphinx.java subprocess and creates an IPC using sockets. It is responsible for interacting with Sphinx via the socket to send configuration params/instructions and initialize a recognition procedure.

Definition at line 46 of file sphinx4_wrapper.py.

7.25.2 Constructor & Destructor Documentation

7.25.2.1 def rapp_speech_detection_sphinx4.sphinx4_wrapper.Sphinx4Wrapper.__init__ (*self*)

Constructor Initiates service clients.

Definition at line 50 of file sphinx4_wrapper.py.

7.25.3 Member Function Documentation

7.25.3.1 def rapp_speech_detection_sphinx4.sphinx4_wrapper.Sphinx4Wrapper._callSphinxJava (*self, audio_file*) [private]

Communicate with Sphinx subprocess to initiate recognition and fetch results.

Parameters

audio_file	[string] The audio file path

Returns

words [list::string] The Sphinx result

Definition at line 407 of file sphinx4_wrapper.py.

7.25.3.2 def rapp_speech_detection_sphinx4.sphinx4_wrapper.Sphinx4Wrapper._createProcessingProfile (*self, audio_type*) [private]

Creates audio profile based on the audio type for processing purposes.

Defines a set of audio processing procedures (i.e. denoising) to be performed on the audio file and the parameters of the procedures. Aims to improve to audio file quality to improve speech recognition results.

Parameters

audio_type	[string] The audio type

Returns

processingProfile [dictionary] The profile attributes

Definition at line 187 of file sphinx4_wrapper.py.

7.25.3.3 def rapp_speech_detection_sphinx4.sphinx4_wrapper.Sphinx4Wrapper._createSocket (*self*) [private]

Creates socket IPC between self and Sphinx subprocess Creates the socket server with a system provided port, which is pass as an argument to the created subprocess.

Definition at line 147 of file sphinx4_wrapper.py.

7.25.3.4 def rapp_speech_detection_sphinx4.sphinx4_wrapper.Sphinx4Wrapper._performEnergyDenoising (*self, next_audio_file, audio_file, scale*) [private]

Perform energy denoise.

Calls energy denoise service rapp_audio_processing.rapp_audio_processing.AudioProcessing::energy_denoise (see also rapp_audio_processing.rapp_energy_denoise.EnergyDenoise::energyDenoise)

Parameters

audio_file	[string] The audio file path
scale	[float] The scale parameter for the denoising procedure

Returns

file_path [string] THe path of the denoised file

Definition at line 394 of file sphinx4_wrapper.py.

7.25.3.5 def rapp_speech_detection_sphinx4.sphinx4_wrapper.Sphinx4Wrapper._readLine (*self*) [private]

Helper function for getting input from IPC with Sphinx subprocess.

Returns

line [string] A buffer read from socket

Definition at line 113 of file sphinx4_wrapper.py.

7.25.3.6 def rapp_speech_detection_sphinx4.sphinx4_wrapper.Sphinx4Wrapper._respawnSphinx (*self*) [private]

Respawns Sphinx subprocess, if it terminates abruptly.

Definition at line 434 of file sphinx4_wrapper.py.

7.25.3.7 def rapp_speech_detection_sphinx4.sphinx4_wrapper.Sphinx4Wrapper.configureSphinx (*self, conf*)

Perform Sphinx4 configuration.

Parameters

conf	[dictionary] Contains the configuration parameters

Definition at line 158 of file sphinx4_wrapper.py.

7.25.3.8 def rapp_speech_detection_sphinx4.sphinx4_wrapper.Sphinx4Wrapper.initializeSphinx (*self, conf*)

Perform Sphinx4 initialization Initiates Sphinx subprocess, sets up socket IPC and configures Sphinx subprocess.

Parameters

conf	[dictionary] Contains the configuration parameters

Definition at line 123 of file sphinx4_wrapper.py.

7.25.3.9 def rapp_speech_detection_sphinx4.sphinx4_wrapper.Sphinx4Wrapper.performSpeechRecognition (*self, audio_file, audio_type, user*)

Performs the speech recognition and returns a list of words.

Parameters

audio_file	[string] The audio file's name
audio_type	[string] The audio file's type

Returns

words [list::string] The result words

Exceptions

RappError	Audio transformation error

Definition at line 247 of file sphinx4_wrapper.py.

7.25.4 Member Data Documentation

7.25.4.1 rapp_speech_detection_sphinx4.sphinx4_wrapper.Sphinx4Wrapper._allow_sphinx_output [private]

Definition at line 115 of file sphinx4_wrapper.py.

7.25.4.2 rapp_speech_detection_sphinx4.sphinx4_wrapper.Sphinx4Wrapper._audio_transform_srv [private]

Transform audio service client.

rapp_audio_processing.rapp_audio_processing.AudioProcessing::transform_audio

Definition at line 107 of file sphinx4_wrapper.py.

7.25.4.3 rapp_speech_detection_sphinx4.sphinx4_wrapper.Sphinx4Wrapper._conf [private]

Sphinx configuration.

Definition at line 53 of file sphinx4_wrapper.py.

7.25.4.4 rapp_speech_detection_sphinx4.sphinx4_wrapper.Sphinx4Wrapper._denoise_service [private]

Denoise service client.

rapp_audio_processing.rapp_audio_processing.AudioProcessing::denoise

Definition at line 89 of file sphinx4_wrapper.py.

7.25.4.5 rapp_speech_detection_sphinx4.sphinx4_wrapper.Sphinx4Wrapper._detect_silence_service [private]

Detect silence service client.

rapp_audio_processing.rapp_audio_processing.AudioProcessing::detect_silence

Definition at line 101 of file sphinx4_wrapper.py.

7.25.4.6 rapp_speech_detection_sphinx4.sphinx4_wrapper.Sphinx4Wrapper._energy_denoise_service [private]

Energy denoise service client.

rapp_audio_processing.rapp_audio_processing.AudioProcessing::energy_denoise

Definition at line 95 of file sphinx4_wrapper.py.

7.25.4.7 rapp_speech_detection_sphinx4.sphinx4_wrapper.Sphinx4Wrapper._sphinx_socket [private]

The IPC socket.

Definition at line 58 of file sphinx4_wrapper.py.

7.25.4.8 rapp_speech_detection_sphinx4.sphinx4_wrapper.Sphinx4Wrapper._sphinx_socket_PORT [private]

The IPC socket port.

Definition at line 60 of file sphinx4_wrapper.py.

7.25.4.9 rapp_speech_detection_sphinx4.sphinx4_wrapper.Sphinx4Wrapper._sphinxDied [private]

Sphinx status flag.

Definition at line 55 of file sphinx4_wrapper.py.

7.25.4.10 rapp_speech_detection_sphinx4.sphinx4_wrapper.Sphinx4Wrapper._sphinxSubprocess [private]

The Sphinx subprocess.

Definition at line 63 of file sphinx4_wrapper.py.

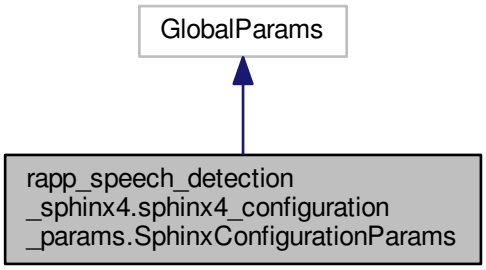
The documentation for this class was generated from the following file:

- /home/travis/rapp_temp/rapp-platform/rapp_speech_detection_sphinx4/src/rapp_speech_detection_sphinx4/sphinx4_wrapper.py

7.26 rapp_speech_detection_sphinx4.sphinx4_configuration_params.SphinxConfigurationParams Class Reference

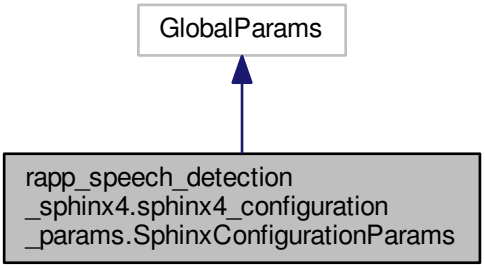
Contains the parameters required for the Sphinx configuration.

Inheritance diagram for rapp_speech_detection_sphinx4.sphinx4_configuration_params.SphinxConfigurationParams:



Collaboration diagram for rapp_speech_detection_sphinx4.sphinx4_configuration_params.SphinxConfiguration-

Params:



Public Member Functions

- def __init__

  Initializes an empty configuration (constructor)
- def equals

  Checks if a SphinxConfigurationParams instance equals self.

Private Attributes

- _grammar

  Sphinx grammar attribute.
- _language

  The language of the request.
- _sentences

  Sphinx sentence attribute.
- _words

  The words to be identified.

7.26.1 Detailed Description

Contains the parameters required for the Sphinx configuration.

Definition at line 25 of file sphinx4_configuration_params.py.

7.26.2 Constructor & Destructor Documentation

7.26.2.1 def rapp_speech_detection_sphinx4.sphinx4_configuration_params.SphinxConfigurationParams.__init__ (*self*)

Initializes an empty configuration (constructor)

Definition at line 28 of file sphinx4_configuration_params.py.

7.26.3 Member Function Documentation

7.26.3.1 def rapp_speech_detection_sphinx4.sphinx4_configuration_params.SphinxConfigurationParams.equals (*self, params*)

Checks if a SphinxConfigurationParams instance equals self.

Parameters

params	[SphinxConfigurationParams] The class instance
status	[bool] True if configurations match

Definition at line 45 of file sphinx4_configuration_params.py.

7.26.4 Member Data Documentation

7.26.4.1 rapp_speech_detection_sphinx4.sphinx4_configuration_params.SphinxConfigurationParams._grammar [private]

Sphinx grammar attribute.

Definition at line 36 of file sphinx4_configuration_params.py.

7.26.4.2 rapp_speech_detection_sphinx4.sphinx4_configuration_params.SphinxConfigurationParams._language [private]

The language of the request.

Definition at line 32 of file sphinx4_configuration_params.py.

7.26.4.3 rapp_speech_detection_sphinx4.sphinx4_configuration_params.SphinxConfigurationParams._sentences [private]

Sphinx sentence attribute.

Definition at line 38 of file sphinx4_configuration_params.py.

7.26.4.4 rapp_speech_detection_sphinx4.sphinx4_configuration_params.SphinxConfigurationParams._words [private]

The words to be identified.

Definition at line 34 of file sphinx4_configuration_params.py.

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

- /home/travis/rapp_temp/rapp-platform/rapp_speech_detection_sphinx4/src/rapp_speech_detection_sphinx4/sphinx4_configuration_params.py

7.27 text_to_speech_espeak.TextToSpeechEspeak Class Reference

Public Member Functions

- def __init__
- def text_to_speech_callback

Public Attributes

- serv
- serv_topic

7.27.1 Detailed Description

Definition at line 33 of file text_to_speech_espeak.py.

7.27.2 Constructor & Destructor Documentation

7.27.2.1 def text_to_speech_espeak.TextToSpeechEspeak.__init__ (*self*)

Definition at line 35 of file text_to_speech_espeak.py.

7.27.3 Member Function Documentation

7.27.3.1 def text_to_speech_espeak.TextToSpeechEspeak.text_to_speech_callback (*self, req*)

Definition at line 45 of file text_to_speech_espeak.py.

7.27.4 Member Data Documentation

7.27.4.1 text_to_speech_espeak.TextToSpeechEspeak.serv

Definition at line 41 of file text_to_speech_espeak.py.

7.27.4.2 text_to_speech_espeak.TextToSpeechEspeak.serv_topic

Definition at line 37 of file text_to_speech_espeak.py.

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

- /home/travis/rapp_temp/rapp-platform/rapp_text_to_speech_espeak/src/text_to_speech_espeak.py

7.28 rapp_audio_processing.rapp_transform_audio.TransformAudio Class Reference

Provides audio type tranformation functionalities.

Public Member Functions

- def transform_audio

  Performs the audio transformation.

Private Member Functions

- def _assertArgs

  Verifies the existence of the required arguments.
- def _convertType

  Performs audio conversion.
- def _validateSourceType

  Validates that the provided audio type match the file extension.

7.28.1 Detailed Description

Provides audio type tranformation functionalities.

Allows the transformation of an audio file to a different format. Supports the alteration of the type (i.e. headset, nao_wav_1_ch etc.), the sample rate, the audio channel number, the audio format and the audio name. Handles transform audio service callback (rapp_audio_processing.rapp_audio_processing.AudioProcessing::transform_audio)

Definition at line 32 of file rapp_transform_audio.py.

7.28.2 Member Function Documentation

7.28.2.1 def rapp_audio_processing.rapp_transform_audio.TransformAudio._assertArgs (*self, source_type, source_name, target_type, target_name, target_channels, target_rate*) [private]

Verifies the existence of the required arguments.

Parameters

source_type	[string] The source audio file's type
source_name	[string] The source audio file's name
target_type	[string] The target audio file's type
target_name	[string] The target audio file's name
target_channels	[string] The target audio's channel number
target_rate	[string] The target audio's sample rate

Exceptions

Exception	Arguments are invalid

Definition at line 76 of file rapp_transform_audio.py.

7.28.2.2 def rapp_audio_processing.rapp_transform_audio.TransformAudio._convertType (*self, source_type, source_name, target_type, target_name, target_channels, target_rate*) [private]

Performs audio conversion.

Parameters

source_type	[string] The source audio file's type
source_name	[string] The source audio file's name
target_type	[string] The target audio file's type
target_name	[string] The target audio file's name
target_channels	[string] The target audio's channel number
target_rate	[string] The target audio's sample rate

Exceptions

Exception	Conversion malfunction

Definition at line 101 of file rapp_transform_audio.py.

7.28.2.3 def rapp_audio_processing.rapp_transform_audio.TransformAudio._validateSourceType (*self, source_type, name*) [private]

Validates that the provided audio type match the file extension.

Parameters

source_type	[string] The source audio file's type
name	[string] The source audio file's name

Exceptions

Exception	Audio type/file type mismatch

Definition at line 139 of file rapp_transform_audio.py.

7.28.2.4 def rapp_audio_processing.rapp_transform_audio.TransformAudio.transform_audio (*self, source_type, source_name, target_type, target_name, target_channels, target_rate*)

Performs the audio transformation.

Parameters

source_type	[string] The source audio file's type
source_name	[string] The source audio file's name
target_type	[string] The target audio file's type
target_name	[string] The target audio file's name
target_channels	[string] The target audio's channel number
target_rate	[string] The target audio's sample rate

Returns

status [string] The status of the transformation prcedure
filename [string] The name of the produced file

Definition at line 45 of file rapp_transform_audio.py.

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

- /home/travis/rapp_temp/rapp-platform/rapp_audio_processing/src/rapp_audio_processing/rapp_transform_audio.py

7.29 rapp_audio_processing.rapp_utilities.Utilities Class Reference

Provides audio processing utilities.

Public Member Functions

- def cleanup

  Removes a number of files.

7.29.1 Detailed Description

Provides audio processing utilities.

Definition at line 27 of file rapp_utilities.py.

7.29.2 Member Function Documentation

7.29.2.1 def rapp_audio_processing.rapp_utilities.Utilities.cleanup (*self, files*)

Removes a number of files.

Parameters

files	[list::string] The to be deleted files' paths

Definition at line 32 of file rapp_utilities.py.

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

- /home/travis/rapp_temp/rapp-platform/rapp_audio_processing/src/rapp_audio_processing/rapp_utilities.py

Chapter 8

File Documentation

8.1 /home/travis/rapp_temp/rapp-platform/rapp_audio_processing/src/rapp_audio_processing/__init__.py File Reference

Namespaces

- rapp_audio_processing

8.2 /home/travis/rapp_temp/rapp-platform/rapp_speech_detection_sphinx4/src/rapp_speech_detection_sphinx4/__init__.py File Reference

Namespaces

- rapp_speech_detection_sphinx4

8.3 /home/travis/rapp_temp/rapp-platform/rapp_audio_processing/src/rapp_audio_processing/rapp_audio_processing.py File Reference

Classes

- class rapp_audio_processing.rapp_audio_processing.AudioProcessing

  Provides audio processing utilities.

Namespaces

- rapp_audio_processing.rapp_audio_processing

Variables

- tuple rapp_audio_processing.rapp_audio_processing.AudioProcessingNode = AudioProcessing()

8.4 /home/travis/rapp_temp/rapp-platform/rapp_audio_processing/src/rapp_audio_processing/rapp_detect_silence.py File Reference

Classes

- class rapp_audio_processing.rapp_detect_silence.DetectSilence

  Performs silence detection on an audio file.

Namespaces

- rapp_audio_processing.rapp_detect_silence

8.5 /home/travis/rapp_temp/rapp-platform/rapp_audio_processing/src/rapp_audio_processing/rapp_energy_denoise.py File Reference

Classes

- class rapp_audio_processing.rapp_energy_denoise.EnergyDenoise

  Performs energy denoising on an audio file.

Namespaces

- rapp_audio_processing.rapp_energy_denoise

8.6 /home/travis/rapp_temp/rapp-platform/rapp_audio_processing/src/rapp_audio_processing/rapp_set_noise_profile.py File Reference

Classes

- class rapp_audio_processing.rapp_set_noise_profile.SetNoiseProfile

  Evaluates the noise profile for an audio file.

Namespaces

- rapp_audio_processing.rapp_set_noise_profile

8.7 /home/travis/rapp_temp/rapp-platform/rapp_audio_processing/src/rapp_audio_processing/rapp_sox_denoise.py File Reference

Classes

- class rapp_audio_processing.rapp_sox_denoise.SoxDenoise

  Performs denoising on an audio file employing Sox application.

Namespaces

- rapp_audio_processing.rapp_sox_denoise

8.8 /home/travis/rapp_temp/rapp-platform/rapp_audio_processing/src/rapp_audio_-processing/rapp_transform_audio.py File Reference

Classes

- class rapp_audio_processing.rapp_transform_audio.TransformAudio

  Provides audio type tranformation functionalities.

Namespaces

- rapp_audio_processing.rapp_transform_audio

8.9 /home/travis/rapp_temp/rapp-platform/rapp_audio_processing/src/rapp_audio_-processing/rapp_utilities.py File Reference

Classes

- class rapp_audio_processing.rapp_utilities.Utilities

  Provides audio processing utilities.

Namespaces

- rapp_audio_processing.rapp_utilities

8.10 /home/travis/rapp_temp/rapp-platform/rapp_cognitive_exercise/src/cognitive_-exercise.py File Reference

Classes

- class cognitive_exercise.CognitiveExercise

  The Cognitive exercise ros node.

Namespaces

- cognitive_exercise

8.11 /home/travis/rapp_temp/rapp-platform/rapp_cognitive_exercise/src/cognitive_-exercise_main.py File Reference

Namespaces

- cognitive_exercise_main

Variables

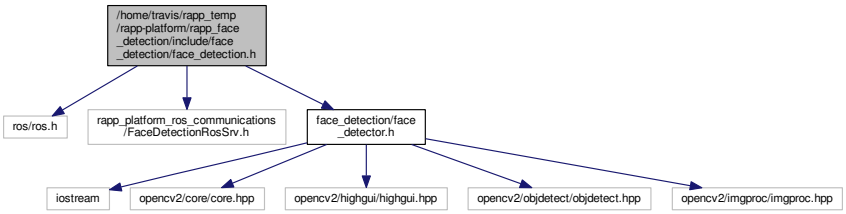
- tuple cognitive_exercise_main.CognitiveExerciseNode = CognitiveExercise()

  The main function that initiates the CognitiveExercise ROS Node.

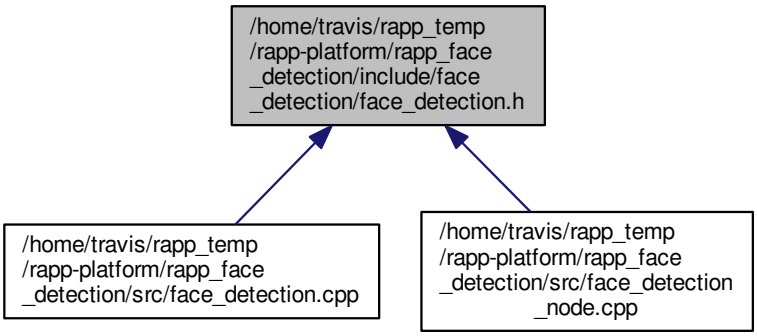
8.12 /home/travis/rapp_temp/rapp-platform/rapp_face_detection/include/face_detection/face_detection.h File Reference

```
#include "ros/ros.h"
#include <rapp_platform_ros_communications/FaceDetectionRosSrv.h>
#include <face_detection/face_detector.h>
```

Include dependency graph for face_detection.h:



This graph shows which files directly or indirectly include this file:



Classes

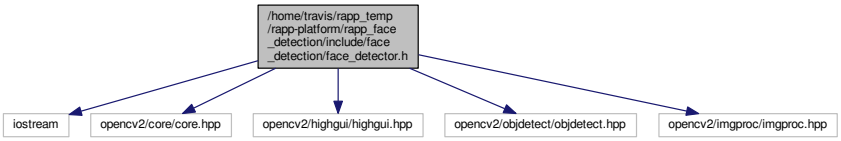
- class FaceDetection

  Class FaceDetection uptakes the task of handling the ROS service callbacks.

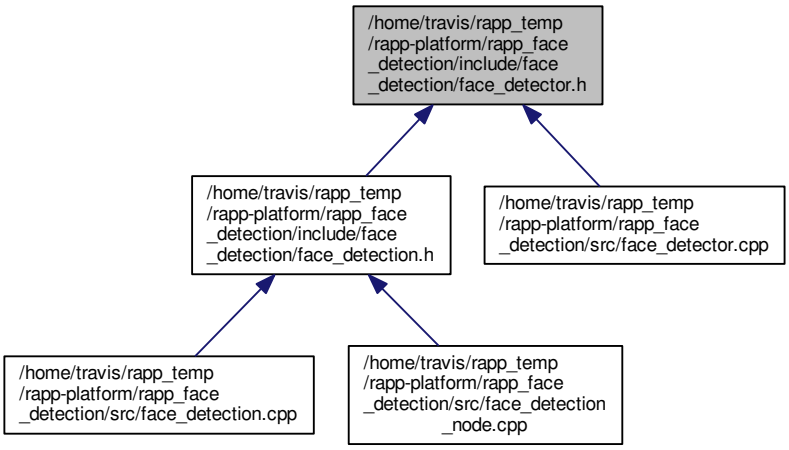
8.13 /home/travis/rapp_temp/rapp-platform/rapp_face_detection/include/face_detection/face_detector.h File Reference

```
#include <iostream>
#include <opencv2/core/core.hpp>
#include <opencv2/highgui/highgui.hpp>
#include <opencv2/objdetect/objdetect.hpp>
#include <opencv2/imgproc/imgproc.hpp>
```

Include dependency graph for face_detector.h:



This graph shows which files directly or indirectly include this file:



Classes

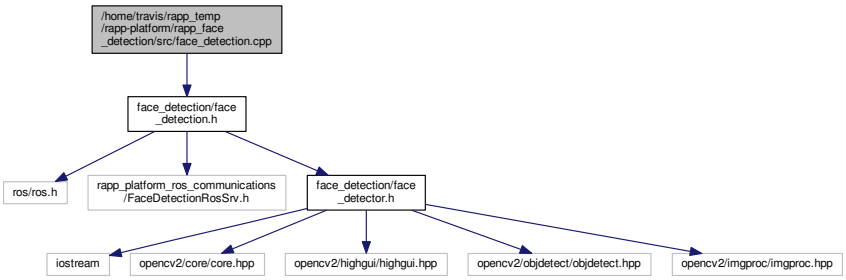
- class FaceDetector

  Class that implements a face detection algorithm based on a Haar cascade classifier.

8.14 /home/travis/rapp_temp/rapp-platform/rapp_face_detection/src/face_detection.cpp File Reference

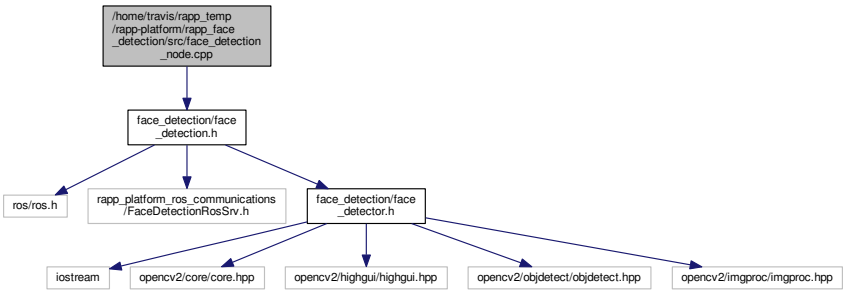
```
#include <face_detection/face_detection.h>
```

Include dependency graph for face_detection.cpp:



8.15 /home/travis/rapp_temp/rapp-platform/rapp_face_detection/src/face_detection_-node.cpp File Reference

`#include <face_detection/face_detection.h>`
Include dependency graph for face_detection_node.cpp:



Functions

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

  The executable's main function. Creates a ROS multispinner to enable concurrent requests and declares a Face-Detection object.

8.15.1 Function Documentation

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

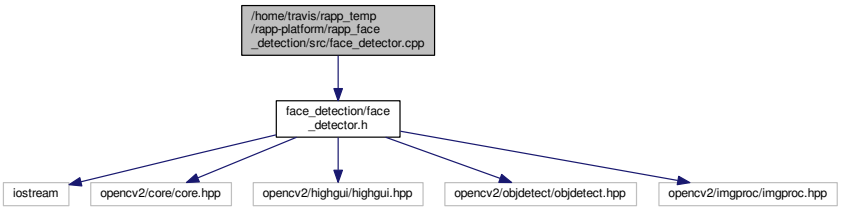
The executable's main function. Creates a ROS multispinner to enable concurrent requests and declares a Face-Detection object.

Definition at line 24 of file face_detection_node.cpp.

8.16 /home/travis/rapp_temp/rapp-platform/rapp_face_detection/src/face_detector.cpp File Reference

```
#include <face_detection/face_detector.h>
```

Include dependency graph for face_detector.cpp:

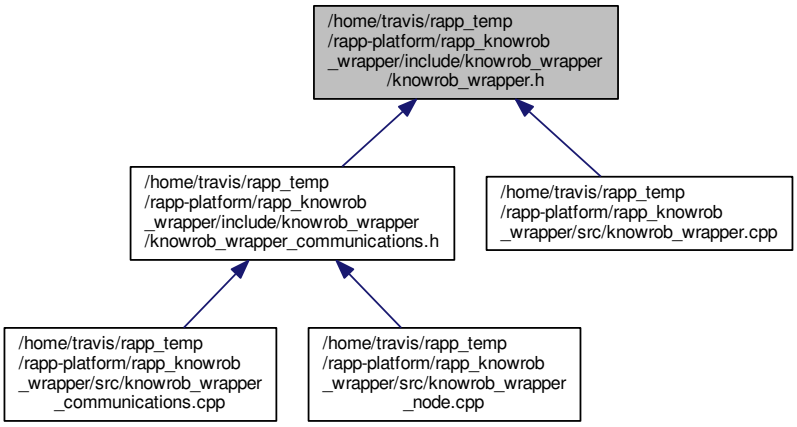


8.17 /home/travis/rapp_temp/rapp-platform/rapp_knowrob_wrapper/include/knowrob_wrapper/knowrob_wrapper.h File Reference

```
#include <string>
#include <iostream>
#include <json_prolog/prolog.h>
#include <rapp_platform_ros_communications/fetchDataSrv.h>
#include <rapp_platform_ros_communications/writeDataSrv.h>
#include <rapp_platform_ros_communications/updateDataSrv.h>
#include <rapp_platform_ros_communications/StringArrayMsg.h>
#include <rapp_platform_ros_communications/createInstanceSrv.h>
#include <rapp_platform_ros_communications/ontologyInstancesOfSrv.h>
#include <rapp_platform_ros_communications/ontologyLoadDumpSrv.h>
#include <rapp_platform_ros_communications/ontologySubSuperClassesOfSrv.h>
#include <rapp_platform_ros_communications/assertRetractAttributeSrv.h>
#include <rapp_platform_ros_communications/ontologyIsSubSuperClassOfSrv.h>
#include <rapp_platform_ros_communications/returnUserInstancesOfClassSrv.h>
#include <rapp_platform_ros_communications/createOntologyAliasSrv.h>
#include <rapp_platform_ros_communications/userPerformanceCognitveTests-
Srv.h>
#include <rapp_platform_ros_communications/createCognitiveExerciseTestSrv.-
h>
#include <rapp_platform_ros_communications/cognitiveTestsOfTypeSrv.h>
#include <rapp_platform_ros_communications/recordUserPerformanceCognitive-
TestsSrv.h>
#include <rapp_platform_ros_communications/clearUserPerformanceCognitve-
TestsSrv.h>
```

Include dependency graph for knowrob_wrapper.h:

This graph shows which files directly or indirectly include this file:



Classes

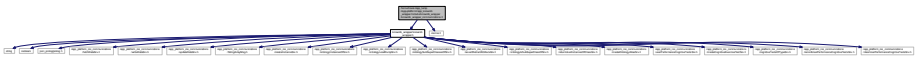
- class KnowrobWrapper

Class KnowrobWrapperCommunications contains all the necessary knowrob wrapper functions.

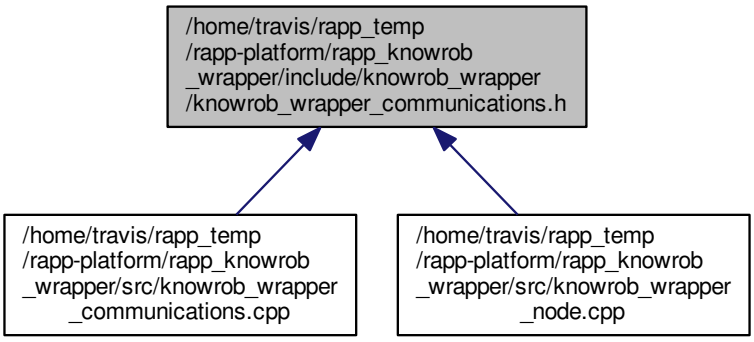
8.18 /home/travis/rapp_temp/rapp-platform/rapp_knowrob_wrapper/include/knowrob_-wrapper/knowrob_wrapper_communications.h File Reference

```
#include <knowrob_wrapper/knowrob_wrapper.h>
#include <ros/ros.h>
```

Include dependency graph for knowrob_wrapper_communications.h:



This graph shows which files directly or indirectly include this file:



Classes

- class KnowrobWrapperCommunications

  Class KnowrobWrapperCommunications uptakes the task of handling the ROS service callbacks.

8.19 /home/travis/rapp_temp/rapp-platform/rapp_knowrob_wrapper/src/knowrob_wrapper.cpp File Reference

```
#include <knowrob_wrapper/knowrob_wrapper.h>
#include <sys/stat.h>
#include <unistd.h>
#include <sstream>
#include <ros/package.h>
#include <fstream>
```

Include dependency graph for knowrob_wrapper.cpp:

Functions

- bool checkIfFileExists (const char *fileName)

  Checks if path exists.

- std::string intToString (int a)

  Converts integer to string.

- std::vector< std::string > split (std::string str, std::string sep)

  Splits string by delimiter.

- std::string SplitFilename (const std::string &str)

  Keeps only the final folder or file from a path.

8.19.1 Function Documentation

8.19.1.1 bool checkIfFileExists (const char * *fileName*)

Checks if path exists.

Parameters

fileName	[char∗] The input path

Returns

out [bool] True if file exists

Definition at line 66 of file knowrob_wrapper.cpp.

8.19.1.2 std::string intToString (int *a*)

Converts integer to string.

Parameters

a	[int] The input integer

Returns

out [string] The output string

Definition at line 42 of file knowrob_wrapper.cpp.

8.19.1.3 std::vector<std::string> split (std::string *str,* std::string *sep*)

Splits string by delimiter.

Parameters

str	[string] The input string
sep	[string] The delimiter

Returns

arr [std::vector<std::string>] A vector with the string parts as splitted by the delimiter

Definition at line 78 of file knowrob_wrapper.cpp.

8.19.1.4 std::string SplitFilename (const std::string & *str*)

Keeps only the final folder or file from a path.

Parameters

str	[string&] The input path

Returns

out [string] The output filename

Definition at line 54 of file knowrob_wrapper.cpp.

8.20 /home/travis/rapp_temp/rapp-platform/rapp_knowrob_wrapper/src/knowrob_wrapper_communications.cpp File Reference

```
#include <knowrob_wrapper/knowrob_wrapper_communications.h>
#include <ros/package.h>
```

Include dependency graph for knowrob_wrapper_communications.cpp:

8.21 /home/travis/rapp_temp/rapp-platform/rapp_knowrob_wrapper/src/knowrob_wrapper_node.cpp File Reference

```
#include <knowrob_wrapper/knowrob_wrapper_communications.h>
```

Include dependency graph for knowrob_wrapper_node.cpp:

Functions

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

  The executable's main function. Creates a ROS multispinner to enable concurrent requests and declares a KnowrobWrapperCommunications object.

8.21.1 Function Documentation

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

The executable's main function. Creates a ROS multispinner to enable concurrent requests and declares a KnowrobWrapperCommunications object.

Definition at line 28 of file knowrob_wrapper_node.cpp.

8.22 /home/travis/rapp_temp/rapp-platform/rapp_mysql_wrapper/src/mysql_wrapper.py File Reference

Classes

- class mysql_wrapper.MySQLdbWrapper

  The mysql wrapper ros node.

Namespaces

- mysql_wrapper

8.23 /home/travis/rapp_temp/rapp-platform/rapp_mysql_wrapper/src/mysql_wrapper_main.py File Reference

Namespaces

- mysql_wrapper_main

Variables

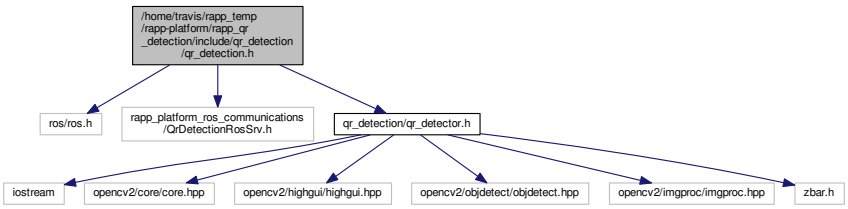
- tuple mysql_wrapper_main.MySQLWrapperNode = MySQLdbWrapper()

  The main function that initiates the rapp mysql wrapper ROS Node.

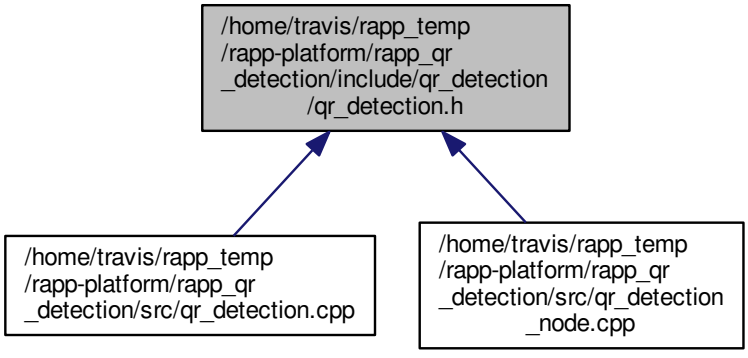
8.24 /home/travis/rapp_temp/rapp-platform/rapp_qr_detection/include/qr_detection/qr_detection.h File Reference

```
#include "ros/ros.h"
#include <rapp_platform_ros_communications/QrDetectionRosSrv.h>
#include <qr_detection/qr_detector.h>
```

Include dependency graph for qr_detection.h:



This graph shows which files directly or indirectly include this file:



Classes

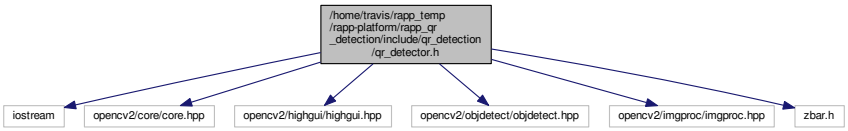
- class QrDetection

  Uptakes the task of setting up the ROS service callbacks towards qr detection.

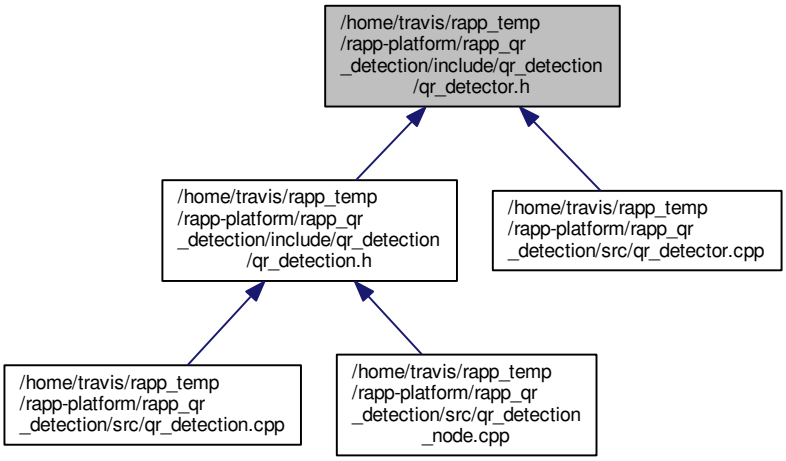
8.25 /home/travis/rapp_temp/rapp-platform/rapp_qr_detection/include/qr_detection/qr_detector.h File Reference

```
#include <iostream>
#include <opencv2/core/core.hpp>
#include <opencv2/highgui/highgui.hpp>
#include <opencv2/objdetect/objdetect.hpp>
#include <opencv2/imgproc/imgproc.hpp>
#include <zbar.h>
```

Include dependency graph for qr_detector.h:



This graph shows which files directly or indirectly include this file:



Classes

- class QrCode

  Structure holding the essential info for a QR code.

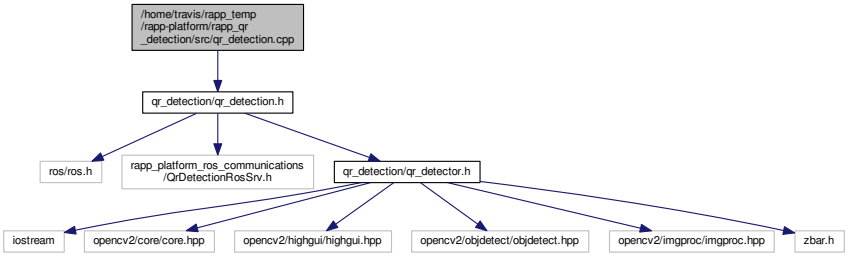
- class QrDetector

  Provides the QR detection functionality.

8.26 /home/travis/rapp_temp/rapp-platform/rapp_qr_detection/src/qr_detection.cpp File Reference

```
#include <qr_detection/qr_detection.h>
```

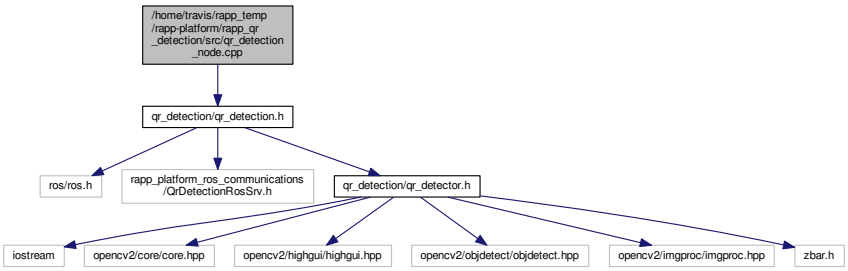
Include dependency graph for qr_detection.cpp:



8.27 /home/travis/rapp_temp/rapp-platform/rapp_qr_detection/src/qr_detection_node.cpp File Reference

```
#include <qr_detection/qr_detection.h>
```

Include dependency graph for qr_detection_node.cpp:



Functions

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

  The main function. Retrieves the threads parameter in order to enable concurrent service invocation.

8.27.1 Function Documentation

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

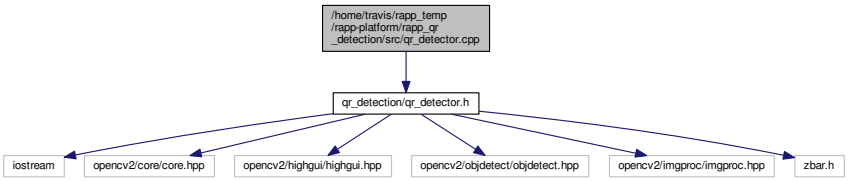
The main function. Retrieves the threads parameter in order to enable concurrent service invocation.

Definition at line 25 of file qr_detection_node.cpp.

8.28 /home/travis/rapp_temp/rapp-platform/rapp_qr_detection/src/qr_detector.cpp File Reference

```
#include <qr_detection/qr_detector.h>
```

Include dependency graph for qr_detector.cpp:



8.29 /home/travis/rapp_temp/rapp-platform/rapp_speech_detection_google/src/rapp_exceptions.py File Reference

Classes

- class rapp_exceptions.RappError

  Inherits Exception and is used to catch only RAPP-specific exceptions.

Namespaces

- rapp_exceptions

8.30 /home/travis/rapp_temp/rapp-platform/rapp_speech_detection_sphinx4/src/rapp_speech_detection_sphinx4/rapp_exceptions.py File Reference

Classes

- class rapp_speech_detection_sphinx4.rapp_exceptions.RappError

  Provides a RAPP specific exception.

Namespaces

- rapp_speech_detection_sphinx4.rapp_exceptions

8.31 /home/travis/rapp_temp/rapp-platform/rapp_text_to_speech_espeak/src/rapp_exceptions.py File Reference

Classes

- class rapp_exceptions.RappError

  Inherits Exception and is used to catch only RAPP-specific exceptions.

Namespaces

- rapp_exceptions

8.32 /home/travis/rapp_temp/rapp-platform/rapp_speech_detection_google/src/speech_recognition_google.py File Reference

Classes

- class speech_recognition_google.SpeechToTextGoogle

  Implements calls the Google ASR API.

Namespaces

- speech_recognition_google

Variables

- tuple speech_recognition_google.speech_to_text_node = SpeechToTextGoogle()

  The main function.

8.33 /home/travis/rapp_temp/rapp-platform/rapp_speech_detection_sphinx4/src/rapp_speech_detection_sphinx4/english_support.py File Reference

Classes

- class rapp_speech_detection_sphinx4.english_support.EnglishSupport

  Allows the creation of configuration files for English Sphinx speech recognition.

Namespaces

- rapp_speech_detection_sphinx4.english_support

8.34 /home/travis/rapp_temp/rapp-platform/rapp_speech_detection_sphinx4/src/rapp_speech_detection_sphinx4/global_parameters.py File Reference

Classes

- class rapp_speech_detection_sphinx4.global_parameters.GlobalParams

  Contains global Sphinx parameters.

Namespaces

- rapp_speech_detection_sphinx4.global_parameters

8.35 /home/travis/rapp_temp/rapp-platform/rapp_speech_detection_sphinx4/src/rapp_speech_detection_sphinx4/greek_support.py File Reference

Classes

- class rapp_speech_detection_sphinx4.greek_support.GreekSupport

  Allows the creation of configuration files for Greek Sphinx speech recognition.

Namespaces

- rapp_speech_detection_sphinx4.greek_support

8.36 /home/travis/rapp_temp/rapp-platform/rapp_speech_detection_sphinx4/src/rapp_speech_detection_sphinx4/limited_vocabulary_creator.py File Reference

Classes

- class rapp_speech_detection_sphinx4.limited_vocabulary_creator.LimitedVocabularyCreator

  Creates temporary configuration files for the input limited vocabulary.

Namespaces

- rapp_speech_detection_sphinx4.limited_vocabulary_creator

8.37 /home/travis/rapp_temp/rapp-platform/rapp_speech_detection_sphinx4/src/rapp_speech_detection_sphinx4/rapp_tools.py File Reference

Namespaces

- rapp_speech_detection_sphinx4.rapp_tools

Functions

- def rapp_speech_detection_sphinx4.rapp_tools.rapp_print

8.38 /home/travis/rapp_temp/rapp-platform/rapp_speech_detection_sphinx4/src/rapp_speech_detection_sphinx4/speech_recognition_sphinx4.py File Reference

Classes

- class rapp_speech_detection_sphinx4.speech_recognition_sphinx4.SpeechRecognitionSphinx4

  Provides a complete Rapp Sphinx Entity.

Namespaces

- rapp_speech_detection_sphinx4.speech_recognition_sphinx4

Variables

- tuple rapp_speech_detection_sphinx4.speech_recognition_sphinx4.SpeechRecognitionSphinx4Node = SpeechRecognitionSphinx4()

8.39 /home/travis/rapp_temp/rapp-platform/rapp_speech_detection_sphinx4/src/rapp_-speech_detection_sphinx4/speech_recognition_sphinx4_handler_node.py File Reference

Classes

- class rapp_speech_detection_sphinx4.speech_recognition_sphinx4_handler_node.SpeechRecognition-Sphinx4HandlerNode

  Maintains Sphinx instances to perform speech recognition.

Namespaces

- rapp_speech_detection_sphinx4.speech_recognition_sphinx4_handler_node

Variables

- tuple rapp_speech_detection_sphinx4.speech_recognition_sphinx4_handler_node.SpeechRecognition-Sphinx4HandlerNode = SpeechRecognitionSphinx4HandlerNode()

8.40 /home/travis/rapp_temp/rapp-platform/rapp_speech_detection_sphinx4/src/rapp_-speech_detection_sphinx4/sphinx4_configuration_params.py File Reference

Classes

- class rapp_speech_detection_sphinx4.sphinx4_configuration_params.SphinxConfigurationParams

  Contains the parameters required for the Sphinx configuration.

Namespaces

- rapp_speech_detection_sphinx4.sphinx4_configuration_params

8.41 /home/travis/rapp_temp/rapp-platform/rapp_speech_detection_sphinx4/src/rapp_-speech_detection_sphinx4/sphinx4_wrapper.py File Reference

Classes

- class rapp_speech_detection_sphinx4.sphinx4_wrapper.Sphinx4Wrapper

  Contains the Sphinx subprocess and is responsible for configuring Sphinx and performing the recognition request.

Namespaces

- rapp_speech_detection_sphinx4.sphinx4_wrapper

8.42 /home/travis/rapp_temp/rapp-platform/rapp_speech_detection_sphinx4/src/Sphinx4.java File Reference

Classes

- class Sphinx4

  Performs speech recognition employing Sphinx.

8.43 /home/travis/rapp_temp/rapp-platform/rapp_text_to_speech_espeak/src/text_to_speech_espeak.py File Reference

Classes

- class text_to_speech_espeak.TextToSpeechEspeak

Namespaces

- text_to_speech_espeak

Variables

- tuple text_to_speech_espeak.text_to_speech_espeak_ros_node = TextToSpeechEspeak()

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