

# RAPP Platform API

Generated by Doxygen 1.8.6

Wed Dec 9 2015 14:02:39



# Contents

<b>1</b>	<b>Namespace Index</b>	<b>1</b>
1.1	Packages	1
<b>2</b>	<b>Hierarchical Index</b>	<b>3</b>
2.1	Class Hierarchy	3
<b>3</b>	<b>Class Index</b>	<b>5</b>
3.1	Class List	5
<b>4</b>	<b>File Index</b>	<b>7</b>
4.1	File List	7
<b>5</b>	<b>Namespace Documentation</b>	<b>9</b>
5.1	rapp Namespace Reference	9
5.2	rapp::cloud Namespace Reference	9
5.2.1	Variable Documentation	10
5.2.1.1	address	10
5.2.1.2	auth_token	10
5.2.1.3	port	10
5.3	rapp::object Namespace Reference	10
5.4	rapp::robot Namespace Reference	10
5.5	rapp::services Namespace Reference	11
5.6	rapp::types Namespace Reference	11
5.6.1	Typedef Documentation	11
5.6.1.1	byte	11
5.7	RappCloud Namespace Reference	11
5.8	RappCloud.CloudInterface Namespace Reference	11
5.9	RappCloud.CloudInterface.CloudInterface Namespace Reference	12
5.10	RappCloud.RandStrGen Namespace Reference	12
5.11	RappCloud.RandStrGen.RandStrGen Namespace Reference	12
5.12	RappCloud.RappCloud Namespace Reference	12
5.12.1	Variable Documentation	12
5.12.1.1	__path__	12

<b>6</b>	<b>Class Documentation</b>	<b>13</b>
6.1	rapp::services::asio_service_http Class Reference	13
6.1.1	Detailed Description	15
6.1.2	Constructor & Destructor Documentation	15
6.1.2.1	asio_service_http	15
6.1.3	Member Function Documentation	15
6.1.3.1	error_handler	15
6.1.3.2	handle_connect	16
6.1.3.3	handle_read_content	16
6.1.3.4	handle_read_headers	16
6.1.3.5	handle_read_status_line	16
6.1.3.6	handle_resolve	16
6.1.3.7	handle_write_request	17
6.1.3.8	invalid_request	17
6.1.3.9	randomBoundary	17
6.1.3.10	Schedule	17
6.1.4	Member Data Documentation	17
6.1.4.1	callback_	17
6.1.4.2	header_	18
6.1.4.3	post_	18
6.1.4.4	request_	18
6.1.4.5	response_	18
6.1.4.6	socket_	18
6.2	rapp::services::asio_service_raw Class Reference	18
6.2.1	Detailed Description	20
6.2.2	Constructor & Destructor Documentation	20
6.2.2.1	asio_service_raw	20
6.2.2.2	asio_service_raw	20
6.2.3	Member Function Documentation	20
6.2.3.1	error_handler	20
6.2.3.2	handle_connect	21
6.2.3.3	handle_read_response	21
6.2.3.4	handle_reply	21
6.2.3.5	handle_resolve	21
6.2.3.6	handle_write_request	21
6.2.3.7	Schedule	22
6.2.4	Member Data Documentation	22
6.2.4.1	bytes_	22
6.2.4.2	callback_	22
6.2.4.3	complete_	22

6.2.4.4	<a href="#">request_</a>	22
6.2.4.5	<a href="#">response_</a>	22
6.2.4.6	<a href="#">socket_</a>	23
6.3	<a href="#">rapp::services::asio_socket Class Reference</a>	23
6.3.1	<a href="#">Detailed Description</a>	23
6.3.2	<a href="#">Member Function Documentation</a>	24
6.3.2.1	<a href="#">Schedule</a>	24
6.4	<a href="#">rapp::object::audio Class Reference</a>	24
6.4.1	<a href="#">Detailed Description</a>	25
6.4.2	<a href="#">Constructor &amp; Destructor Documentation</a>	25
6.4.2.1	<a href="#">audio</a>	25
6.4.2.2	<a href="#">audio</a>	25
6.4.2.3	<a href="#">audio</a>	25
6.4.2.4	<a href="#">audio</a>	25
6.4.3	<a href="#">Member Function Documentation</a>	25
6.4.3.1	<a href="#">bytearray</a>	25
6.4.3.2	<a href="#">openCopy_</a>	26
6.4.3.3	<a href="#">operator=</a>	26
6.4.3.4	<a href="#">operator==</a>	26
6.4.3.5	<a href="#">save</a>	26
6.4.4	<a href="#">Member Data Documentation</a>	26
6.4.4.1	<a href="#">bytearray_</a>	26
6.5	<a href="#">RappCloud.CloudInterface.CloudInterface.CloudInterface Class Reference</a>	26
6.5.1	<a href="#">Detailed Description</a>	26
6.5.2	<a href="#">Member Function Documentation</a>	27
6.5.2.1	<a href="#">callService</a>	27
6.5.2.2	<a href="#">isJson</a>	28
6.6	<a href="#">rapp::robot::communication Class Reference</a>	28
6.6.1	<a href="#">Detailed Description</a>	29
6.6.2	<a href="#">Member Enumeration Documentation</a>	29
6.6.2.1	<a href="#">Language</a>	29
6.6.3	<a href="#">Member Function Documentation</a>	29
6.6.3.1	<a href="#">captureAudio</a>	29
6.6.3.2	<a href="#">getMicrophoneEnergy</a>	29
6.6.3.3	<a href="#">playAudio</a>	29
6.6.3.4	<a href="#">textToSpeech</a>	29
6.6.3.5	<a href="#">voiceRecord</a>	30
6.6.3.6	<a href="#">wordSpotting</a>	31
6.7	<a href="#">rapp::object::face Class Reference</a>	31
6.7.1	<a href="#">Detailed Description</a>	31

6.7.2	Constructor & Destructor Documentation . . . . .	31
6.7.2.1	face . . . . .	31
6.7.2.2	face . . . . .	32
6.7.2.3	face . . . . .	32
6.7.3	Member Function Documentation . . . . .	32
6.7.3.1	operator== . . . . .	32
6.7.4	Member Data Documentation . . . . .	32
6.7.4.1	bottom_right_x__ . . . . .	32
6.7.4.2	bottom_right_y__ . . . . .	32
6.7.4.3	bottom_right_z__ . . . . .	32
6.7.4.4	top_left_x__ . . . . .	32
6.7.4.5	top_left_y__ . . . . .	32
6.7.4.6	top_left_z__ . . . . .	32
6.8	face Class Reference . . . . .	32
6.8.1	Detailed Description . . . . .	33
6.9	rapp::cloud::faceDetector Class Reference . . . . .	33
6.9.1	Detailed Description . . . . .	34
6.9.2	Constructor & Destructor Documentation . . . . .	35
6.9.2.1	faceDetector . . . . .	35
6.9.3	Member Function Documentation . . . . .	35
6.9.3.1	handle_reply . . . . .	35
6.9.4	Member Data Documentation . . . . .	35
6.9.4.1	delegate_ . . . . .	35
6.10	rapp::cloud::fetchPersonalData Class Reference . . . . .	35
6.10.1	Detailed Description . . . . .	37
6.10.2	Constructor & Destructor Documentation . . . . .	37
6.10.2.1	fetchPersonalData . . . . .	37
6.10.3	Member Function Documentation . . . . .	37
6.10.3.1	handle_reply . . . . .	37
6.10.4	Member Data Documentation . . . . .	38
6.10.4.1	delegate__ . . . . .	38
6.11	rapp::robot::nao Class Reference . . . . .	38
6.11.1	Detailed Description . . . . .	39
6.11.2	Constructor & Destructor Documentation . . . . .	39
6.11.2.1	nao . . . . .	39
6.11.3	Member Function Documentation . . . . .	39
6.11.3.1	captureImage . . . . .	39
6.11.3.2	Head . . . . .	39
6.11.3.3	lookAtPoint . . . . .	39
6.11.3.4	model . . . . .	40

6.11.3.5	<a href="#">moveJoint</a>	40
6.11.3.6	<a href="#">moveStop</a>	40
6.11.3.7	<a href="#">moveTo</a>	40
6.11.3.8	<a href="#">moveVel</a>	40
6.11.3.9	<a href="#">removeStiffness</a>	40
6.11.3.10	<a href="#">ruid</a>	40
6.11.3.11	<a href="#">takePredefinedPosture</a>	40
6.11.3.12	<a href="#">visOdom</a>	40
6.12	<a href="#">rapp::robot::navigation Class Reference</a>	40
6.12.1	<a href="#">Detailed Description</a>	41
6.12.2	<a href="#">Member Function Documentation</a>	41
6.12.2.1	<a href="#">lookAtPoint</a>	41
6.12.2.2	<a href="#">moveHead</a>	42
6.12.2.3	<a href="#">moveJoint</a>	42
6.12.2.4	<a href="#">moveStop</a>	42
6.12.2.5	<a href="#">moveTo</a>	42
6.12.2.6	<a href="#">moveVel</a>	42
6.12.2.7	<a href="#">removeStiffness</a>	42
6.12.2.8	<a href="#">takePredefinedPosture</a>	42
6.12.2.9	<a href="#">visOdom</a>	42
6.13	<a href="#">rapp::cloud::ontologyIsSubSuperClassOf Class Reference</a>	42
6.13.1	<a href="#">Detailed Description</a>	44
6.13.2	<a href="#">Constructor &amp; Destructor Documentation</a>	44
6.13.2.1	<a href="#">ontologyIsSubSuperClassOf</a>	44
6.13.3	<a href="#">Member Function Documentation</a>	44
6.13.3.1	<a href="#">handle_reply</a>	44
6.13.4	<a href="#">Member Data Documentation</a>	44
6.13.4.1	<a href="#">delegate__</a>	44
6.14	<a href="#">rapp::cloud::ontologySubClassesOf Class Reference</a>	44
6.14.1	<a href="#">Detailed Description</a>	46
6.14.2	<a href="#">Constructor &amp; Destructor Documentation</a>	46
6.14.2.1	<a href="#">ontologySubClassesOf</a>	46
6.14.3	<a href="#">Member Function Documentation</a>	46
6.14.3.1	<a href="#">handle_reply</a>	46
6.14.4	<a href="#">Member Data Documentation</a>	46
6.14.4.1	<a href="#">delegate__</a>	46
6.15	<a href="#">ontologySubclassOf Class Reference</a>	46
6.15.1	<a href="#">Detailed Description</a>	47
6.16	<a href="#">ontologySubSuperclassOf Class Reference</a>	47
6.16.1	<a href="#">Detailed Description</a>	47

6.17 rapp::cloud::ontologySuperClassesOf Class Reference	47
6.17.1 Detailed Description	49
6.17.2 Constructor & Destructor Documentation	49
6.17.2.1 ontologySuperClassesOf	49
6.17.3 Member Function Documentation	49
6.17.3.1 handle_reply	49
6.17.4 Member Data Documentation	49
6.17.4.1 delegate__	49
6.18 ontologySuperclassesOf Class Reference	49
6.18.1 Detailed Description	50
6.19 rapp::object::picture Class Reference	50
6.19.1 Detailed Description	51
6.19.2 Constructor & Destructor Documentation	51
6.19.2.1 picture	51
6.19.2.2 picture	51
6.19.2.3 picture	51
6.19.2.4 picture	51
6.19.3 Member Function Documentation	51
6.19.3.1 bytearray	51
6.19.3.2 openCopy__	51
6.19.3.3 operator=	51
6.19.3.4 operator==	52
6.19.3.5 save	52
6.19.4 Member Data Documentation	52
6.19.4.1 bytearray__	52
6.20 rapp::robot::proto Class Reference	52
6.20.1 Detailed Description	52
6.20.2 Member Function Documentation	53
6.20.2.1 model	53
6.20.2.2 ruid	53
6.21 rapp::object::qrCode Class Reference	53
6.21.1 Detailed Description	54
6.21.2 Constructor & Destructor Documentation	54
6.21.2.1 qrCode	54
6.21.2.2 qrCode	54
6.21.2.3 qrCode	54
6.21.3 Member Function Documentation	54
6.21.3.1 label	54
6.21.3.2 operator==	54
6.21.4 Member Data Documentation	55



6.21.4.1	<a href="#">centre_x__</a>	55
6.21.4.2	<a href="#">centre_y__</a>	55
6.21.4.3	<a href="#">message__</a>	55
6.22	<a href="#">rapp::cloud::qrDetector Class Reference</a>	55
6.22.1	<a href="#">Detailed Description</a>	56
6.22.2	<a href="#">Constructor &amp; Destructor Documentation</a>	57
6.22.2.1	<a href="#">qrDetector</a>	57
6.22.3	<a href="#">Member Function Documentation</a>	57
6.22.3.1	<a href="#">handle_reply</a>	57
6.22.4	<a href="#">Member Data Documentation</a>	57
6.22.4.1	<a href="#">delegate__</a>	57
6.23	<a href="#">RappCloud.RandStrGen.RandStrGen.RandStrGen Class Reference</a>	57
6.23.1	<a href="#">Detailed Description</a>	58
6.23.2	<a href="#">Member Function Documentation</a>	58
6.23.2.1	<a href="#">create</a>	58
6.23.3	<a href="#">Member Data Documentation</a>	58
6.23.3.1	<a href="#">__charsArray</a>	58
6.23.3.2	<a href="#">__defaultSize</a>	58
6.24	<a href="#">RappCloud.RappCloud.RappCloud Class Reference</a>	58
6.24.1	<a href="#">Detailed Description</a>	60
6.24.2	<a href="#">Constructor &amp; Destructor Documentation</a>	60
6.24.2.1	<a href="#">__init__</a>	60
6.24.3	<a href="#">Member Function Documentation</a>	60
6.24.3.1	<a href="#">__appendRandStr</a>	60
6.24.3.2	<a href="#">__parse_auth_cfg</a>	60
6.24.3.3	<a href="#">__parse_platform_cfg</a>	60
6.24.3.4	<a href="#">__parse_services_cfg</a>	60
6.24.3.5	<a href="#">available_services</a>	61
6.24.3.6	<a href="#">call_service</a>	61
6.24.3.7	<a href="#">cognitive_test_chooser</a>	61
6.24.3.8	<a href="#">detect_objects</a>	61
6.24.3.9	<a href="#">face_detection</a>	61
6.24.3.10	<a href="#">get_platform_services</a>	62
6.24.3.11	<a href="#">ontology_is_subsuperclass_of</a>	62
6.24.3.12	<a href="#">ontology_subclasses_of</a>	62
6.24.3.13	<a href="#">ontology_superclasses_of</a>	62
6.24.3.14	<a href="#">qr_detection</a>	63
6.24.3.15	<a href="#">record_cognitive_test_performance</a>	63
6.24.3.16	<a href="#">set_noise_profile</a>	63
6.24.3.17	<a href="#">speech_detection_google</a>	64

6.24.3.18	<a href="#">speech_detection_sphinx4</a>	64
6.24.3.19	<a href="#">text_to_speech</a>	64
6.24.4	<a href="#">Member Data Documentation</a>	65
6.24.4.1	<a href="#">__randStrSize</a>	65
6.24.4.2	<a href="#">auth_</a>	65
6.24.4.3	<a href="#">cfgFileDir_</a>	65
6.24.4.4	<a href="#">cfgParser_</a>	65
6.24.4.5	<a href="#">platform_params_</a>	65
6.24.4.6	<a href="#">platformIP_</a>	65
6.24.4.7	<a href="#">servicePort_</a>	65
6.24.4.8	<a href="#">services_</a>	65
6.24.4.9	<a href="#">serviceUrl_</a>	66
6.25	<a href="#">rapp::services::service_controller Class Reference</a>	66
6.25.1	<a href="#">Detailed Description</a>	66
6.25.2	<a href="#">Constructor &amp; Destructor Documentation</a>	67
6.25.2.1	<a href="#">service_controller</a>	67
6.25.3	<a href="#">Member Function Documentation</a>	67
6.25.3.1	<a href="#">queue</a>	67
6.25.3.2	<a href="#">runJob</a>	67
6.25.3.3	<a href="#">runJobs</a>	67
6.25.4	<a href="#">Member Data Documentation</a>	68
6.25.4.1	<a href="#">auth_base64_</a>	68
6.25.4.2	<a href="#">io_service_</a>	68
6.25.4.3	<a href="#">mutex_</a>	68
6.25.4.4	<a href="#">password_</a>	68
6.25.4.5	<a href="#">query_</a>	68
6.25.4.6	<a href="#">resolver_</a>	68
6.25.4.7	<a href="#">server_</a>	68
6.25.4.8	<a href="#">username_</a>	69
6.25.4.9	<a href="#">work_</a>	69
6.26	<a href="#">rapp::cloud::setDenoiseProfile Class Reference</a>	69
6.26.1	<a href="#">Detailed Description</a>	70
6.26.2	<a href="#">Constructor &amp; Destructor Documentation</a>	71
6.26.2.1	<a href="#">setDenoiseProfile</a>	71
6.26.3	<a href="#">Member Function Documentation</a>	71
6.26.3.1	<a href="#">handle_reply</a>	71
6.27	<a href="#">rapp::cloud::speechToText Class Reference</a>	71
6.27.1	<a href="#">Detailed Description</a>	72
6.27.2	<a href="#">Constructor &amp; Destructor Documentation</a>	73
6.27.2.1	<a href="#">speechToText</a>	73

6.27.3	Member Function Documentation	73
6.27.3.1	handle_reply	73
6.27.4	Member Data Documentation	73
6.27.4.1	delegate_	73
6.28	rapp::robot::vision Class Reference	73
6.28.1	Detailed Description	74
6.28.2	Member Function Documentation	74
6.28.2.1	captureImage	74
<b>7</b>	<b>File Documentation</b>	<b>75</b>
7.1	/home/travis/rapp_temp/rapp-api/cpp/examples/face_detect.cpp File Reference	75
7.1.1	Function Documentation	75
7.1.1.1	main	75
7.2	/home/travis/rapp_temp/rapp-api/cpp/examples/fetch_data.cpp File Reference	76
7.2.1	Function Documentation	76
7.2.1.1	main	76
7.3	/home/travis/rapp_temp/rapp-api/cpp/examples/ontology_example.cpp File Reference	76
7.3.1	Function Documentation	77
7.3.1.1	main	77
7.4	/home/travis/rapp_temp/rapp-api/cpp/examples/picture_example.cpp File Reference	77
7.4.1	Function Documentation	78
7.4.1.1	main	78
7.5	/home/travis/rapp_temp/rapp-api/cpp/examples/qr_detect.cpp File Reference	78
7.5.1	Function Documentation	78
7.5.1.1	main	78
7.6	/home/travis/rapp_temp/rapp-api/cpp/examples/set_denoise_example.cpp File Reference	78
7.6.1	Function Documentation	79
7.6.1.1	main	79
7.7	/home/travis/rapp_temp/rapp-api/cpp/examples/speech_to_text.cpp File Reference	79
7.7.1	Function Documentation	79
7.7.1.1	main	80
7.8	/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/faceDetector/faceDetector.hpp File Reference	80
7.9	/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/faceDetector/Includes.ihh File Reference	81
7.10	/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/fetchPersonalData/Includes.ihh File Reference	82
7.11	/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/ontologyIsSubSuperClassOf/Includes.ihh File Reference	83
7.12	/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/ontologySubClassesOf/Includes.ihh File Reference	83
7.13	/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/ontologySuperClassesOf/Includes.ihh File Reference	84
7.14	/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/qrDetector/Includes.ihh File Reference	86

7.15	/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/setDenoiseProfile/Includes.ihh File Reference	87
7.16	/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/speechToText/Includes.ihh File Reference . . .	88
7.17	/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/upServices/Includes.ihh File Reference . . . .	89
7.18	/home/travis/rapp_temp/rapp-api/cpp/includes/objects/audio/Includes.ihh File Reference . . . . .	89
7.19	/home/travis/rapp_temp/rapp-api/cpp/includes/objects/face/Includes.ihh File Reference . . . . .	90
7.20	/home/travis/rapp_temp/rapp-api/cpp/includes/objects/picture/Includes.ihh File Reference . . . . .	90
7.21	/home/travis/rapp_temp/rapp-api/cpp/includes/objects/qrCode/Includes.ihh File Reference . . . . .	91
7.22	/home/travis/rapp_temp/rapp-api/cpp/includes/robot/communication/Includes.ihh File Reference . .	92
7.23	/home/travis/rapp_temp/rapp-api/cpp/includes/robot/nao/Includes.ihh File Reference . . . . .	94
7.24	/home/travis/rapp_temp/rapp-api/cpp/includes/robot/navigation/Includes.ihh File Reference . . . .	94
7.25	/home/travis/rapp_temp/rapp-api/cpp/includes/robot/proto/Includes.ihh File Reference . . . . .	95
7.26	/home/travis/rapp_temp/rapp-api/cpp/includes/robot/vision/Includes.ihh File Reference . . . . .	95
7.27	/home/travis/rapp_temp/rapp-api/cpp/includes/service/asio_service_http/Includes.ihh File Reference	96
7.28	/home/travis/rapp_temp/rapp-api/cpp/includes/service/asio_service_raw/Includes.ihh File Reference	97
7.29	/home/travis/rapp_temp/rapp-api/cpp/includes/service/asio_socket/Includes.ihh File Reference . . .	98
7.30	/home/travis/rapp_temp/rapp-api/cpp/includes/service/service_controller/Includes.ihh File Reference	99
7.31	/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/fetchPersonalData/fetchPersonalData.hpp File Reference . . . . .	100
7.32	/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/ontologyIsSubSuperClassOf/ontologyIsSub- SuperClassOf.hpp File Reference . . . . .	101
7.33	/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/ontologySubClassesOf/ontologySubClasses- Of.hpp File Reference . . . . .	102
7.34	/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/ontologySuperClassesOf/ontologySuper- ClassesOf.hpp File Reference . . . . .	104
7.35	/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/qrDetector/qrDetector.hpp File Reference . . .	105
7.36	/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/setDenoiseProfile/setDenoiseProfile.hpp File Reference . . . . .	106
7.37	/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/speechToText/speechToText.hpp File Reference	107
7.38	/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/upServices/upServices.hpp File Reference . .	107
7.39	/home/travis/rapp_temp/rapp-api/cpp/includes/objects/audio/audio.hpp File Reference . . . . .	108
7.40	/home/travis/rapp_temp/rapp-api/cpp/includes/objects/face/face.hpp File Reference . . . . .	109
7.41	/home/travis/rapp_temp/rapp-api/cpp/includes/objects/picture/picture.hpp File Reference . . . . .	110
7.42	/home/travis/rapp_temp/rapp-api/cpp/includes/objects/qrCode/qrCode.hpp File Reference . . . . .	111
7.43	/home/travis/rapp_temp/rapp-api/cpp/includes/robot/communication/communication.hpp File Refer- ence . . . . .	112
7.44	/home/travis/rapp_temp/rapp-api/cpp/includes/robot/nao/nao.hpp File Reference . . . . .	113
7.45	/home/travis/rapp_temp/rapp-api/cpp/includes/robot/navigation/navigation.hpp File Reference . . .	114
7.46	/home/travis/rapp_temp/rapp-api/cpp/includes/robot/proto/proto.hpp File Reference . . . . .	115
7.47	/home/travis/rapp_temp/rapp-api/cpp/includes/robot/vision/vision.hpp File Reference . . . . .	115
7.48	/home/travis/rapp_temp/rapp-api/cpp/includes/service/asio_service_http/asio_service_http.hpp File Reference . . . . .	116

7.49	/home/travis/rapp_temp/rapp-api/cpp/includes/service/asio_service_raw/asio_service_raw.cpp File Reference . . . . .	117
7.50	/home/travis/rapp_temp/rapp-api/cpp/includes/service/asio_service_raw/asio_service_raw.hpp File Reference . . . . .	118
7.51	/home/travis/rapp_temp/rapp-api/cpp/includes/service/asio_socket/asio_socket.hpp File Reference . . . . .	119
7.52	/home/travis/rapp_temp/rapp-api/cpp/includes/service/globals/globals.hpp File Reference . . . . .	120
7.53	/home/travis/rapp_temp/rapp-api/cpp/includes/service/service_controller/service_controller.hpp File Reference . . . . .	121
7.54	/home/travis/rapp_temp/rapp-api/python/RappCloud/__init__.py File Reference . . . . .	121
7.55	/home/travis/rapp_temp/rapp-api/python/RappCloud/CloudInterface/__init__.py File Reference . . . . .	122
7.56	/home/travis/rapp_temp/rapp-api/python/RappCloud/RandStrGen/__init__.py File Reference . . . . .	122
7.57	/home/travis/rapp_temp/rapp-api/python/RappCloud/CloudInterface/CloudInterface.py File Reference . . . . .	122
7.57.1	Detailed Description . . . . .	122
7.58	/home/travis/rapp_temp/rapp-api/python/RappCloud/RandStrGen/RandStrGen.py File Reference . . . . .	122
7.58.1	Detailed Description . . . . .	123
7.59	/home/travis/rapp_temp/rapp-api/python/RappCloud/RappCloud.py File Reference . . . . .	123
7.59.1	Detailed Description . . . . .	123
	<b>Index</b>	<b>124</b>



# Chapter 1

## Namespace Index

### 1.1 Packages

Here are the packages with brief descriptions (if available):

<a href="#">rapp</a>	9
<a href="#">rapp::cloud</a>	9
<a href="#">rapp::object</a>	10
<a href="#">rapp::robot</a>	10
<a href="#">rapp::services</a>	11
<a href="#">rapp::types</a>	11
<a href="#">RappCloud</a>	11
<a href="#">RappCloud.CloudInterface</a>	11
<a href="#">RappCloud.CloudInterface.CloudInterface</a>	12
<a href="#">RappCloud.RandStrGen</a>	12
<a href="#">RappCloud.RandStrGen.RandStrGen</a>	12
<a href="#">RappCloud.RappCloud</a>	12





## Chapter 2

# Hierarchical Index

### 2.1 Class Hierarchy

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

rapp::services::asio_socket . . . . .	23
rapp::services::asio_service_http . . . . .	13
rapp::cloud::faceDetector . . . . .	33
rapp::cloud::fetchPersonalData . . . . .	35
rapp::cloud::ontologyIsSubSuperClassOf . . . . .	42
rapp::cloud::ontologySubClassesOf . . . . .	44
rapp::cloud::ontologySuperClassesOf . . . . .	47
rapp::cloud::qrDetector . . . . .	55
rapp::cloud::setDenoiseProfile . . . . .	69
rapp::cloud::speechToText . . . . .	71
rapp::services::asio_service_raw . . . . .	18
rapp::object::audio . . . . .	24
RappCloud.CloudInterface.CloudInterface.CloudInterface . . . . .	26
rapp::robot::communication . . . . .	28
rapp::object::face . . . . .	31
face . . . . .	32
rapp::robot::navigation . . . . .	40
rapp::robot::nao . . . . .	38
ontologySubclassOf . . . . .	46
ontologySubSuperclassOf . . . . .	47
ontologySuperclassesOf . . . . .	49
rapp::object::picture . . . . .	50
rapp::robot::proto . . . . .	52
rapp::robot::nao . . . . .	38
rapp::object::qrCode . . . . .	53
RappCloud.RandStrGen.RandStrGen.RandStrGen . . . . .	57
RappCloud.RappCloud.RappCloud . . . . .	58
rapp::services::service_controller . . . . .	66
rapp::robot::vision . . . . .	73
rapp::robot::nao . . . . .	38



## Chapter 3

# Class Index

### 3.1 Class List

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

<a href="#">rapp::services::asio_service_http</a>	Base class for asynchronous http websockets used for connecting to cloud services . . . . .	13
<a href="#">rapp::services::asio_service_raw</a>	Base class for asynchronous sockets used for connecting to cloud services . . . . .	18
<a href="#">rapp::services::asio_socket</a>	Abstract Base ASIO Socket class . . . . .	23
<a href="#">rapp::object::audio</a>	Class which wraps around raw bytes of an audiofile . . . . .	24
<a href="#">RappCloud.CloudInterface.CloudInterface.CloudInterface</a>	Cloud Interface class . . . . .	26
<a href="#">rapp::robot::communication</a>	Abstract Base Class (ABC) Interface for Robot Communication . . . . .	28
<a href="#">rapp::object::face</a>	face . . . . .	31
	Class which should somehow encapsulate a face . . . . .	32
<a href="#">rapp::cloud::faceDetector</a>	Asynchronous Service which will request the cloud to detect faces . . . . .	33
<a href="#">rapp::cloud::fetchPersonalData</a>	Get all personal data for a specific user . . . . .	35
<a href="#">rapp::robot::nao</a>	Implementation Class for Aldearan's NAO robot . . . . .	38
<a href="#">rapp::robot::navigation</a>	Abstract Base Class (ABC) Interface for Navigation . . . . .	40
<a href="#">rapp::cloud::ontologyIsSubSuperClassOf</a>	. . . . .	42
<a href="#">rapp::cloud::ontologySubClassesOf</a>	. . . . .	44
<a href="#">ontologySubclassOf</a>	Asynchronous Service which will request the Ontology Subclass of/for an Input . . . . .	46
<a href="#">ontologySubSuperclassOf</a>	. . . . .	47
<a href="#">rapp::cloud::ontologySuperClassesOf</a>	. . . . .	47
<a href="#">ontologySuperclassesOf</a>	. . . . .	49
<a href="#">rapp::object::picture</a>	Class which wraps around raw bytes of a picture . . . . .	50
<a href="#">rapp::robot::proto</a>	Abstract Base Class (ABC) Interface Prototype for all Robots . . . . .	52
<a href="#">rapp::object::qrCode</a>	Class which should encapsulate a QR code . . . . .	53
<a href="#">rapp::cloud::qrDetector</a>	Asynchronous Service which will request the cloud to detect QR codes . . . . .	55

<a href="#">RappCloud.RandStrGen.RandStrGen.RandStrGen</a>	
Random String Generator class . . . . .	57
<a href="#">RappCloud.RappCloud.RappCloud</a>	
Rapp Platform API class . . . . .	58
<a href="#">rapp::services::service_controller</a>	
Main class that controllers RAPP Services . . . . .	66
<a href="#">rapp::cloud::setDenoiseProfile</a>	
Setting the denoising audio profile for speech recognition . . . . .	69
<a href="#">rapp::cloud::speechToText</a>	
Asynchronous Service which will request the cloud to process speech-to-text . . . . .	71
<a href="#">rapp::robot::vision</a>	
Abstract Base Class (ABC) Interface for Vision . . . . .	73

## Chapter 4

# File Index

### 4.1 File List

Here is a list of all files with brief descriptions:

/home/travis/rapp_temp/rapp-api/cpp/examples/face_detect.cpp	75
/home/travis/rapp_temp/rapp-api/cpp/examples/fetch_data.cpp	76
/home/travis/rapp_temp/rapp-api/cpp/examples/ontology_example.cpp	76
/home/travis/rapp_temp/rapp-api/cpp/examples/picture_example.cpp	77
/home/travis/rapp_temp/rapp-api/cpp/examples/qr_detect.cpp	78
/home/travis/rapp_temp/rapp-api/cpp/examples/set_denoise_example.cpp	78
/home/travis/rapp_temp/rapp-api/cpp/examples/speech_to_text.cpp	79
/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/faceDetector/faceDetector.hpp	80
/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/faceDetector/Includes.ihh	81
/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/fetchPersonalData/fetchPersonalData.hpp	100
/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/fetchPersonalData/Includes.ihh	82
/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/ontologyIsSubSuperClassOf/Includes.ihh	83
/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/ontologyIsSubSuperClassOf/ontologyIsSubSuperClassOf.hpp	101
/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/ontologySubClassesOf/Includes.ihh	83
/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/ontologySubClassesOf/ontologySubClassesOf.hpp	102
/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/ontologySuperClassesOf/Includes.ihh	84
/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/ontologySuperClassesOf/ontologySuperClassesOf.hpp	104
/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/qrDetector/Includes.ihh	86
/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/qrDetector/qrDetector.hpp	105
/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/setDenoiseProfile/Includes.ihh	87
/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/setDenoiseProfile/setDenoiseProfile.hpp	106
/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/speechToText/Includes.ihh	88
/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/speechToText/speechToText.hpp	107
/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/upServices/Includes.ihh	89
/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/upServices/upServices.hpp	107
/home/travis/rapp_temp/rapp-api/cpp/includes/objects/audio/audio.hpp	108
/home/travis/rapp_temp/rapp-api/cpp/includes/objects/audio/Includes.ihh	89
/home/travis/rapp_temp/rapp-api/cpp/includes/objects/face/face.hpp	109
/home/travis/rapp_temp/rapp-api/cpp/includes/objects/face/Includes.ihh	90
/home/travis/rapp_temp/rapp-api/cpp/includes/objects/picture/Includes.ihh	90
/home/travis/rapp_temp/rapp-api/cpp/includes/objects/picture/picture.hpp	110
/home/travis/rapp_temp/rapp-api/cpp/includes/objects/qrCode/Includes.ihh	91
/home/travis/rapp_temp/rapp-api/cpp/includes/objects/qrCode/qrCode.hpp	111
/home/travis/rapp_temp/rapp-api/cpp/includes/robot/communication/communication.hpp	112
/home/travis/rapp_temp/rapp-api/cpp/includes/robot/communication/Includes.ihh	92
/home/travis/rapp_temp/rapp-api/cpp/includes/robot/nao/Includes.ihh	94

/home/travis/rapp_temp/rapp-api/cpp/includes/robot/nao/ <a href="#">nao.hpp</a> . . . . .	113
/home/travis/rapp_temp/rapp-api/cpp/includes/robot/navigation/ <a href="#">Includes.ihh</a> . . . . .	94
/home/travis/rapp_temp/rapp-api/cpp/includes/robot/navigation/ <a href="#">navigation.hpp</a> . . . . .	114
/home/travis/rapp_temp/rapp-api/cpp/includes/robot/proto/ <a href="#">Includes.ihh</a> . . . . .	95
/home/travis/rapp_temp/rapp-api/cpp/includes/robot/proto/ <a href="#">proto.hpp</a> . . . . .	115
/home/travis/rapp_temp/rapp-api/cpp/includes/robot/vision/ <a href="#">Includes.ihh</a> . . . . .	95
/home/travis/rapp_temp/rapp-api/cpp/includes/robot/vision/ <a href="#">vision.hpp</a> . . . . .	115
/home/travis/rapp_temp/rapp-api/cpp/includes/service/asio_service_http/ <a href="#">asio_service_http.hpp</a> . . . . .	116
/home/travis/rapp_temp/rapp-api/cpp/includes/service/asio_service_http/ <a href="#">Includes.ihh</a> . . . . .	96
/home/travis/rapp_temp/rapp-api/cpp/includes/service/asio_service_raw/ <a href="#">asio_service_raw.cpp</a> . . . . .	117
/home/travis/rapp_temp/rapp-api/cpp/includes/service/asio_service_raw/ <a href="#">asio_service_raw.hpp</a> . . . . .	118
/home/travis/rapp_temp/rapp-api/cpp/includes/service/asio_service_raw/ <a href="#">Includes.ihh</a> . . . . .	97
/home/travis/rapp_temp/rapp-api/cpp/includes/service/asio_socket/ <a href="#">asio_socket.hpp</a> . . . . .	119
/home/travis/rapp_temp/rapp-api/cpp/includes/service/asio_socket/ <a href="#">Includes.ihh</a> . . . . .	98
/home/travis/rapp_temp/rapp-api/cpp/includes/service/globals/ <a href="#">globals.hpp</a> . . . . .	120
/home/travis/rapp_temp/rapp-api/cpp/includes/service/service_controller/ <a href="#">Includes.ihh</a> . . . . .	99
/home/travis/rapp_temp/rapp-api/cpp/includes/service/service_controller/ <a href="#">service_controller.hpp</a> . . . . .	121
/home/travis/rapp_temp/rapp-api/python/RappCloud/ <a href="#">__init__.py</a> . . . . .	121
/home/travis/rapp_temp/rapp-api/python/RappCloud/ <a href="#">RappCloud.py</a> . . . . .	123
/home/travis/rapp_temp/rapp-api/python/RappCloud/CloudInterface/ <a href="#">__init__.py</a> . . . . .	122
/home/travis/rapp_temp/rapp-api/python/RappCloud/CloudInterface/ <a href="#">CloudInterface.py</a> . . . . .	122
/home/travis/rapp_temp/rapp-api/python/RappCloud/RandStrGen/ <a href="#">__init__.py</a> . . . . .	122
/home/travis/rapp_temp/rapp-api/python/RappCloud/RandStrGen/ <a href="#">RandStrGen.py</a> . . . . .	122

## Chapter 5

# Namespace Documentation

### 5.1 rapp Namespace Reference

#### Namespaces

- [cloud](#)
- [object](#)
- [robot](#)
- [services](#)
- [types](#)

### 5.2 rapp::cloud Namespace Reference

#### Classes

- class [faceDetector](#)  
*Asynchronous Service which will request the cloud to detect faces.*
- class [fetchPersonalData](#)  
*Get all personal data for a specific user.*
- class [ontologyIsSubSuperClassOf](#)
- class [ontologySubClassesOf](#)
- class [ontologySuperClassesOf](#)
- class [qrDetector](#)  
*Asynchronous Service which will request the cloud to detect QR codes.*
- class [setDenoiseProfile](#)  
*setting the denoising audio profile for speech recognition*
- class [speechToText](#)  
*Asynchronous Service which will request the cloud to process speech-to-text.*

#### Variables

- constexpr char [address](#) [] = "localhost"  
*api.rapp.cloud - use deployment IP*
- constexpr char [auth\\_token](#) [] = "cmFwcGRldjpyYXBwZGV2"  
*base64 encoded authentication token*
- constexpr char [port](#) [] = "9001"  
*api.rapp.cloud - HOP server port*

### 5.2.1 Variable Documentation

#### 5.2.1.1 `constexpr char rapp::cloud::address[] = "localhost"`

api.rapp.cloud - use deployment IP

A few global strings needed internally

Version

3

Date

13-February-2015

Author

Alex Gkiokas [a.gkiokas@ortelio.co.uk](mailto:a.gkiokas@ortelio.co.uk)

Definition at line 16 of file globals.hpp.

#### 5.2.1.2 `constexpr char rapp::cloud::auth_token[] = "cmFwcGRldjpyYXBwZGV2"`

base64 encoded authentication token

Definition at line 22 of file globals.hpp.

#### 5.2.1.3 `constexpr char rapp::cloud::port[] = "9001"`

api.rapp.cloud - HOP server port

Definition at line 19 of file globals.hpp.

## 5.3 `rapp::object` Namespace Reference

### Classes

- class [audio](#)  
*class which wraps around raw bytes of an audiofile*
- class [face](#)
- class [picture](#)  
*class which wraps around raw bytes of a picture*
- class [qrCode](#)  
*class which should encapsulate a QR code*

## 5.4 `rapp::robot` Namespace Reference

### Classes

- class [communication](#)  
*Abstract Base Class (ABC) Interface for Robot Communication.*
- class [nao](#)



*Implementation Class for Aldearan's NAO robot.*

- class [navigation](#)

*Abstract Base Class (ABC) Interface for Navigation.*

- class [proto](#)

*Abstract Base Class (ABC) Interface Prototype for all Robots.*

- class [vision](#)

*Abstract Base Class (ABC) Interface for Vision.*

## 5.5 rapp::services Namespace Reference

### Classes

- class [asio\\_service\\_http](#)

*base class for asynchronous http websockets used for connecting to cloud services*

- class [asio\\_service\\_raw](#)

*base class for asynchronous sockets used for connecting to cloud services*

- class [asio\\_socket](#)

*Abstract Base ASIO Socket class.*

- class [service\\_controller](#)

*Main class that controllers RAPP Services.*

## 5.6 rapp::types Namespace Reference

### Typedefs

- typedef char [byte](#)

### 5.6.1 Typedef Documentation

#### 5.6.1.1 typedef char rapp::types::byte

Definition at line 27 of file globals.hpp.

## 5.7 RappCloud Namespace Reference

### Namespaces

- [CloudInterface](#)
- [RandStrGen](#)
- [RappCloud](#)

## 5.8 RappCloud.CloudInterface Namespace Reference

### Namespaces

- [CloudInterface](#)

## 5.9 RappCloud.CloudInterface.CloudInterface Namespace Reference

### Classes

- class [CloudInterface](#)  
*Cloud Interface class.*

## 5.10 RappCloud.RandStrGen Namespace Reference

### Namespaces

- [RandStrGen](#)

## 5.11 RappCloud.RandStrGen.RandStrGen Namespace Reference

### Classes

- class [RandStrGen](#)  
*Random String Generator class.*

## 5.12 RappCloud.RappCloud Namespace Reference

### Classes

- class [RappCloud](#)  
*Rapp Platform API class.*

### Variables

- tuple [\\_\\_path\\_\\_](#) = os.path.dirname(\_\_file\_\_)

### 5.12.1 Variable Documentation

#### 5.12.1.1 tuple RappCloud.RappCloud.\_\_path\_\_ = os.path.dirname(\_\_file\_\_)

Definition at line 39 of file RappCloud.py.

## Chapter 6

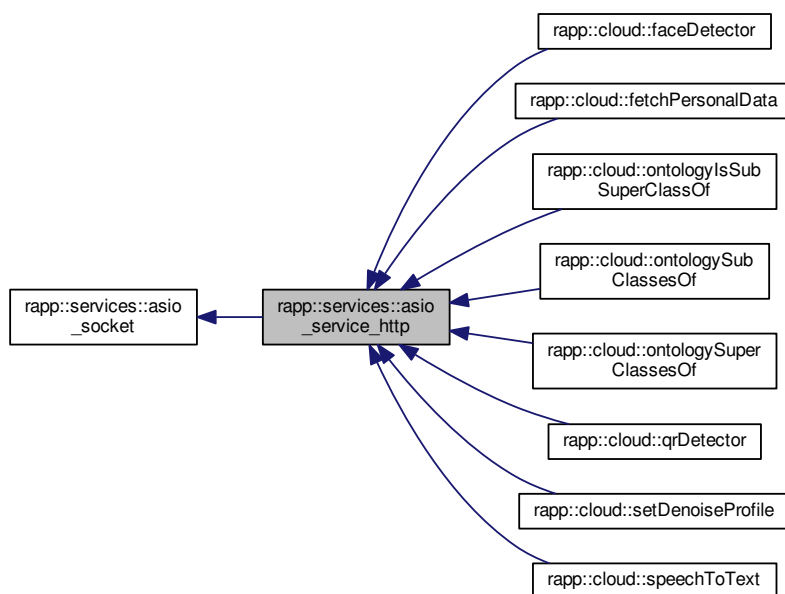
# Class Documentation

### 6.1 rapp::services::asio\_service\_http Class Reference

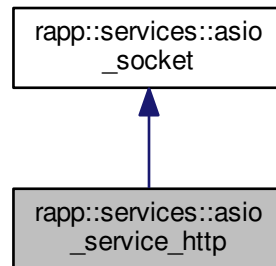
base class for asynchronous http websockets used for connecting to cloud services

```
#include <asio_service_http.hpp>
```

Inheritance diagram for rapp::services::asio\_service\_http:



Collaboration diagram for `rapp::services::asio_service_http`:



## Public Member Functions

- void [Schedule](#) (boost::asio::ip::tcp::resolver::query &query, boost::asio::ip::tcp::resolver &resolver, boost::asio::io\_service &io\_service)

## Protected Member Functions

- [asio\\_service\\_http](#) ()=default  
*Hidden empty constructor is meant to be used only by inheriting classes.*
- void [error\\_handler](#) (const boost::system::error\_code &error)  
*Handle an Error.*
- void [handle\\_connect](#) (const boost::system::error\_code &err, boost::asio::ip::tcp::resolver::iterator endpoint\_iterator)
- void [handle\\_read\\_content](#) (const boost::system::error\_code &err)  
*Callback for Handling Actual Data Contents.*
- void [handle\\_read\\_headers](#) (const boost::system::error\_code &err)  
*Callback for Handling Headers.*
- void [handle\\_read\\_status\\_line](#) (const boost::system::error\_code &err)  
*Callback for handling HTTP Header Response Data.*
- void [handle\\_resolve](#) (const boost::system::error\_code &err, boost::asio::ip::tcp::resolver::iterator endpoint\_iterator)  
*Callback for Handling Address Resolution.*
- void [handle\\_write\\_request](#) (const boost::system::error\_code &err)  
*Callback for handling request and waiting for response.*
- void [invalid\\_request](#) (const std::string message)  
*Handle Invalid Query - e.g.: response which states our query was invalid.*
- std::string [randomBoundary](#) () const  
*Create a random boundary for the multipart/form in HTTP.*

## Protected Attributes

- std::function< void(std::string)> [callback\\_](#)  
*Callback Handler - use with std::bind or boost variant.*
- std::string [header\\_](#)

- Header that will be used.*
- std::string [post\\_](#)  
*Actual post Data.*
- boost::asio::streambuf [request\\_](#)  
*Request Container.*
- boost::asio::streambuf [response\\_](#)  
*Response Container.*
- std::unique\_ptr  
< boost::asio::ip::tcp::socket > [socket\\_](#)  
*Actual Socket.*

### 6.1.1 Detailed Description

base class for asynchronous http websockets used for connecting to cloud services

#### Version

6

#### Date

26-April-2015

#### Author

Alex Gkiokas [a.gkiokas@ortelio.co.uk](mailto:a.gkiokas@ortelio.co.uk)

#### See Also

<http://www.jmarshall.com/easy/http/#postmethod> for HTTP Protocol details

#### Warning

this class does not support SSL/TLS sockets

Definition at line 18 of file asio\_service\_http.hpp.

### 6.1.2 Constructor & Destructor Documentation

6.1.2.1 `rapp::services::asio_service_http::asio_service_http ( )` `[protected]`, `[default]`

Hidden empty constructor is meant to be used only by inheriting classes.

### 6.1.3 Member Function Documentation

6.1.3.1 `void rapp::services::asio_service_http::error_handler ( const boost::system::error_code & error )` `[protected]`

Handle an Error.

## Parameters

<i>error</i>	is the raised error from the client
--------------	-------------------------------------

Definition at line 53 of file asio\_service\_http.hpp.

6.1.3.2 void rapp::services::asio\_service\_http::handle\_connect ( const boost::system::error\_code & *err*,  
boost::asio::ip::tcp::resolver::iterator *endpoint\_iterator* ) [protected]

Callback for Handling Connection Events

## Parameters

<i>err</i>	is a possible error
<i>endpoint_iterator</i>	is boosts' hostname address handler

Definition at line 93 of file asio\_service\_http.hpp.

6.1.3.3 void rapp::services::asio\_service\_http::handle\_read\_content ( const boost::system::error\_code & *err* )  
[protected]

Callback for Handling Actual Data Contents.

## Parameters

<i>err</i>	is a possible error message
------------	-----------------------------

Definition at line 193 of file asio\_service\_http.hpp.

6.1.3.4 void rapp::services::asio\_service\_http::handle\_read\_headers ( const boost::system::error\_code & *err* )  
[protected]

Callback for Handling Headers.

## Parameters

<i>err</i>	is a possible error message
------------	-----------------------------

Definition at line 176 of file asio\_service\_http.hpp.

6.1.3.5 void rapp::services::asio\_service\_http::handle\_read\_status\_line ( const boost::system::error\_code & *err* )  
[protected]

Callback for handling HTTP Header Response Data.

## Parameters

<i>err</i>	is a possible error message
------------	-----------------------------

Definition at line 139 of file asio\_service\_http.hpp.

6.1.3.6 void rapp::services::asio\_service\_http::handle\_resolve ( const boost::system::error\_code & *err*,  
boost::asio::ip::tcp::resolver::iterator *endpoint\_iterator* ) [protected]

Callback for Handling Address Resolution.

## Parameters

<i>err</i>	is a possible error
<i>endpoint_iterator</i>	is boost's hostname address handler

Definition at line 69 of file asio\_service\_http.hpp.

**6.1.3.7** void rapp::services::asio\_service\_http::handle\_write\_request ( const boost::system::error\_code & *err* )  
[protected]

Callback for handling request and waiting for response.

## Parameters

<i>err</i>	is a possible error
------------	---------------------

Definition at line 121 of file asio\_service\_http.hpp.

**6.1.3.8** void rapp::services::asio\_service\_http::invalid\_request ( const std::string *message* ) [protected]

Handle Invalid Query - e.g.: response which states our query was invalid.

## Parameters

<i>message</i>	is the message received from the service
----------------	--

Definition at line 59 of file asio\_service\_http.hpp.

**6.1.3.9** std::string rapp::services::asio\_service\_http::randomBoundary ( ) const [protected]

Create a random boundary for the multipart/form in HTTP.

Definition at line 226 of file asio\_service\_http.hpp.

**6.1.3.10** void rapp::services::asio\_service\_http::Schedule ( boost::asio::ip::tcp::resolver::query & *query*,  
boost::asio::ip::tcp::resolver & *resolver*, boost::asio::io\_service & *io\_service* ) [virtual]

Schedule this client as a job for execution using

## Parameters

<i>query</i>	defines the actual URL/URI
<i>resolver</i>	is the URL/URI resolver reference
<i>io_service</i>	is the service queue on which this job will be scheduled to run

Implements [rapp::services::asio\\_socket](#).

Definition at line 28 of file asio\_service\_http.hpp.

## 6.1.4 Member Data Documentation

**6.1.4.1** std::function<void( std::string )> rapp::services::asio\_service\_http::callback\_ [protected]

Callback Handler - use with std::bind or boost variant.

Definition at line 251 of file asio\_service\_http.hpp.

#### 6.1.4.2 `std::string rapp::services::asio_service_http::header_` [protected]

Header that will be used.

Definition at line 245 of file `asio_service_http.hpp`.

#### 6.1.4.3 `std::string rapp::services::asio_service_http::post_` [protected]

Actual post Data.

Definition at line 248 of file `asio_service_http.hpp`.

#### 6.1.4.4 `boost::asio::streambuf rapp::services::asio_service_http::request_` [protected]

Request Container.

Definition at line 257 of file `asio_service_http.hpp`.

#### 6.1.4.5 `boost::asio::streambuf rapp::services::asio_service_http::response_` [protected]

Response Container.

Definition at line 260 of file `asio_service_http.hpp`.

#### 6.1.4.6 `std::unique_ptr<boost::asio::ip::tcp::socket> rapp::services::asio_service_http::socket_` [protected]

Actual Socket.

Definition at line 254 of file `asio_service_http.hpp`.

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

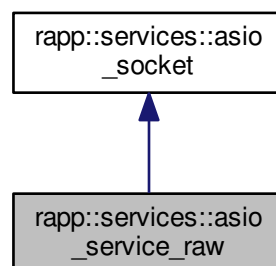
- `/home/travis/rapp_temp/rapp-api/cpp/includes/service/asio_service_http/asio_service_http.hpp`

## 6.2 `rapp::services::asio_service_raw` Class Reference

base class for asynchronous sockets used for connecting to cloud services

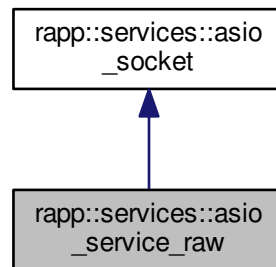
```
#include <asio_service_raw.hpp>
```

Inheritance diagram for `rapp::services::asio_service_raw`:





Collaboration diagram for rapp::services::asio\_service\_raw:



## Public Member Functions

- `asio_service_raw` (const std::vector< rapp::types::byte > &bytearray)  
*Construct an Asynchronous Socket Client without HTTP stuff, only XML delimiters.*
- `asio_service_raw` (const std::vector< rapp::types::byte > &bytearray, std::function< void(boost::asio::streambuf &)> callback)  
*Construct an Asynchronous Socket Client without HTTP stuff, only XML delimiters.*
- void `Schedule` (boost::asio::ip::tcp::resolver::query &query, boost::asio::ip::tcp::resolver &resolver, boost::asio::io\_service &io\_service)

## Protected Member Functions

- virtual void `error_handler` (const boost::system::error\_code &error)
- void `handle_connect` (const boost::system::error\_code &err, boost::asio::ip::tcp::resolver::iterator endpoint\_iterator)
- void `handle_read_response` (const boost::system::error\_code &err)
- virtual void `handle_reply` ()
- void `handle_resolve` (const boost::system::error\_code &err, boost::asio::ip::tcp::resolver::iterator endpoint\_iterator)
- void `handle_write_request` (const boost::system::error\_code &err)

## Protected Attributes

- std::vector< rapp::types::byte > `bytes_`  
*Actual bytestream that will be sent over the socket -.*
- std::function< void(boost::asio::streambuf &)> `callback_`  
*Optional Callback Handler.*
- bool `complete_` = false  
*Operation complete?*
- boost::asio::streambuf `request_`  
*Request buffer stream.*
- boost::asio::streambuf `response_`  
*Response buffer stream.*
- std::unique\_ptr< boost::asio::ip::tcp::socket > `socket_`  
*Actual Socket.*

### 6.2.1 Detailed Description

base class for asynchronous sockets used for connecting to cloud services

Version

2

Date

6-February-2015

Author

Alex Gkiokas [a.gkiokas@ortelio.co.uk](mailto:a.gkiokas@ortelio.co.uk)

Warning

this class does not support SSL/TLS sockets

WARNING RESTRUCTURE AS HEADER ONLY !!!! FACILITATE THE USAGE OF STREAMING BUFFERS FROM CLIENT TO SERVER AS THIS IS THE ONLY THING WE WILL USE THIS CLASS FOR !!!

WARNING THE virtual methods below are of no use - see how [asio\\_service\\_http](#) has been reworked and do the same here

Definition at line 19 of file asio\_service\_raw.hpp.

### 6.2.2 Constructor & Destructor Documentation

**6.2.2.1** `rapp::services::asio_service_raw::asio_service_raw ( const std::vector< rapp::types::byte > & bytearray )`

Construct an Asynchronous Socket Client without HTTP stuff, only XML delimiters.

Parameters

<i>bytearray</i>	is a vector which contains raw byte (char) values
------------------	---

Definition at line 7 of file asio\_service\_raw.cpp.

**6.2.2.2** `rapp::services::asio_service_raw::asio_service_raw ( const std::vector< rapp::types::byte > & bytearray, std::function< void(boost::asio::streambuf &)> callback )`

Construct an Asynchronous Socket Client without HTTP stuff, only XML delimiters.

Parameters

<i>bytearray</i>	is a vector which contains raw byte (char) values
<i>callback</i>	is a lambda or function pointer with the specific signature, that is invoked upon reply acquisition

Definition at line 12 of file asio\_service\_raw.cpp.

### 6.2.3 Member Function Documentation

**6.2.3.1** `void rapp::services::asio_service_raw::error_handler ( const boost::system::error_code & error )` `[protected]`, `[virtual]`

Handle an Error

## Parameters

<i>error</i>	is the raised error from the client
--------------	-------------------------------------

Definition at line 52 of file asio\_service\_raw.cpp.

**6.2.3.2** void rapp::services::asio\_service\_raw::handle\_connect ( const boost::system::error\_code & *err*, boost::asio::ip::tcp::resolver::iterator *endpoint\_iterator* ) [protected]

Callback for Handling Connection Events

## Parameters

<i>err</i>	is a possible error
<i>endpoint_iterator</i>	is boosts' hostname address handler

WARNING - Make this time-out

Definition at line 80 of file asio\_service\_raw.cpp.

**6.2.3.3** void rapp::services::asio\_service\_raw::handle\_read\_response ( const boost::system::error\_code & *err* ) [protected]

Callback for handling reading the reponse from the server

Definition at line 134 of file asio\_service\_raw.cpp.

**6.2.3.4** void rapp::services::asio\_service\_raw::handle\_reply ( ) [protected], [virtual]

Handle the Reply

## Note

you have to override this method if inheriting

Definition at line 45 of file asio\_service\_raw.cpp.

**6.2.3.5** void rapp::services::asio\_service\_raw::handle\_resolve ( const boost::system::error\_code & *err*, boost::asio::ip::tcp::resolver::iterator *endpoint\_iterator* ) [protected]

Callback for Handling Address Resolution

## Parameters

<i>err</i>	is a possible error
<i>endpoint_iterator</i>	is boost's hostname address handler

Definition at line 57 of file asio\_service\_raw.cpp.

**6.2.3.6** void rapp::services::asio\_service\_raw::handle\_write\_request ( const boost::system::error\_code & *err* ) [protected]

Callback for handling sending request and waiting for a response

## Parameters

<i>err</i>	is a possible error
------------	---------------------

NOTE: Make this time-out, we don't want to wait forever for a reply!

Definition at line 113 of file asio\_service\_raw.cpp.

**6.2.3.7** `void rapp::services::asio_service_raw::Schedule ( boost::asio::ip::tcp::resolver::query & query, boost::asio::ip::tcp::resolver & resolver, boost::asio::io_service & io_service ) [virtual]`

Schedule this client as a job for execution using

#### Parameters

<i>query</i>	defines the actual URL/URI
<i>resolver</i>	is the URL/URI resolver reference
<i>io_service</i>	is the service queue on which this job will be scheduled to run

Implements [rapp::services::asio\\_socket](#).

Definition at line 21 of file asio\_service\_raw.cpp.

## 6.2.4 Member Data Documentation

**6.2.4.1** `std::vector<rapp::types::byte> rapp::services::asio_service_raw::bytes_ [protected]`

Actual bytestream that will be sent over the socket -.

#### Note

: be careful not to consume it prematurely!

Definition at line 99 of file asio\_service\_raw.hpp.

**6.2.4.2** `std::function<void( boost::asio::streambuf & )> rapp::services::asio_service_raw::callback_ [protected]`

Optional Callback Handler.

Definition at line 102 of file asio\_service\_raw.hpp.

**6.2.4.3** `bool rapp::services::asio_service_raw::complete_ = false [protected]`

Operation complete?

Definition at line 114 of file asio\_service\_raw.hpp.

**6.2.4.4** `boost::asio::streambuf rapp::services::asio_service_raw::request_ [protected]`

Request buffer stream.

Definition at line 108 of file asio\_service\_raw.hpp.

**6.2.4.5** `boost::asio::streambuf rapp::services::asio_service_raw::response_ [protected]`

Response buffer stream.

Definition at line 111 of file asio\_service\_raw.hpp.

6.2.4.6 `std::unique_ptr<boost::asio::ip::tcp::socket> rapp::services::asio_service_raw::socket_` `[protected]`

Actual Socket.

Definition at line 105 of file `asio_service_raw.hpp`.

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

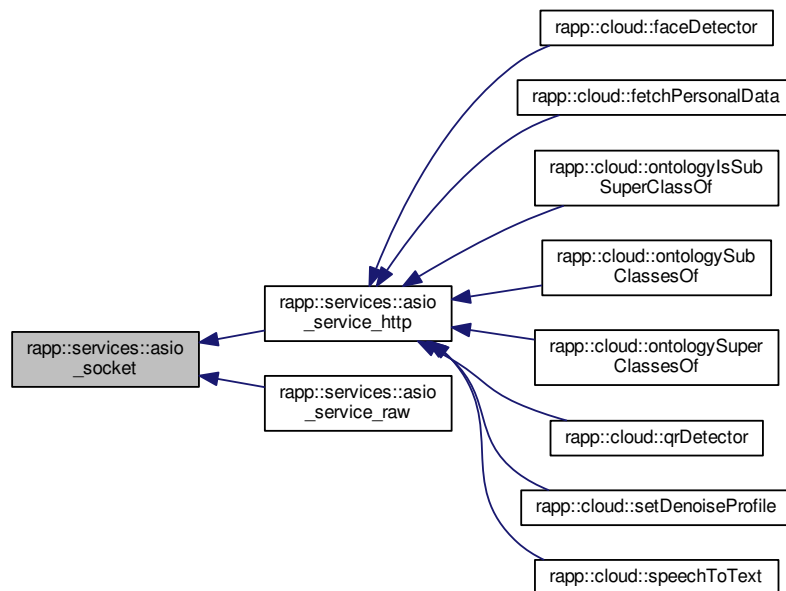
- `/home/travis/rapp_temp/rapp-api/cpp/includes/service/asio_service_raw/asio_service_raw.hpp`
- `/home/travis/rapp_temp/rapp-api/cpp/includes/service/asio_service_raw/asio_service_raw.cpp`

## 6.3 rapp::services::asio\_socket Class Reference

Abstract Base ASIO Socket class.

```
#include <asio_socket.hpp>
```

Inheritance diagram for `rapp::services::asio_socket`:



### Public Member Functions

- virtual void [Schedule](#) (`boost::asio::ip::tcp::resolver::query &`, `boost::asio::ip::tcp::resolver &`, `boost::asio::io_service &`)=0

#### 6.3.1 Detailed Description

Abstract Base ASIO Socket class.

Use for passing around the service controller, various types of sockets This Interface is needed, so that different services, can be passed to the scheduler transparently

## Version

2

## Date

26-April-2015

## Author

Alex Gkiokas [a.gkiokas@ortelio.co.uk](mailto:a.gkiokas@ortelio.co.uk)

Definition at line 19 of file asio\_socket.hpp.

### 6.3.2 Member Function Documentation

6.3.2.1 `virtual void rapp::services::asio_socket::Schedule ( boost::asio::ip::tcp::resolver::query & , boost::asio::ip::tcp::resolver & , boost::asio::io_service & ) [pure virtual]`

Schedule this client as a job for execution using

## Parameters

<i>query</i>	defines the actual URL/URI
<i>resolver</i>	is the URL/URI resolver reference
<i>io_service</i>	is the service queue on which this job will be scheduled to run

Implemented in [rapp::services::asio\\_service\\_raw](#), and [rapp::services::asio\\_service\\_http](#).

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

- [/home/travis/rapp\\_temp/rapp-api/cpp/includes/service/asio\\_socket/asio\\_socket.hpp](#)

## 6.4 rapp::object::audio Class Reference

class which wraps around raw bytes of an audiofile

```
#include <audio.hpp>
```

### Public Member Functions

- [audio](#) (const std::string filepath)  
*Construct from a file-path.*
- [audio](#) (std::ifstream &bytestream)  
*Construct using an open file stream.*
- [audio](#) (const [audio](#) &)=default  
*Copy constructor.*
- std::vector< [rapp::types::byte](#) > [bytearray](#) () const  
*Get audio as array of bytes.*
- [audio](#) & [operator=](#) (const [audio](#) &)=default  
*Assignment operator.*
- bool [operator==](#) (const [audio](#) &rhs) const  
*Are audios same ?*
- bool [save](#) (const std::string filepath)  
*Save audio to filepath.*

## Private Member Functions

- [audio](#) ()=delete
- void [openCopy\\_](#) (std::ifstream &bytestream)

## Private Attributes

- std::vector< [rapp::types::byte](#) > [bytearray\\_](#)

### 6.4.1 Detailed Description

class which wraps around raw bytes of an audiofile

#### Version

1

#### Date

16-August-2015

#### Author

Alex Gkiokas [a.gkiokas@ortelio.co.uk](mailto:a.gkiokas@ortelio.co.uk)

Definition at line 13 of file audio.hpp.

### 6.4.2 Constructor & Destructor Documentation

#### 6.4.2.1 rapp::object::audio::audio ( const std::string *filepath* )

Construct from a file-path.

Definition at line 18 of file audio.hpp.

#### 6.4.2.2 rapp::object::audio::audio ( std::ifstream & *bytestream* )

Construct using an open file stream.

Definition at line 30 of file audio.hpp.

#### 6.4.2.3 rapp::object::audio::audio ( const audio & ) [default]

Copy constructor.

#### 6.4.2.4 rapp::object::audio::audio ( ) [private],[delete]

### 6.4.3 Member Function Documentation

#### 6.4.3.1 std::vector<rapp::types::byte> rapp::object::audio::bytearray ( ) const

Get audio as array of bytes.

Definition at line 39 of file audio.hpp.

**6.4.3.2** `void rapp::object::audio::openCopy_ ( std::ifstream & bytestream ) [private]`

Definition at line 74 of file audio.hpp.

**6.4.3.3** `audio& rapp::object::audio::operator= ( const audio & ) [default]`

Assignment operator.

**6.4.3.4** `bool rapp::object::audio::operator== ( const audio & rhs ) const`

Are audios same ?

Definition at line 45 of file audio.hpp.

**6.4.3.5** `bool rapp::object::audio::save ( const std::string filepath )`

Save audio to filepath.

Definition at line 54 of file audio.hpp.

## 6.4.4 Member Data Documentation

**6.4.4.1** `std::vector<rapp::types::byte> rapp::object::audio::bytearray_ [private]`

Definition at line 84 of file audio.hpp.

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

- [/home/travis/rapp\\_temp/rapp-api/cpp/includes/objects/audio/audio.hpp](#)

## 6.5 RappCloud.CloudInterface.CloudInterface.CloudInterface Class Reference

Cloud Interface class.

### Static Public Member Functions

- def [callService](#)  
*Performs Platform's HOP Web Service request.*
- def [isJson](#)  
*Check if an object (literal) is in json representation format.*

### 6.5.1 Detailed Description

Cloud Interface class.

Service controller for HOP Web Services requests Static class.

Definition at line 41 of file CloudInterface.py.



## 6.5.2 Member Function Documentation

6.5.2.1 `def RappCloud.CloudInterface.CloudInterface.CloudInterface.callService ( url, payload, files, basicAuth )`  
`[static]`

Performs Platform's HOP Web Service request.

**Parameters**

<i>basicAuth</i>	Basic http authentication credentials {'username': '', 'password': ''}
<i>url</i>	Post request destination Url.
<i>payload</i>	data payload of the post request.
<i>files</i>	multipart post file field.

**Returns**

Rapp Platform Service response object.

Definition at line 54 of file CloudInterface.py.

**6.5.2.2 def RappCloud.CloudInterface.CloudInterface.CloudInterface.isJson ( obj ) [static]**

Check if an object (literal) is in json representation format.

**Parameters**

<i>obj</i>	Object (literal).
------------	-------------------

**Returns**

True if object is a json object. False otherwise.

Definition at line 105 of file CloudInterface.py.

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

- /home/travis/rapp\_temp/rapp-api/python/RappCloud/CloudInterface/[CloudInterface.py](#)

**6.6 rapp::robot::communication Class Reference**

Abstract Base Class (ABC) Interface for Robot Communication.

```
#include <communication.hpp>
```

**Public Types**

- enum [Language](#) {  
[Language::ENGLISH](#),  
[Language::GREEK](#) }

**Public Member Functions**

- virtual bool [captureAudio](#) (std::shared\_ptr< [rapp::object::audio](#) > buffer, float waiting\_time, float microphone\_energy)=0  
*Record audio.*
- virtual bool [playAudio](#) (const std::string &file\_path, double position, double volume, double balance, bool play\_in\_loop)=0  
*Produce Audio from robot's speakers.*
- virtual bool [textToSpeech](#) (const std::string str, [Language](#) language=[Language::ENGLISH](#))=0  
*Produce speec from text.*
- virtual std::string [wordSpotting](#) (std::array< std::string > dictionary, unsigned int size)=0  
?

**used for?**

*Get Microphone Energy - NOTE what is the Param*

- virtual float `getMicrophoneEnergy` (std::string name) const =0
- virtual bool `voiceRecord` (const std::shared\_ptr< rapp::object::audio >)=0

**6.6.1 Detailed Description**

Abstract Base Class (ABC) Interface for Robot Communication.

Version

1

Date

20-September-2015

Author

Alex Giokas [a.gkiokas@ortelio.co.uk](mailto:a.gkiokas@ortelio.co.uk)

This class specifies the interface for all communications. It is your responsibility to implement them appropriately.

Definition at line 16 of file communication.hpp.

**6.6.2 Member Enumeration Documentation**

6.6.2.1 enum rapp::robot::communication::Language [strong]

Enumerator

**ENGLISH**

**GREEK**

Definition at line 20 of file communication.hpp.

**6.6.3 Member Function Documentation**

6.6.3.1 virtual bool rapp::robot::communication::captureAudio ( std::shared\_ptr< rapp::object::audio > *buffer*, float *waiting\_time*, float *microphone\_energy* ) [pure virtual]

Record audio.

6.6.3.2 virtual float rapp::robot::communication::getMicrophoneEnergy ( std::string *name* ) const [pure virtual]

6.6.3.3 virtual bool rapp::robot::communication::playAudio ( const std::string & *file\_path*, double *position*, double *volume*, double *balance*, bool *play\_in\_loop* ) [pure virtual]

Produce Audio from robot's speakers.

6.6.3.4 virtual bool rapp::robot::communication::textToSpeech ( const std::string *str*, Language *language* = Language::ENGLISH ) [pure virtual]

Produce speec from text.

6.6.3.5 `virtual bool rapp::robot::communication::voiceRecord ( const std::shared_ptr< rapp::object::audio > ) [pure virtual]`

Record Voice - NOTE:

## Parameters

<i>audio</i>	pointer will be updated If this method is asynchronous or multi-threaded, then you need to lock the pointer in your implementation.
--------------	---

6.6.3.6 virtual std::string rapp::robot::communication::wordSpotting ( std::array< std::string > *dictionary*, unsigned int *size* )  
[pure virtual]

?

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

- /home/travis/rapp\_temp/rapp-api/cpp/includes/robot/communication/[communication.hpp](#)

## 6.7 rapp::object::face Class Reference

```
#include <face.hpp>
```

### Public Member Functions

- [face](#) (float *top\_left\_x*, float *top\_left\_y*, float *top\_left\_z*, float *bottom\_right\_x*, float *bottom\_right\_y*, float *bottom\_right\_z*)  
*Construct using face coordinates (a rectangle)*
- [face](#) ()=default
- [face](#) (const [face](#) &)=default  
*Copy constructor.*
- bool [operator==](#) (const [face](#) &*rhs*) const  
*Assignment Constructor.*

### Private Attributes

- float [bottom\\_right\\_x\\_\\_](#) = -1.
- float [bottom\\_right\\_y\\_\\_](#) = -1.
- float [bottom\\_right\\_z\\_\\_](#) = -1.
- float [top\\_left\\_x\\_\\_](#) = -1.
- float [top\\_left\\_y\\_\\_](#) = -1.
- float [top\\_left\\_z\\_\\_](#) = -1.

#### 6.7.1 Detailed Description

Definition at line 16 of file [face.hpp](#).

#### 6.7.2 Constructor & Destructor Documentation

6.7.2.1 rapp::object::face::face ( float *top\_left\_x*, float *top\_left\_y*, float *top\_left\_z*, float *bottom\_right\_x*, float *bottom\_right\_y*, float *bottom\_right\_z* )

Construct using face coordinates (a rectangle)

Definition at line 23 of file [face.hpp](#).

**6.7.2.2** `rapp::object::face::face ( )` [default]

**6.7.2.3** `rapp::object::face::face ( const face & )` [default]

Copy constructor.

### 6.7.3 Member Function Documentation

**6.7.3.1** `bool rapp::object::face::operator== ( const face & rhs ) const`

Assignment Constructor.

Equality operator

Definition at line 49 of file face.hpp.

### 6.7.4 Member Data Documentation

**6.7.4.1** `float rapp::object::face::bottom_right_x_ = -1.` [private]

Definition at line 64 of file face.hpp.

**6.7.4.2** `float rapp::object::face::bottom_right_y_ = -1.` [private]

Definition at line 65 of file face.hpp.

**6.7.4.3** `float rapp::object::face::bottom_right_z_ = -1.` [private]

Definition at line 66 of file face.hpp.

**6.7.4.4** `float rapp::object::face::top_left_x_ = -1.` [private]

Definition at line 61 of file face.hpp.

**6.7.4.5** `float rapp::object::face::top_left_y_ = -1.` [private]

Definition at line 62 of file face.hpp.

**6.7.4.6** `float rapp::object::face::top_left_z_ = -1.` [private]

Definition at line 63 of file face.hpp.

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

- [/home/travis/rapp\\_temp/rapp-api/cpp/includes/objects/face/face.hpp](#)

## 6.8 face Class Reference

class which should somehow encapsulate a face

```
#include <face.hpp>
```

### 6.8.1 Detailed Description

class which should somehow encapsulate a face

#### Version

1

#### Date

13-February-2015

#### Author

Alex Gkiokas [a.gkiokas@ortelio.co.uk](mailto:a.gkiokas@ortelio.co.uk)

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

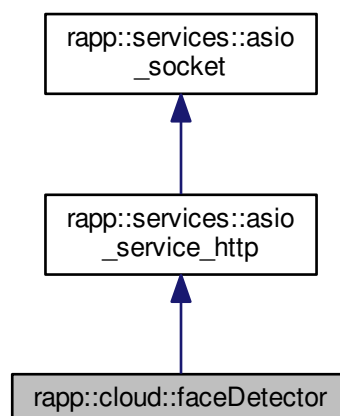
- [/home/travis/rapp\\_temp/rapp-api/cpp/includes/objects/face/face.hpp](#)

## 6.9 rapp::cloud::faceDetector Class Reference

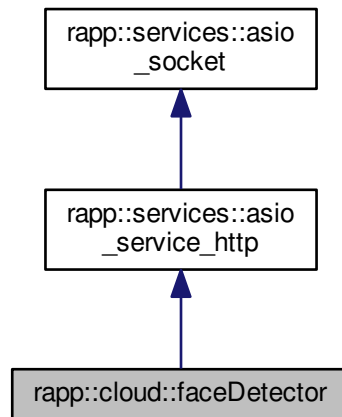
Asynchronous Service which will request the cloud to detect faces.

```
#include <faceDetector.hpp>
```

Inheritance diagram for rapp::cloud::faceDetector:



Collaboration diagram for `rapp::cloud::faceDetector`:



## Public Member Functions

- `faceDetector` (const std::shared\_ptr< [rapp::object::picture](#) > image, const std::string image\_format, std::function< void(std::vector< [rapp::object::face](#) >) > callback)  
*Constructor.*

## Private Member Functions

- void `handle_reply` (std::string json)

## Private Attributes

- std::function< void(std::vector< [rapp::object::face](#) >) > `delegate_`  
*The callback called upon completion of receiving the detected faces.*

## Additional Inherited Members

### 6.9.1 Detailed Description

Asynchronous Service which will request the cloud to detect faces.

Version

6

Date

26-April-2015



## Author

Alex Gkiokas [a.gkiokas@ortelio.co.uk](mailto:a.gkiokas@ortelio.co.uk)

Definition at line 13 of file faceDetector.hpp.

## 6.9.2 Constructor & Destructor Documentation

**6.9.2.1** `rapp::cloud::faceDetector::faceDetector ( const std::shared_ptr< rapp::object::picture > image, const std::string image_format, std::function< void(std::vector< rapp::object::face >) > callback )`

Constructor.

## Parameters

<i>image</i>	is the input image
--------------	--------------------

## See Also

[rapp::object::picture](#)

## Parameters

<i>image_format</i>	is the image format
<i>callback</i>	is the function that will receive a vector of the detected <a href="#">face(s)</a> coordinates

Definition at line 23 of file faceDetector.hpp.

## 6.9.3 Member Function Documentation

**6.9.3.1** `void rapp::cloud::faceDetector::handle_reply ( std::string json )` `[private]`

Definition at line 66 of file faceDetector.hpp.

## 6.9.4 Member Data Documentation

**6.9.4.1** `std::function< void ( std::vector< rapp::object::face > ) > rapp::cloud::faceDetector::delegate_` `[private]`

The callback called upon completion of receiving the detected faces.

Definition at line 131 of file faceDetector.hpp.

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

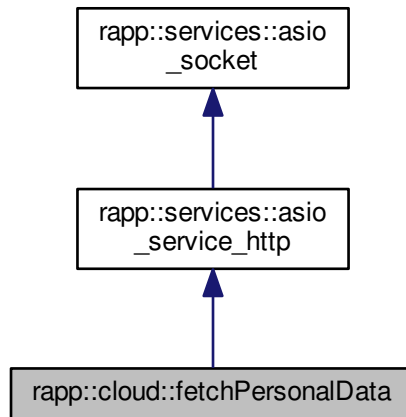
- `/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/faceDetector/faceDetector.hpp`

## 6.10 rapp::cloud::fetchPersonalData Class Reference

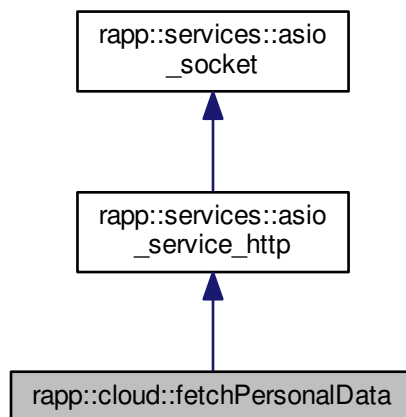
Get all personal data for a specific user.

```
#include <fetchPersonalData.hpp>
```

Inheritance diagram for `rapp::cloud::fetchPersonalData`:



Collaboration diagram for `rapp::cloud::fetchPersonalData`:



## Public Member Functions

- [`fetchPersonalData`](#) (const std::string user, std::function< void(const std::string) > callback)  
*Constructor for obtained personal (JSON) data for a specific user.*

## Private Member Functions

- void [`handle\_reply`](#) (std::string json)

## Private Attributes

- `std::function< void(const std::string) >` `delegate__`

*The callback called upon completion of receiving the detected faces.*

## Additional Inherited Members

### 6.10.1 Detailed Description

Get all personal data for a specific user.

#### Version

1

#### Date

18-April-2015

#### Author

Alex Gkiokas [a.gkiokas@ortelio.co.uk](mailto:a.gkiokas@ortelio.co.uk)

Definition at line 14 of file `fetchPersonalData.hpp`.

### 6.10.2 Constructor & Destructor Documentation

#### 6.10.2.1 `rapp::cloud::fetchPersonalData::fetchPersonalData ( const std::string user, std::function< void(const std::string) > callback )`

Constructor for obtained personal (JSON) data for a specific user.

#### Parameters

<i>user</i>	is the string username as stored in the database
<i>callback</i>	is the functor that will received the obtained data

#### Note

this is asynchronous, not serial, execution time may vary

Definition at line 24 of file `fetchPersonalData.hpp`.

### 6.10.3 Member Function Documentation

#### 6.10.3.1 `void rapp::cloud::fetchPersonalData::handle_reply ( std::string json ) [private]`

Get reply and send it directly to delegate

#### Note

we do not do any parsing at all here

Definition at line 51 of file `fetchPersonalData.hpp`.

## 6.10.4 Member Data Documentation

### 6.10.4.1 `std::function< void( const std::string ) > rapp::cloud::fetchPersonalData::delegate__` [private]

The callback called upon completion of receiving the detected faces.

Definition at line 57 of file `fetchPersonalData.hpp`.

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

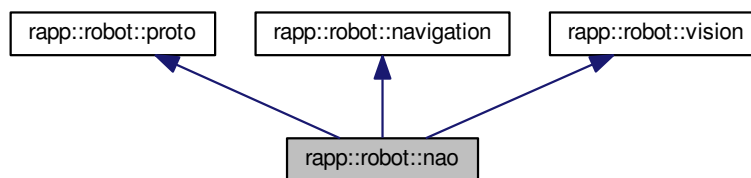
- `/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/fetchPersonalData/fetchPersonalData.hpp`

## 6.11 `rapp::robot::nao` Class Reference

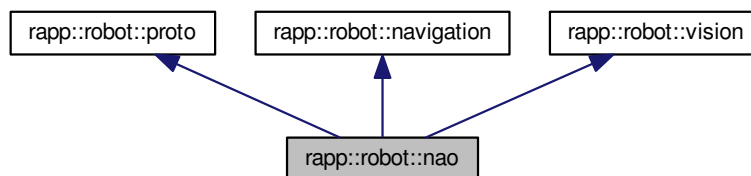
Implementation Class for Aldearan's NAO robot.

```
#include <nao.hpp>
```

Inheritance diagram for `rapp::robot::nao`:



Collaboration diagram for `rapp::robot::nao`:



## Public Member Functions

- `nao()`=default  
*Constructor ?*
- `std::shared_ptr`  
`< rapp::object::picture > captureImage` (`std::string cameraId`, `int cameraResolution`) `const`  
*NOTE: What about format?*
- `void move` `Head` (`float yaw`, `float pitch`)
- `void` `lookAtPoint` (`float x`, `float y`, `float z`)

- std::string [model](#) () const  
*Get Robot's Model.*
- void [moveJoint](#) (std::string joint, float angle)
- void [moveStop](#) ()
- void [moveTo](#) (float x, float y, float z)  
*TODO: Describe each parameter and explain what it is.*
- void [moveVel](#) (float x, float y, float z)
- void [removeStiffness](#) (std::string joint)
- std::string [ruid](#) () const  
*Get Robot's Unique ID.*
- void [takePredefinedPosture](#) (std::string pose)
- void [visOdom](#) ()

### 6.11.1 Detailed Description

Implementation Class for Aldearan's NAO robot.

Version

1

Date

20-September-2015

Author

Alex Gkiokas [a.gkiokas@ortelio.co.uk](mailto:a.gkiokas@ortelio.co.uk)

Definition at line 13 of file nao.hpp.

### 6.11.2 Constructor & Destructor Documentation

6.11.2.1 `rapp::robot::nao::nao ( )` [default]

Constructor ?

### 6.11.3 Member Function Documentation

6.11.3.1 `std::shared_ptr<rapp::object::picture> rapp::robot::nao::captureImage ( std::string camerald, int cameraResolution ) const` [virtual]

NOTE: What about format?

Implements [rapp::robot::vision](#).

6.11.3.2 `void move rapp::robot::nao::Head ( float yaw, float pitch )`

6.11.3.3 `void rapp::robot::nao::lookAtPoint ( float x, float y, float z )` [virtual]

Implements [rapp::robot::navigation](#).

6.11.3.4 `std::string rapp::robot::nao::model ( ) const` [virtual]

Get Robot's Model.

Implements [rapp::robot::proto](#).

6.11.3.5 `void rapp::robot::nao::moveJoint ( std::string joint, float angle )` [virtual]

Implements [rapp::robot::navigation](#).

6.11.3.6 `void rapp::robot::nao::moveStop ( )` [virtual]

Implements [rapp::robot::navigation](#).

6.11.3.7 `void rapp::robot::nao::moveTo ( float x, float y, float theta )` [virtual]

TODO: Describe each parameter and explain what it is.

Implements [rapp::robot::navigation](#).

6.11.3.8 `void rapp::robot::nao::moveVel ( float x, float y, float z )` [virtual]

Implements [rapp::robot::navigation](#).

6.11.3.9 `void rapp::robot::nao::removeStiffness ( std::string joint )`

6.11.3.10 `std::string rapp::robot::nao::ruid ( ) const` [virtual]

Get Robot's Unique ID.

Implements [rapp::robot::proto](#).

6.11.3.11 `void rapp::robot::nao::takePredefinedPosture ( std::string pose )` [virtual]

NOTE: parameter pose could be a class of its own, because it encapsulates some kind of Robot State.

Implements [rapp::robot::navigation](#).

6.11.3.12 `void rapp::robot::nao::visOdom ( )` [virtual]

Implements [rapp::robot::navigation](#).

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

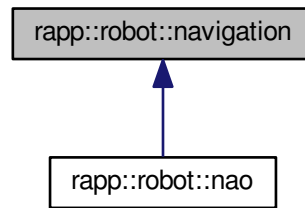
- `/home/travis/rapp_temp/rapp-api/cpp/includes/robot/nao/nao.hpp`

## 6.12 rapp::robot::navigation Class Reference

Abstract Base Class (ABC) Interface for Navigation.

```
#include <navigation.hpp>
```

Inheritance diagram for rapp::robot::navigation:



## Public Member Functions

- virtual void [lookAtPoint](#) (float x, float y, float z)=0
  - virtual void [moveHead](#) (float yaw, float pitch)=0
  - virtual void [moveJoint](#) (std::string joint, float angle)=0
  - virtual void [moveStop](#) ()=0
  - virtual void [moveTo](#) (float x, float y, float theta)=0
- TODO: Describe each parameter and explain what it is.*
- virtual void [moveVel](#) (float x, float y, float theta)=0
  - virtual void [removeStiffness](#) (std::string joint) const =0
  - virtual void [takePredefinedPosture](#) (std::string pose)=0
  - virtual void [visOdom](#) ()=0

### 6.12.1 Detailed Description

Abstract Base Class (ABC) Interface for Navigation.

Version

1

Date

20-September-2015

Author

Alex Gkiokas [a.gkiokas@ortelio.co.uk](mailto:a.gkiokas@ortelio.co.uk)

Definition at line 13 of file navigation.hpp.

### 6.12.2 Member Function Documentation

6.12.2.1 virtual void rapp::robot::navigation::lookAtPoint ( float x, float y, float z ) [pure virtual]

Implemented in [rapp::robot::nao](#).

6.12.2.2 `virtual void rapp::robot::navigation::moveHead ( float yaw, float pitch )` [pure virtual]

6.12.2.3 `virtual void rapp::robot::navigation::moveJoint ( std::string joint, float angle )` [pure virtual]

Implemented in [rapp::robot::nao](#).

6.12.2.4 `virtual void rapp::robot::navigation::moveStop ( )` [pure virtual]

Implemented in [rapp::robot::nao](#).

6.12.2.5 `virtual void rapp::robot::navigation::moveTo ( float x, float y, float theta )` [pure virtual]

TODO: Describe each parameter and explain what it is.

Implemented in [rapp::robot::nao](#).

6.12.2.6 `virtual void rapp::robot::navigation::moveVel ( float x, float y, float theta )` [pure virtual]

Implemented in [rapp::robot::nao](#).

6.12.2.7 `virtual void rapp::robot::navigation::removeStiffness ( std::string joint ) const` [pure virtual]

6.12.2.8 `virtual void rapp::robot::navigation::takePredefinedPosture ( std::string pose )` [pure virtual]

NOTE: parameter pose could be a class of its own, because it encapsulates some kind of Robot State.

Implemented in [rapp::robot::nao](#).

6.12.2.9 `virtual void rapp::robot::navigation::visOdom ( )` [pure virtual]

Implemented in [rapp::robot::nao](#).

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

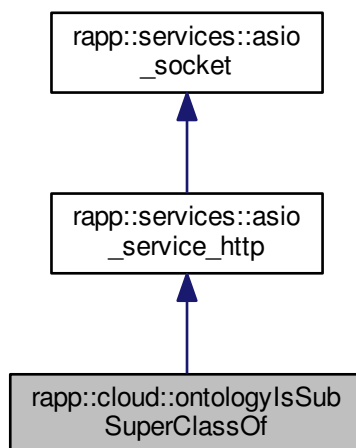
- [/home/travis/rapp\\_temp/rapp-api/cpp/includes/robot/navigation/navigation.hpp](#)

## 6.13 rapp::cloud::ontologyIsSubSuperClassOf Class Reference

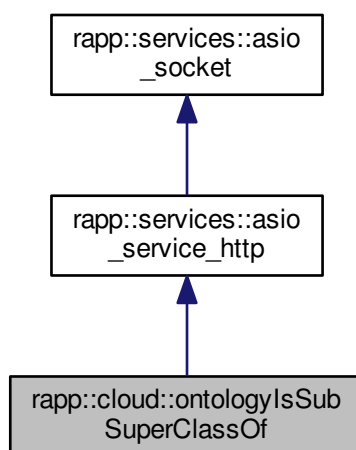
```
#include <ontologyIsSubSuperClassOf.hpp>
```



Inheritance diagram for rapp::cloud::ontologyIsSubSuperClassOf:



Collaboration diagram for rapp::cloud::ontologyIsSubSuperClassOf:



## Public Member Functions

- [ontologyIsSubSuperClassOf](#) (const std::string parent, const std::string child, bool recursive, std::function< void(bool result) > callback)

*Constructor for this handler.*

## Private Member Functions

- void [handle\\_reply](#) (std::string json)

## Private Attributes

- std::function< void(bool result) > [delegate\\_\\_](#)

*The callback called upon completion of receiving the detected faces.*

## Additional Inherited Members

### 6.13.1 Detailed Description

Definition at line 13 of file ontologyIsSubSuperClassOf.hpp.

### 6.13.2 Constructor & Destructor Documentation

- 6.13.2.1 `rapp::cloud::ontologyIsSubSuperClassOf::ontologyIsSubSuperClassOf ( const std::string parent, const std::string child, bool recursive, std::function< void(bool result) > callback )`

Constructor for this handler.

#### Parameters

<i>query</i>	is the entity for which we will try to acquire its ?
<i>callback</i>	is the functor that will receive the classes discovered

Definition at line 22 of file ontologyIsSubSuperClassOf.hpp.

### 6.13.3 Member Function Documentation

- 6.13.3.1 `void rapp::cloud::ontologyIsSubSuperClassOf::handle_reply ( std::string json ) [private]`

Definition at line 43 of file ontologyIsSubSuperClassOf.hpp.

### 6.13.4 Member Data Documentation

- 6.13.4.1 `std::function< void( bool result ) > rapp::cloud::ontologyIsSubSuperClassOf::delegate__ [private]`

The callback called upon completion of receiving the detected faces.

Definition at line 77 of file ontologyIsSubSuperClassOf.hpp.

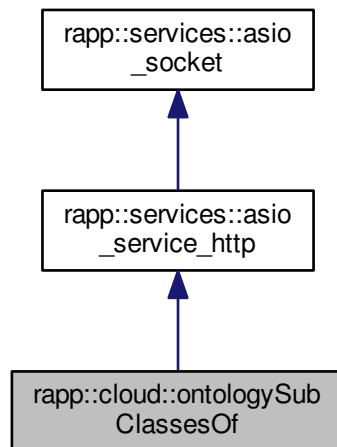
The documentation for this class was generated from the following file:

- /home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/ontologyIsSubSuperClassOf/[ontologyIsSubSuperClassOf.hpp](#)

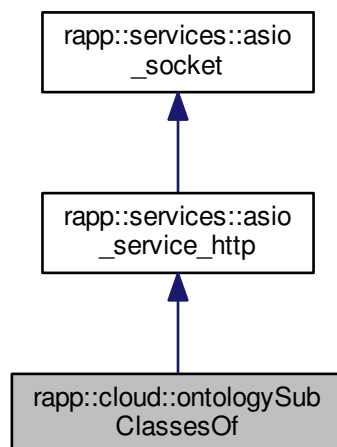
## 6.14 rapp::cloud::ontologySubClassesOf Class Reference

```
#include <ontologySubClassesOf.hpp>
```

Inheritance diagram for rapp::cloud::ontologySubClassesOf:



Collaboration diagram for rapp::cloud::ontologySubClassesOf:



## Public Member Functions

- [ontologySubClassesOf](#) (std::string query, std::function< void(std::vector< std::string >) > callback)

*Constructor for this handler.*

## Private Member Functions

- void [handle\\_reply](#) (std::string json)

## Private Attributes

- std::function< void(std::vector< std::string > classes) > [delegate\\_\\_](#)

*The callback called upon completion of receiving the detected faces.*

## Additional Inherited Members

### 6.14.1 Detailed Description

Definition at line 15 of file ontologySubClassesOf.hpp.

### 6.14.2 Constructor & Destructor Documentation

- 6.14.2.1 `rapp::cloud::ontologySubClassesOf::ontologySubClassesOf ( std::string query, std::function< void(std::vector< std::string >) > callback )`

Constructor for this handler.

Parameters

<i>query</i>	is the entity for which we will try to acquire its Super-Ordinates
<i>callback</i>	is the functor that will receive the classes discovered

Definition at line 25 of file ontologySubClassesOf.hpp.

### 6.14.3 Member Function Documentation

- 6.14.3.1 `void rapp::cloud::ontologySubClassesOf::handle_reply ( std::string json )` `[private]`

Definition at line 44 of file ontologySubClassesOf.hpp.

### 6.14.4 Member Data Documentation

- 6.14.4.1 `std::function< void( std::vector<std::string> classes ) > rapp::cloud::ontologySubClassesOf::delegate__` `[private]`

The callback called upon completion of receiving the detected faces.

Definition at line 76 of file ontologySubClassesOf.hpp.

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

- /home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/ontologySubClassesOf/[ontologySubClassesOf.hpp](#)

## 6.15 ontologySubclassOf Class Reference

Asynchronous Service which will request the Ontology Subclass of/for an Input.

```
#include <ontologySubClassesOf.hpp>
```

### 6.15.1 Detailed Description

Asynchronous Service which will request the Ontology Subclass of/for an Input.

#### Version

3

#### Date

19-September-2015

#### Author

Alex Gkiokas [a.gkiokas@ortelio.co.uk](mailto:a.gkiokas@ortelio.co.uk) HTTP POST RFC: <http://www.w3.org/Protocols/rfc2616/rfc2616-sec8.html> HTTP Transfer requirements: <http://www.w3.org/Protocols/rfc2616/rfc2616-sec8.html>

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

- [/home/travis/rapp\\_temp/rapp-api/cpp/includes/cloud/ontologySubClassesOf/ontologySubClassesOf.hpp](#)

## 6.16 ontologySubSuperclassOf Class Reference

```
#include <ontologyIsSubSuperClassOf.hpp>
```

### 6.16.1 Detailed Description

#### Version

#### Date

#### Author

Alex Gkiokas [a.gkiokas@ortelio.co.uk](mailto:a.gkiokas@ortelio.co.uk)

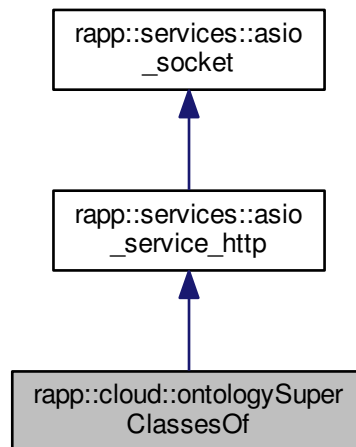
The documentation for this class was generated from the following file:

- [/home/travis/rapp\\_temp/rapp-api/cpp/includes/cloud/ontologyIsSubSuperClassOf/ontologyIsSubSuperClassOf.hpp](#)

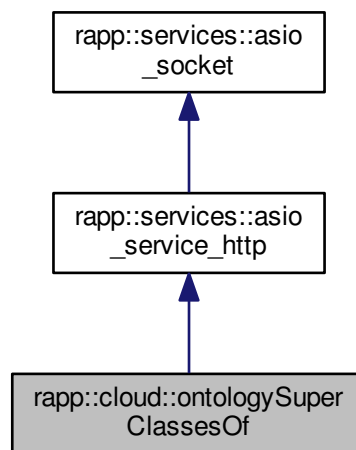
## 6.17 rapp::cloud::ontologySuperClassesOf Class Reference

```
#include <ontologySuperClassesOf.hpp>
```

Inheritance diagram for `rapp::cloud::ontologySuperClassesOf`:



Collaboration diagram for `rapp::cloud::ontologySuperClassesOf`:



## Public Member Functions

- `ontologySuperClassesOf` (const std::string query, std::function< void(std::vector< std::string >) > callback)  
*Constructor for this handler.*

## Private Member Functions

- void [handle\\_reply](#) (std::string json)

## Private Attributes

- std::function< void(std::vector< std::string > classes) > [delegate\\_\\_](#)

*The callback called upon completion of receiving the detected faces.*

## Additional Inherited Members

### 6.17.1 Detailed Description

Definition at line 13 of file ontologySuperClassesOf.hpp.

### 6.17.2 Constructor & Destructor Documentation

- 6.17.2.1 `rapp::cloud::ontologySuperClassesOf::ontologySuperClassesOf ( const std::string query, std::function< void(std::vector< std::string >) > callback )`

Constructor for this handler.

#### Parameters

<i>query</i>	is the entity for which we will try to acquire its Super-Ordinates
<i>callback</i>	is the functor that will receive the classes discovered

Definition at line 22 of file ontologySuperClassesOf.hpp.

### 6.17.3 Member Function Documentation

- 6.17.3.1 `void rapp::cloud::ontologySuperClassesOf::handle_reply ( std::string json ) [private]`

Definition at line 40 of file ontologySuperClassesOf.hpp.

### 6.17.4 Member Data Documentation

- 6.17.4.1 `std::function< void( std::vector<std::string> classes ) > rapp::cloud::ontologySuperClassesOf::delegate__ [private]`

The callback called upon completion of receiving the detected faces.

Definition at line 73 of file ontologySuperClassesOf.hpp.

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

- /home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/ontologySuperClassesOf/[ontologySuperClassesOf.hpp](#)

## 6.18 ontologySuperclassesOf Class Reference

```
#include <ontologySuperClassesOf.hpp>
```

### 6.18.1 Detailed Description

Version

Date

Author

Alex Gkiokas [a.gkiokas@ortelio.co.uk](mailto:a.gkiokas@ortelio.co.uk)

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

- [/home/travis/rapp\\_temp/rapp-api/cpp/includes/cloud/ontologySuperClassesOf/ontologySuperClassesOf.hpp](#)

## 6.19 rapp::object::picture Class Reference

class which wraps around raw bytes of a picture

```
#include <picture.hpp>
```

### Public Member Functions

- [picture](#) (const std::string filepath)  
*Construct from a file-path.*
- [picture](#) (std::ifstream &bytestream)  
*Construct using an open file stream.*
- [picture](#) (const [picture](#) &)=default  
*Copy constructor.*
- std::vector< [rapp::types::byte](#) > [bytearray](#) () const  
*Get picture as array of bytes.*
- [picture](#) & [operator=](#) (const [picture](#) &)=default  
*Assignment operator.*
- bool [operator==](#) (const [picture](#) &rhs) const  
*Are pictures same ?*
- bool [save](#) (const std::string filepath)  
*Save picture to filepath.*

### Private Member Functions

- [picture](#) ()=delete
- void [openCopy\\_](#) (std::ifstream &bytestream)

### Private Attributes

- std::vector< [rapp::types::byte](#) > [bytearray\\_](#)



### 6.19.1 Detailed Description

class which wraps around raw bytes of a picture

Version

2

Date

6-February-2015

Author

Alex Gkiokas [a.gkiokas@ortelio.co.uk](mailto:a.gkiokas@ortelio.co.uk)

Definition at line 13 of file picture.hpp.

### 6.19.2 Constructor & Destructor Documentation

#### 6.19.2.1 rapp::object::picture::picture ( const std::string *filepath* )

Construct from a file-path.

Definition at line 18 of file picture.hpp.

#### 6.19.2.2 rapp::object::picture::picture ( std::ifstream & *bytestream* )

Construct using an open file stream.

Definition at line 29 of file picture.hpp.

#### 6.19.2.3 rapp::object::picture::picture ( const picture & ) [default]

Copy constructor.

#### 6.19.2.4 rapp::object::picture::picture ( ) [private],[delete]

### 6.19.3 Member Function Documentation

#### 6.19.3.1 std::vector<rapp::types::byte> rapp::object::picture::bytearray ( ) const

Get picture as array of bytes.

Definition at line 38 of file picture.hpp.

#### 6.19.3.2 void rapp::object::picture::openCopy\_ ( std::ifstream & *bytestream* ) [private]

Definition at line 73 of file picture.hpp.

#### 6.19.3.3 picture& rapp::object::picture::operator= ( const picture & ) [default]

Assignment operator.

#### 6.19.3.4 `bool rapp::object::picture::operator== ( const picture & rhs ) const`

Are pictures same ?

Definition at line 44 of file picture.hpp.

#### 6.19.3.5 `bool rapp::object::picture::save ( const std::string filepath )`

Save picture to filepath.

Definition at line 53 of file picture.hpp.

### 6.19.4 Member Data Documentation

#### 6.19.4.1 `std::vector<rapp::types::byte> rapp::object::picture::bytearray_ [private]`

Definition at line 83 of file picture.hpp.

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

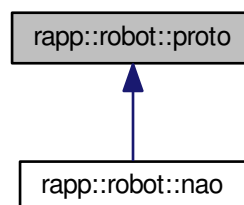
- [/home/travis/rapp\\_temp/rapp-api/cpp/includes/objects/picture/picture.hpp](#)

## 6.20 `rapp::robot::proto` Class Reference

Abstract Base Class (ABC) Interface Prototype for all Robots.

```
#include <proto.hpp>
```

Inheritance diagram for `rapp::robot::proto`:



### Public Member Functions

- `virtual std::string model () const =0`  
*Get Robot's Model.*
- `virtual std::string ruid () const =0`  
*Get Robot's Unique ID.*

#### 6.20.1 Detailed Description

Abstract Base Class (ABC) Interface Prototype for all Robots.

## Version

1

## Date

20-September-2015

## Author

Alex Gkiokas [a.gkiokas@ortelio.co.uk](mailto:a.gkiokas@ortelio.co.uk)

Definition at line 13 of file proto.hpp.

## 6.20.2 Member Function Documentation

## 6.20.2.1 virtual std::string rapp::robot::proto::model ( ) const [pure virtual]

Get Robot's Model.

Implemented in [rapp::robot::nao](#).

## 6.20.2.2 virtual std::string rapp::robot::proto::ruid ( ) const [pure virtual]

Get Robot's Unique ID.

Implemented in [rapp::robot::nao](#).

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

- [/home/travis/rapp\\_temp/rapp-api/cpp/includes/robot/proto/proto.hpp](#)

## 6.21 rapp::object::qrCode Class Reference

class which should encapsulate a QR code

#include &lt;qrCode.hpp&gt;

## Public Member Functions

- [qrCode](#) (float centre\_x, float centre\_y, std::string [label](#))  
*Construct using code coordinates (a rectangle) and a label (URL, email, string, etc)*
- [qrCode](#) ()=default  
*Allow Empty Constructor.*
- [qrCode](#) (const [qrCode](#) &)=default  
*Copy Constructor.*
- std::string [label](#) () const  
*Get the qr Label.*
- bool [operator==](#) (const [qrCode](#) &rhs) const  
*Assignment Constructor.*

## Private Attributes

- float [centre\\_x\\_\\_](#) = -1
- float [centre\\_y\\_\\_](#) = -1
- std::string [message\\_\\_](#)

### 6.21.1 Detailed Description

class which should encapsulate a QR code

Version

1

Date

13-February-2015

Author

Alex Gkiokas [a.gkiokas@ortelio.co.uk](mailto:a.gkiokas@ortelio.co.uk)

Definition at line 16 of file qrCode.hpp.

### 6.21.2 Constructor & Destructor Documentation

6.21.2.1 `rapp::object::qrCode::qrCode ( float centre_x, float centre_y, std::string label )`

Construct using code coordinates (a rectangle) and a label (URL, email, string, etc)

Parameters

<i>centre_x</i>	is coordinate
<i>centre_y</i>	is coordinate
<i>label</i>	is message embedded in QR

Definition at line 26 of file qrCode.hpp.

6.21.2.2 `rapp::object::qrCode::qrCode ( ) [default]`

Allow Empty Constructor.

6.21.2.3 `rapp::object::qrCode::qrCode ( const qrCode & ) [default]`

Copy Constructor.

### 6.21.3 Member Function Documentation

6.21.3.1 `std::string rapp::object::qrCode::label ( ) const`

Get the qr Label.

Definition at line 57 of file qrCode.hpp.

6.21.3.2 `bool rapp::object::qrCode::operator== ( const qrCode & rhs ) const`

Assignment Constructor.

Equality operator

Note

only the message is compared (insensitive case), not the coordinates!

Definition at line 49 of file qrCode.hpp.

### 6.21.4 Member Data Documentation

6.21.4.1 `float rapp::object::qrCode::centre_x__ = -1` `[private]`

Definition at line 64 of file qrCode.hpp.

6.21.4.2 `float rapp::object::qrCode::centre_y__ = -1` `[private]`

Definition at line 66 of file qrCode.hpp.

6.21.4.3 `std::string rapp::object::qrCode::message__` `[private]`

Definition at line 68 of file qrCode.hpp.

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

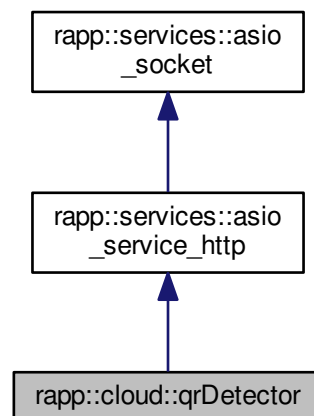
- [/home/travis/rapp\\_temp/rapp-api/cpp/includes/objects/qrCode/qrCode.hpp](/home/travis/rapp_temp/rapp-api/cpp/includes/objects/qrCode/qrCode.hpp)

## 6.22 rapp::cloud::qrDetector Class Reference

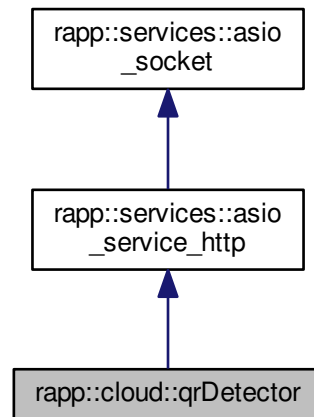
Asynchronous Service which will request the cloud to detect QR codes.

```
#include <qrDetector.hpp>
```

Inheritance diagram for rapp::cloud::qrDetector:



Collaboration diagram for `rapp::cloud::qrDetector`:



## Public Member Functions

- `qrDetector` (const std::shared\_ptr< `rapp::object::picture` > image, const std::string image\_format, std::function< void(std::vector< `rapp::object::qrCode` >) > callback)  
*Constructor.*

## Private Member Functions

- void `handle_reply` (std::string json)

## Private Attributes

- std::function< void(std::vector< `rapp::object::qrCode` >) > `delegate__`  
*The callback called upon completion of receiving the detected faces.*

## Additional Inherited Members

### 6.22.1 Detailed Description

Asynchronous Service which will request the cloud to detect QR codes.

Version

2

Date

26-April-2015

Author

Alex Gkiokas [a.gkiokas@ortelio.co.uk](mailto:a.gkiokas@ortelio.co.uk)

Definition at line 13 of file qrDetector.hpp.

## 6.22.2 Constructor & Destructor Documentation

6.22.2.1 `rapp::cloud::qrDetector::qrDetector ( const std::shared_ptr< rapp::object::picture > image, const std::string image_format, std::function< void(std::vector< rapp::object::qrCode >) > callback )`

Constructor.

Parameters

<i>image</i>	is a picture object pointer
<i>callback</i>	is the function that will receive a vector of detected qr(s)
<i>image_format</i>	must be defined, e.g.: jpeg, png, gif, etc.

Definition at line 23 of file qrDetector.hpp.

## 6.22.3 Member Function Documentation

6.22.3.1 `void rapp::cloud::qrDetector::handle_reply ( std::string json )` `[private]`

Definition at line 66 of file qrDetector.hpp.

## 6.22.4 Member Data Documentation

6.22.4.1 `std::function< void ( std::vector< rapp::object::qrCode> ) > rapp::cloud::qrDetector::delegate__` `[private]`

The callback called upon completion of receiving the detected faces.

Definition at line 106 of file qrDetector.hpp.

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

- [/home/travis/rapp\\_temp/rapp-api/cpp/includes/cloud/qrDetector/qrDetector.hpp](#)

## 6.23 RappCloud.RandStrGen.RandStrGen.RandStrGen Class Reference

Random String Generator class.

### Static Public Member Functions

- def [create](#)  
Generate a new random string.

### Static Private Attributes

- string [\\_\\_charsArray](#) = "0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz"
- int [\\_\\_defaultSize](#) = 5

### 6.23.1 Detailed Description

Random String Generator class.

Generate random strings. Static class.

Definition at line 37 of file RandStrGen.py.

### 6.23.2 Member Function Documentation

#### 6.23.2.1 `def RappCloud.RandStrGen.RandStrGen.RandStrGen.create ( size ) [static]`

Generate a new random string.

Parameters

<i>size</i>	String size.
-------------	--------------

Definition at line 49 of file RandStrGen.py.

### 6.23.3 Member Data Documentation

#### 6.23.3.1 `string RappCloud.RandStrGen.RandStrGen.RandStrGen.__charsArray = "0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz" [static],[private]`

Definition at line 39 of file RandStrGen.py.

#### 6.23.3.2 `int RappCloud.RandStrGen.RandStrGen.RandStrGen.__defaultSize = 5 [static],[private]`

Definition at line 41 of file RandStrGen.py.

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

- [/home/travis/rapp\\_temp/rapp-api/python/RappCloud/RandStrGen/RandStrGen.py](#)

## 6.24 RappCloud.RappCloud.RappCloud Class Reference

Rapp Platform API class.

### Public Member Functions

- `def \_\_init\_\_`  
*Default constructor.*
- `def available\_services`  
*API call for Ontology-Subsuperclass-Of RAPP Platform front-end service.*
- `def call\_service`  
*Call different services throught a single method.*
- `def cognitive\_test\_chooser`  
*API call for Cognitive-Test-Chooser RAPP Platform front-end service.*
- `def detect\_objects`  
*NOT SUPPORTED.*
- `def face\_detection`  
*API call for Face-Detection RAPP Platform front-end service.*
- `def get\_platform\_services`



*Returns a list with the available RAPP Platform services.*

- def [ontology\\_is\\_subsuperclass\\_of](#)  
*API call for Ontology-Subsuperclass-Of RAPP Platform front-end service.*
- def [ontology\\_subclasses\\_of](#)  
*API call for Ontology-Subclasses-Of RAPP Platform front-end service.*
- def [ontology\\_superclasses\\_of](#)  
*API call for Ontology-Superclasses-Of RAPP Platform front-end service.*
- def [qr\\_detection](#)  
*API call for Qr-Detection RAPP Platform front-end service.*
- def [record\\_cognitive\\_test\\_performance](#)  
*API call for Record-Cognitive-Test-Performance RAPP Platform front-end service.*
- def [set\\_noise\\_profile](#)  
*API call for Set-Noise-Profile RAPP Platform front-end service.*
- def [speech\\_detection\\_google](#)  
*API call for Speech-Detection-Google RAPP Platform front-end service.*
- def [speech\\_detection\\_sphinx4](#)  
*API call for Speech-Detection-Sphinx4 RAPP Platform front-end service.*
- def [text\\_to\\_speech](#)  
*API call for Text-To-Speech RAPP Platform front-end service.*

## Public Attributes

- [auth\\_](#)
- [cfgFileDir\\_](#)
- [cfgParser\\_](#)
- [platform\\_params\\_](#)
- [platformIP\\_](#)  
*Catch exceptions on loading configuration file ## TODO Enhance Exception handling.*
- [servicePort\\_](#)
- [services\\_](#)
- [serviceUrl\\_](#)

## Private Member Functions

- def [\\_\\_appendRandStr](#)  
*Append a random string as a postFix to the input filePath.*
- def [\\_\\_parse\\_auth\\_cfg](#)  
*Parse and load Rapp Platform authentication parameters.*
- def [\\_\\_parse\\_platform\\_cfg](#)  
*Parse and load Rapp Platform parameters.*
- def [\\_\\_parse\\_services\\_cfg](#)  
*Parse and load Rapp Platform Web Services info.*

## Private Attributes

- [\\_\\_randStrSize](#)

### 6.24.1 Detailed Description

Rapp Platform API class.

API calls for Platform HOP Web Services.

Definition at line 46 of file RappCloud.py.

### 6.24.2 Constructor & Destructor Documentation

#### 6.24.2.1 `def RappCloud.RappCloud.RappCloud.__init__( self )`

Default constructor.

Definition at line 49 of file RappCloud.py.

### 6.24.3 Member Function Documentation

#### 6.24.3.1 `def RappCloud.RappCloud.RappCloud.__appendRandStr( self, filePath )` [private]

Append a random string as a postfix to the input filePath.

Parameters

<i>self</i>	The object pointer.
<i>filePath</i>	File's system path to append the random postfix string.

Returns

The new file name.

Definition at line 167 of file RappCloud.py.

#### 6.24.3.2 `def RappCloud.RappCloud.RappCloud.__parse_auth_cfg( self )` [private]

Parse and load Rapp Platform authentication parameters.

Parameters

<i>self</i>	The object pointer.
-------------	---------------------

Definition at line 69 of file RappCloud.py.

#### 6.24.3.3 `def RappCloud.RappCloud.RappCloud.__parse_platform_cfg( self )` [private]

Parse and load Rapp Platform parameters.

Parameters

<i>self</i>	The object pointer.
-------------	---------------------

Definition at line 122 of file RappCloud.py.

#### 6.24.3.4 `def RappCloud.RappCloud.RappCloud.__parse_services_cfg( self )` [private]

Parse and load Rapp Platform Web Services info.

## Parameters

<i>self</i>	The object pointer.
-------------	---------------------

Definition at line 101 of file RappCloud.py.

6.24.3.5 def RappCloud.RappCloud.RappCloud.available\_services ( *self* )

API call for Ontology-Subsuperclass-Of RAPP Platform front-end service.

## Parameters

<i>self</i>	The object pointer.
-------------	---------------------

## Returns

Rapp Platform Service response object.

Definition at line 429 of file RappCloud.py.

6.24.3.6 def RappCloud.RappCloud.RappCloud.call\_service ( *self*, *service\_name*, *args* )

Call different services throught a single method.

Not implemented yet! This method will be fully implemented on v0.6.0

## Parameters

<i>self</i>	The object pointer.
<i>service_name</i>	The Rapp Platform Service to call.
<i>args</i>	

Definition at line 182 of file RappCloud.py.

6.24.3.7 def RappCloud.RappCloud.RappCloud.cognitive\_test\_chooser ( *self*, *user*, *testType* )

API call for Cognitive-Test-Chooser RAPP Platform front-end service.

## Parameters

<i>self</i>	The object pointer.
<i>testType</i>	Cognitive Test Type. ArithmeticCts, AwarenessCts, ReasoningCts.
<i>user</i>	User's name, a.k.a username.

## Returns

Rapp Platform Service API call response object.

Definition at line 514 of file RappCloud.py.

6.24.3.8 def RappCloud.RappCloud.RappCloud.detect\_objects ( *self*, *fileUri*, *limit* )

NOT SUPPORTED.

DEPRECATED!!!

Definition at line 408 of file RappCloud.py.

6.24.3.9 def RappCloud.RappCloud.RappCloud.face\_detection ( *self*, *file\_uri* )

API call for Face-Detection RAPP Platform front-end service.

## Parameters

<i>self</i>	The object pointer.
<i>file_uri</i>	Path to the image file to be given as input to the face_detection Platform Service.

## Returns

Rapp Platform Service response object.

Definition at line 332 of file RappCloud.py.

#### 6.24.3.10 `def RappCloud.RappCloud.RappCloud.get_platform_services ( self )`

Returns a list with the available RAPP Platform services.

## Parameters

<i>self</i>	The object pointer
-------------	--------------------

## Returns

The Platform Services supported by the Rapp-API

Definition at line 198 of file RappCloud.py.

#### 6.24.3.11 `def RappCloud.RappCloud.RappCloud.ontology_is_subsuperclass_of ( self, parent_class, child_class, recursive )`

API call for Ontology-Subsuperclass-Of RAPP Platform front-end service.

## Parameters

<i>self</i>	The object pointer.
<i>parent_class</i>	Ontology parent class name.
<i>child_class</i>	Ontology child calss name.
<i>recursive</i>	Defines if a recursive procedure will be used (bool).

## Returns

Rapp Platform Service response object.

Definition at line 390 of file RappCloud.py.

#### 6.24.3.12 `def RappCloud.RappCloud.RappCloud.ontology_subclasses_of ( self, query )`

API call for Ontology-Subclasses-Of RAPP Platform front-end service.

## Parameters

<i>self</i>	The object pointer.
<i>query</i>	Ontology query string.

## Returns

Rapp Platform Service response object.

Definition at line 352 of file RappCloud.py.

#### 6.24.3.13 `def RappCloud.RappCloud.RappCloud.ontology_superclasses_of ( self, query )`

API call for Ontology-Superclasses-Of RAPP Platform front-end service.

## Parameters

<i>self</i>	The object pointer.
<i>query</i>	Ontology query string.

## Returns

Rapp Platform Service response object.

Definition at line 370 of file RappCloud.py.

#### 6.24.3.14 def RappCloud.RappCloud.RappCloud.qr\_detection ( *self*, *file\_uri* )

API call for Qr-Detection RAPP Platform front-end service.

## Parameters

<i>self</i>	The object pointer.
<i>file_uri</i>	Path to the image file to be given as input to the qr_detection Platform Service.

## Returns

Rapp Platform Service response object.

Definition at line 311 of file RappCloud.py.

#### 6.24.3.15 def RappCloud.RappCloud.RappCloud.record\_cognitive\_test\_performance ( *self*, *user*, *test*, *score* )

API call for Record-Cognitive-Test-Performance RAPP Platform front-end service.

## Parameters

<i>self</i>	The object pointer.
<i>user</i>	User's name, a.k.a username.
<i>test</i>	Test full name as obtained from a call to cognitive_test_chooser Platform service.
<i>score</i>	User's score for given test in range [0-100].

## Returns

Rapp Platform Service API call response object.

Definition at line 537 of file RappCloud.py.

#### 6.24.3.16 def RappCloud.RappCloud.RappCloud.set\_noise\_profile ( *self*, *file\_uri*, *audio\_source*, *user* )

API call for Set-Noise-Profile RAPP Platform front-end service.

## Parameters

<i>self</i>	The object pointer.
<i>audio_source</i>	A value that presents the information for the audio source data. e.g "nao_wav_1_ch".
<i>file_uri</i>	Path to the audio/speech file to be given as input to the speech_detection_google Platform Service.

<i>user</i>	User's name, a.k.a username.
-------------	------------------------------

**Returns**

Rapp Platform Service response object.

Definition at line 286 of file RappCloud.py.

6.24.3.17 `def RappCloud.RappCloud.RappCloud.speech_detection_google ( self, file_uri, audio_source, user, language )`

API call for Speech-Detection-Google RAPP Platform front-end service.

**Parameters**

<i>self</i>	The object pointer.
<i>language</i>	Language to be used by the speech_detection_sphinx4 module. Currently valid language values are 'gr' for Greek and 'en' for English.
<i>audio_source</i>	A value that presents the information for the audio source data. e.g "nao_wav_1_ch".
<i>file_uri</i>	Path to the audio/speech file to be given as input to the speech_detection_google Platform Service.
<i>user</i>	User's name, a.k.a username.

**Returns**

Rapp Platform Service response object.

Definition at line 256 of file RappCloud.py.

6.24.3.18 `def RappCloud.RappCloud.RappCloud.speech_detection_sphinx4 ( self, language, audio_source, words, sentences, grammar, file_uri, user )`

API call for Speech-Detection-Sphinx4 RAPP Platform front-end service.

**Parameters**

<i>self</i>	The object pointer.
<i>language</i>	Language to be used by the speech_detection_sphinx4 module. Currently valid language values are 'gr' for Greek and 'en' for English.
<i>audio_source</i>	A value that presents the information for the audio source data. e.g "nao_wav_1_ch".
<i>words</i>	A vector that carries the "under-detection" words.
<i>sentences</i>	The under consideration sentences.
<i>grammar</i>	Grammar to be used.
<i>file_uri</i>	Path to the audio/speech file to be given as input to the speech_detection_sphinx4 Platform Service.
<i>user</i>	User's name, a.k.a username.

**Returns**

Rapp Platform Service response object.

Definition at line 220 of file RappCloud.py.

6.24.3.19 `def RappCloud.RappCloud.RappCloud.text_to_speech ( self, text, language, dest )`

API call for Text-To-Speech RAPP Platform front-end service.

## Parameters

<i>self</i>	The object pointer.
<i>text</i>	String to perform TTS on.
<i>language</i>	Supported translation language. 'el' -> Greek, 'en' -> English.
<i>dest</i>	If provided the returned audio data will be stored in this destination file. Otherwise the audio data are returned as part of return object.

## Returns

Rapp Platform Service API call response object.

Definition at line 457 of file RappCloud.py.

### 6.24.4 Member Data Documentation

#### 6.24.4.1 RappCloud.RappCloud.RappCloud.\_\_randStrSize [private]

Definition at line 62 of file RappCloud.py.

#### 6.24.4.2 RappCloud.RappCloud.RappCloud.auth\_

Definition at line 58 of file RappCloud.py.

#### 6.24.4.3 RappCloud.RappCloud.RappCloud.cfgFileDir\_

Definition at line 51 of file RappCloud.py.

#### 6.24.4.4 RappCloud.RappCloud.RappCloud.cfgParser\_

Definition at line 52 of file RappCloud.py.

#### 6.24.4.5 RappCloud.RappCloud.RappCloud.platform\_params\_

Definition at line 53 of file RappCloud.py.

#### 6.24.4.6 RappCloud.RappCloud.RappCloud.platformIP\_

Catch exceptions on loading configuration file ## TODO Enhance Exception handling.

Definition at line 54 of file RappCloud.py.

#### 6.24.4.7 RappCloud.RappCloud.RappCloud.servicePort\_

Definition at line 55 of file RappCloud.py.

#### 6.24.4.8 RappCloud.RappCloud.RappCloud.services\_

Definition at line 56 of file RappCloud.py.

#### 6.24.4.9 RappCloud.RappCloud.RappCloud.serviceUrl\_

Definition at line 57 of file RappCloud.py.

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

- /home/travis/rapp\_temp/rapp-api/python/RappCloud/[RappCloud.py](#)

## 6.25 rapp::services::service\_controller Class Reference

Main class that controllers RAPP Services.

```
#include <service_controller.hpp>
```

### Public Member Functions

- [service\\_controller](#) ()
- boost::asio::io\_service & [queue](#) ()  
*The Service Queue.*
- void [runJob](#) (const std::shared\_ptr< [asio\\_socket](#) > job)  
*Run one service job.*
- void [runJobs](#) (std::vector< std::shared\_ptr< [asio\\_socket](#) >> jobs)  
*Run a group of jobs in a batch.*

### Private Attributes

- const std::string [auth\\_base64\\_](#) = "cmFwcGRldjpyYXBwZGV2"
- boost::asio::io\_service [io\\_service\\_](#)  
*IO service.*
- std::mutex [mutex\\_](#)  
*Service Mutex.*
- const std::string [password\\_](#)  
*Authentication token.*
- boost::asio::ip::tcp::resolver::query [query\\_](#)  
*Endpoint Resolver.*
- boost::asio::ip::tcp::resolver [resolver\\_](#)  
*Resolution for TCP.*
- const std::string [server\\_](#)  
*Cloud Server Address.*
- const std::string [username\\_](#)  
*Username token.*
- std::shared\_ptr  
< boost::asio::io\_service::work > [work\\_](#)  
*Work queue.*

### 6.25.1 Detailed Description

Main class that controllers RAPP Services.

Version

2



## Date

20-April-2014

## Author

Alex Gkiokas [a.gkiokas@ortelio.co.uk](mailto:a.gkiokas@ortelio.co.uk)

This class controls services (be it on cloud or robot). A service is a callable function which offers some type of functionality to the callee. Whilst most services reside on the cloud (`rapp::services::cloud`) some may reside on the robot (`rapp::services::robot`).

The service controller is used for either cloud or robot, as it essentially controls the socket connections. This is low-level stuff, and is of little concern to external developers, and is to be used only by developers who wish to create or extend services.

Ideally, one should be used for accessing the cloud services, and another one for accessing the robot services.

Definition at line 26 of file `service_controller.hpp`.

## 6.25.2 Constructor & Destructor Documentation

### 6.25.2.1 rapp::services::service\_controller::service\_controller ( )

Definition at line 30 of file `service_controller.hpp`.

## 6.25.3 Member Function Documentation

### 6.25.3.1 boost::asio::io\_service& rapp::services::service\_controller::queue ( )

The Service Queue.

Definition at line 35 of file `service_controller.hpp`.

### 6.25.3.2 void rapp::services::service\_controller::runJob ( const std::shared\_ptr< asio\_socket > job )

Run one service job.

#### Parameters

<i>client</i>	is the actual object pointer that will be executed in a single operation
---------------	--

#### Note

upon completion, the object's handler will be invoked  
this method will block, until job is finished

Definition at line 46 of file `service_controller.hpp`.

### 6.25.3.3 void rapp::services::service\_controller::runJobs ( std::vector< std::shared\_ptr< asio\_socket >> jobs )

Run a group of jobs in a batch.

#### Parameters

<i>jobs</i>	is vector of constant pointers to client services
-------------	---

**Note**

upon completion, the each object's handler will be invoked

**Warning**

upon completion, the queue schedule will be reset.

Definition at line 61 of file service\_controller.hpp.

**6.25.4 Member Data Documentation**

**6.25.4.1** `const std::string rapp::services::service_controller::auth_base64_ = "cmFwcGRldjpyYXBwZGV2"` `[private]`

Definition at line 87 of file service\_controller.hpp.

**6.25.4.2** `boost::asio::io_service rapp::services::service_controller::io_service_` `[private]`

IO service.

Definition at line 93 of file service\_controller.hpp.

**6.25.4.3** `std::mutex rapp::services::service_controller::mutex_` `[private]`

Service Mutex.

Definition at line 105 of file service\_controller.hpp.

**6.25.4.4** `const std::string rapp::services::service_controller::password_` `[private]`

Authentication token.

Definition at line 90 of file service\_controller.hpp.

**6.25.4.5** `boost::asio::ip::tcp::resolver::query rapp::services::service_controller::query_` `[private]`

Endpoint Resolver.

Definition at line 96 of file service\_controller.hpp.

**6.25.4.6** `boost::asio::ip::tcp::resolver rapp::services::service_controller::resolver_` `[private]`

Resolution for TCP.

Definition at line 99 of file service\_controller.hpp.

**6.25.4.7** `const std::string rapp::services::service_controller::server_` `[private]`

Cloud Server Address.

Definition at line 81 of file service\_controller.hpp.

6.25.4.8 `const std::string rapp::services::service_controller::username_ [private]`

Username token.

Definition at line 84 of file `service_controller.hpp`.

6.25.4.9 `std::shared_ptr<boost::asio::io_service::work> rapp::services::service_controller::work_ [private]`

Work queue.

Definition at line 102 of file `service_controller.hpp`.

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

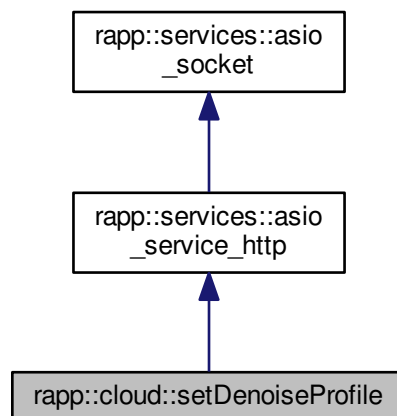
- `/home/travis/rapp_temp/rapp-api/cpp/includes/service/service_controller/service_controller.hpp`

## 6.26 rapp::cloud::setDenoiseProfile Class Reference

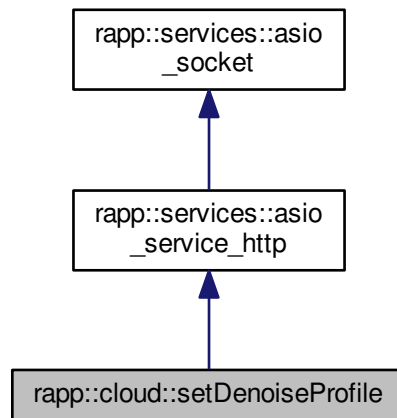
setting the denoising audio profile for speech recognition

```
#include <setDenoiseProfile.hpp>
```

Inheritance diagram for `rapp::cloud::setDenoiseProfile`:



Collaboration diagram for `rapp::cloud::setDenoiseProfile`:



## Public Member Functions

- [setDenoiseProfile](#) (const std::shared\_ptr< [rapp::object::audio](#) > file, const std::string user, const std::string audio\_source)

## Private Member Functions

- void [handle\\_reply](#) (std::string json)

## Additional Inherited Members

### 6.26.1 Detailed Description

setting the denoising audio profile for speech recognition

#### Version

2

#### Date

20-September-2015

#### Author

Alex Gkiokas [a.gkiokas@ortelio.co.uk](mailto:a.gkiokas@ortelio.co.uk)

Definition at line 13 of file `setDenoiseProfile.hpp`.

## 6.26.2 Constructor & Destructor Documentation

6.26.2.1 `rapp::cloud::setDenoiseProfile::setDenoiseProfile ( const std::shared_ptr< rapp::object::audio > file, const std::string user, const std::string audio_source )`

This class does not return something, it only captures an error

Definition at line 20 of file setDenoiseProfile.hpp.

## 6.26.3 Member Function Documentation

6.26.3.1 `void rapp::cloud::setDenoiseProfile::handle_reply ( std::string json )` [private]

Definition at line 72 of file setDenoiseProfile.hpp.

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

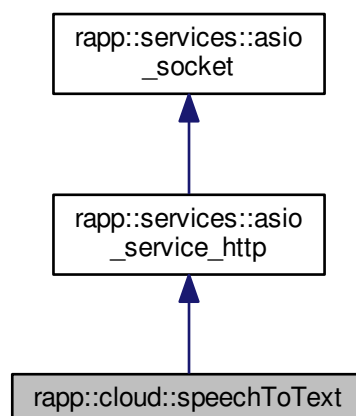
- `/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/setDenoiseProfile/setDenoiseProfile.hpp`

## 6.27 rapp::cloud::speechToText Class Reference

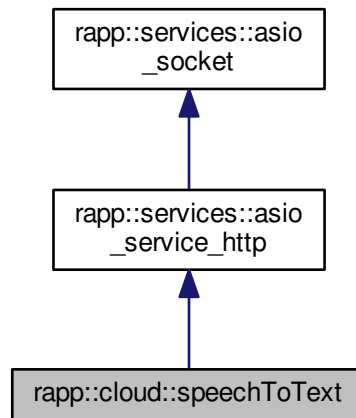
Asynchronous Service which will request the cloud to process speech-to-text.

```
#include <speechToText.hpp>
```

Inheritance diagram for rapp::cloud::speechToText:



Collaboration diagram for `rapp::cloud::speechToText`:



## Public Member Functions

- `speechToText` (const std::shared\_ptr< [rapp::object::audio](#) > file, const std::string language, const std::string user, const std::string audio\_source, const std::vector< std::string > grammar, const std::vector< std::string > words, const std::vector< std::string > sentences, std::function< void(std::vector< std::string > words) > callback)

*Contrusct a [speechToText](#) handler.*

## Private Member Functions

- void `handle_reply` (std::string json)

## Private Attributes

- std::function< void(std::vector< std::string > words) > `delegate_`

*The callback called upon completion of receiving the detected words.*

## Additional Inherited Members

### 6.27.1 Detailed Description

Asynchronous Service which will request the cloud to process speech-to-text.

Version

1

Date

19-September-2015

## Author

Alex Gkiokas [a.gkiokas@ortelio.co.uk](mailto:a.gkiokas@ortelio.co.uk)

Definition at line 13 of file speechToText.hpp.

## 6.27.2 Constructor & Destructor Documentation

**6.27.2.1** `rapp::cloud::speechToText::speechToText ( const std::shared_ptr< rapp::object::audio > file, const std::string language, const std::string user, const std::string audio_source, const std::vector< std::string > grammar, const std::vector< std::string > words, const std::vector< std::string > sentences, std::function< void(std::vector< std::string > words) > callback )`

Contrusct a [speechToText](#) handler.

## Parameters

<i>audio</i>	is the actual binary sound file
<i>language</i>	is the language used for speech to text
<i>grammar</i>	is the Grammars used in Spc2Txt
<i>user</i>	is the user token
<i>words</i>	will be searched for in the audio
<i>sentences</i>	will be under consideration
<i>callback</i>	will be executed once the rapp cloud has responded

Definition at line 27 of file speechToText.hpp.

## 6.27.3 Member Function Documentation

**6.27.3.1** `void rapp::cloud::speechToText::handle_reply ( std::string json )` `[private]`

Definition at line 117 of file speechToText.hpp.

## 6.27.4 Member Data Documentation

**6.27.4.1** `std::function< void( std::vector<std::string> words ) > rapp::cloud::speechToText::delegate_` `[private]`

The callback called upon completion of receiving the detected words.

Definition at line 151 of file speechToText.hpp.

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

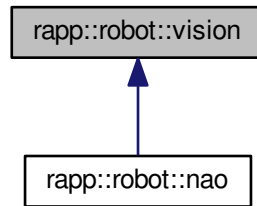
- `/home/travis/rapp_temp/rapp-api/cpp/includes/cloud/speechToText/speechToText.hpp`

## 6.28 rapp::robot::vision Class Reference

Abstract Base Class (ABC) Interface for Vision.

```
#include <vision.hpp>
```

Inheritance diagram for `rapp::robot::vision`:



## Public Member Functions

- virtual `std::shared_ptr`  
`< rapp::object::picture > captureImage (std::string cameraId, int cameraResolution) const =0`  
*NOTE: What about format?*

### 6.28.1 Detailed Description

Abstract Base Class (ABC) Interface for Vision.

Version

1

Date

20-September-2015

Author

Alex Gkiokas [a.gkiokas@ortelio.co.uk](mailto:a.gkiokas@ortelio.co.uk)

Definition at line 13 of file `vision.hpp`.

### 6.28.2 Member Function Documentation

6.28.2.1 `virtual std::shared_ptr<rapp::object::picture> rapp::robot::vision::captureImage ( std::string cameraId, int cameraResolution ) const` `[pure virtual]`

NOTE: What about format?

Implemented in `rapp::robot::nao`.

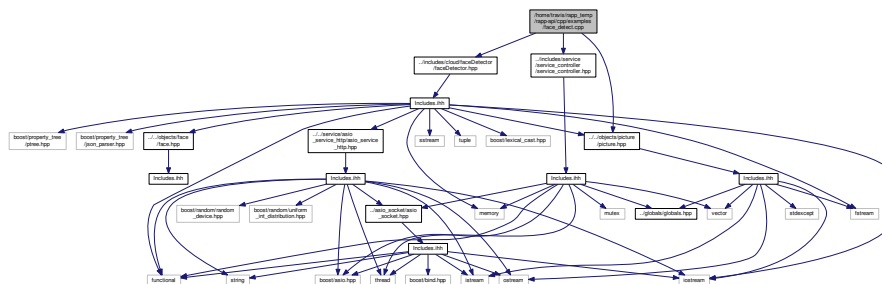
The documentation for this class was generated from the following file:

- `/home/travis/rapp_temp/rapp-api/cpp/includes/robot/vision/vision.hpp`



## File Documentation

```
#include "../includes/service/service_controller/service_controller.hpp"
#include "../includes/cloud/faceDetector/faceDetector.hpp"
#include "../includes/objects/picture/picture.hpp"
Include dependency graph for face_detect.cpp:
```



- int **main** (int argc, char \*argv[])

#### 7.1.1.1 int main ( int argc, char \* argv[] )

13-February-2015

Alex Gkiokas This is now the default way of working with images

Definition at line 5 of file face\_detect.cpp.



- `int main (int argc, char *argv[])`

### 7.3.1.1 int main ( int argc, char \* argv[] )

## 7.4 /home/travis/rapp\_temp/rapp-api/cpp/examples/picture\_example.cpp File Reference

```
#include <memory>
```

```

graph TD
    Root["/home/travis/rapp_temp  
/rapp-api/cpp/examples  
/picture_example.cpp"]
    Obj["../includes/objects  
/picture/picture.hpp"]
    Mem["memory"]
    Inc["Includes.ihh"]
    Ios["iostream"]
    Ise["istream"]
    Ose["ostream"]
    Fse["fstream"]
    Vec["vector"]
    Std["stdexcept"]
    Glob["../../service/globals/globals.hpp"]

    Root --> Obj
    Root --> Mem
    Obj --> Inc
    Inc --> Ios
    Inc --> Ise
    Inc --> Ose
    Inc --> Fse
    Inc --> Vec
    Inc --> Std
    Inc --> Glob
  
```

- `int main (int argc, char *argv[])`



[illegible]

- `int main ()`

#### 7.6.1.1 int main ( )

## 7.7 /home/travis/rapp\_temp/rapp-api/cpp/examples/speech\_to\_text.cpp File Reference

[illegible]

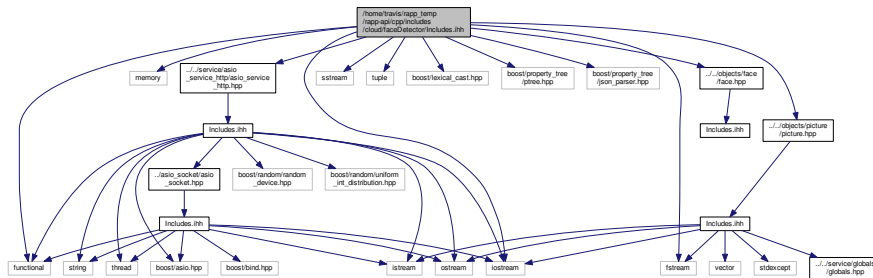
- `int main ()`

Generated on Wed Dec 9 2015 14:02:39 for RAPP Platform API by Doxygen

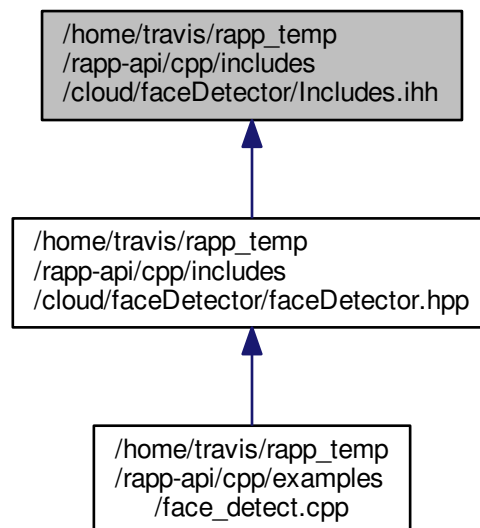


7.9 /home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/faceDetector/Includes.ihh File Reference

```
#include <functional>
#include <memory>
#include <iostream>
#include <fstream>
#include <sstream>
#include <tuple>
#include <boost/lexical_cast.hpp>
#include <boost/property_tree/ptree.hpp>
#include <boost/property_tree/json_parser.hpp>
#include "../..service/asio_service_http/asio_service_http.hpp"
#include "../..objects/face/face.hpp"
#include "../..objects/picture/picture.hpp"
Include dependency graph for Includes.ihh:
```

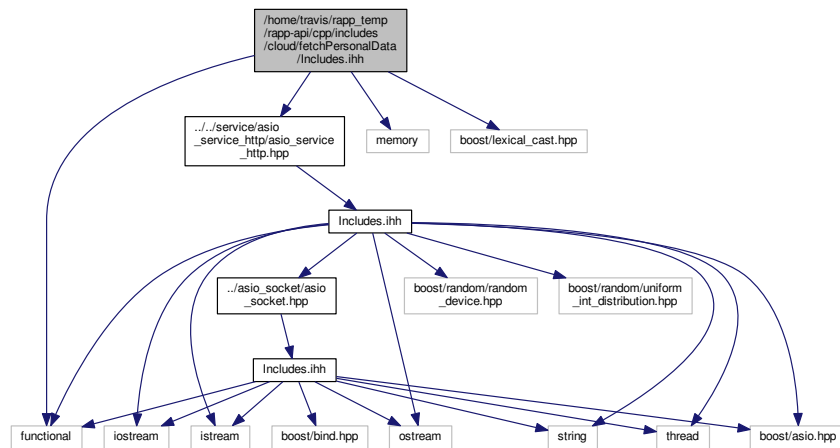


This graph shows which files directly or indirectly include this file:

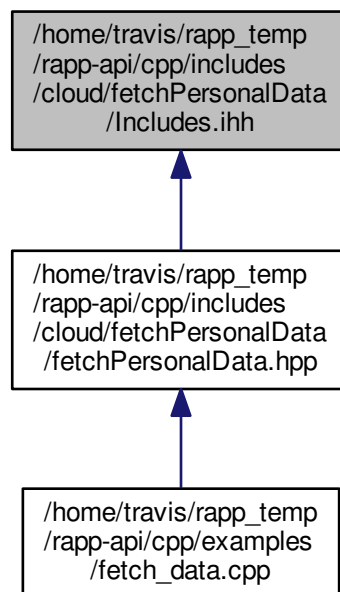


## 7.10 /home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/fetchPersonalData/Includes.ihh File Reference

```
#include <functional>
#include <memory>
#include "../service/asio_service_http/asio_service_http.hpp"
#include <boost/lexical_cast.hpp>
Include dependency graph for Includes.ihh:
```



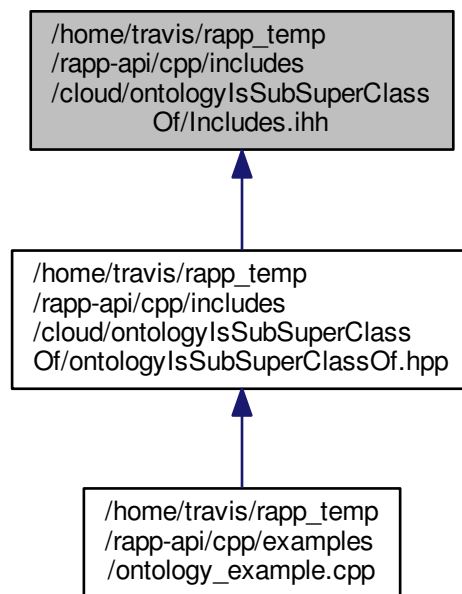
This graph shows which files directly or indirectly include this file:





## 7.11 /home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/ontologyIsSubSuperClassOf/Includes.ihh File Reference

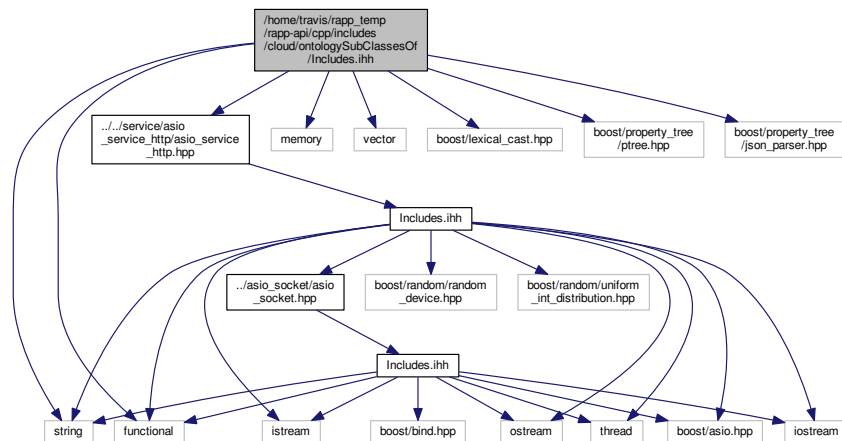
This graph shows which files directly or indirectly include this file:



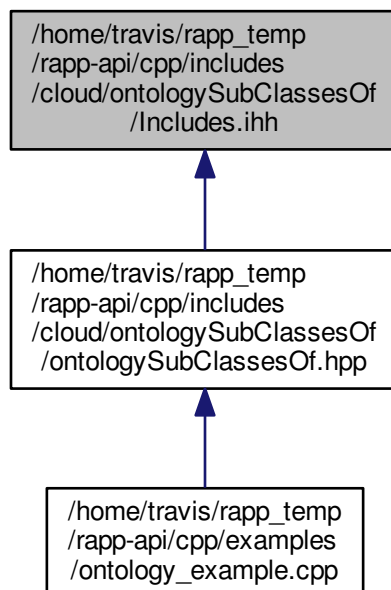
## 7.12 /home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/ontologySubClassesOf/Includes.ihh File Reference

```
#include <functional>
#include <memory>
#include <vector>
#include <string>
#include <boost/lexical_cast.hpp>
#include <boost/property_tree/ptree.hpp>
#include <boost/property_tree/json_parser.hpp>
#include "../service/asio_service_http/asio_service_http.hpp"
```

Include dependency graph for Includes.ihh:



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



### 7.13 /home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/ontologySuperClassesOf/-Includes.ihh File Reference

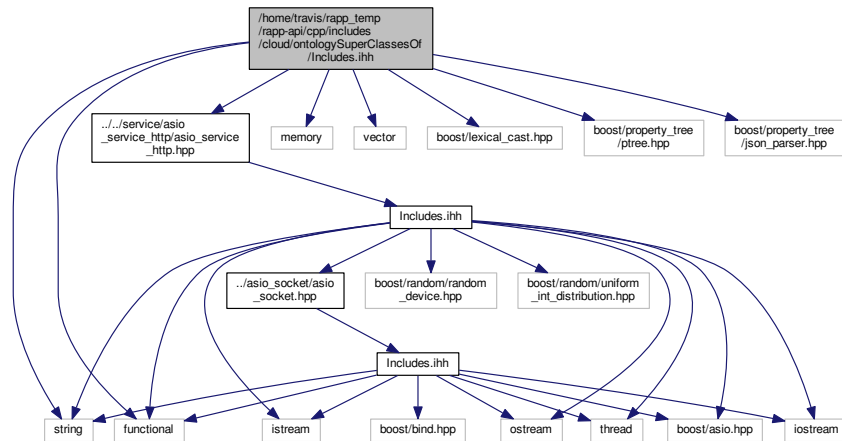
```
#include <functional>
```

```

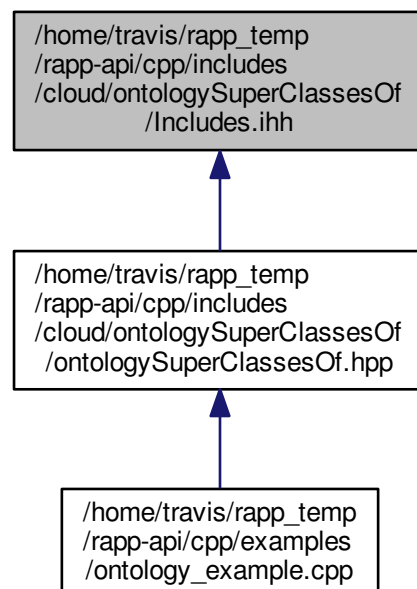
#include <memory>
#include <vector>
#include <string>
#include <boost/lexical_cast.hpp>
#include <boost/property_tree/ptree.hpp>
#include <boost/property_tree/json_parser.hpp>
#include "../service/asio_service_http/asio_service_http.hpp"

```

Include dependency graph for Includes.ihh:



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

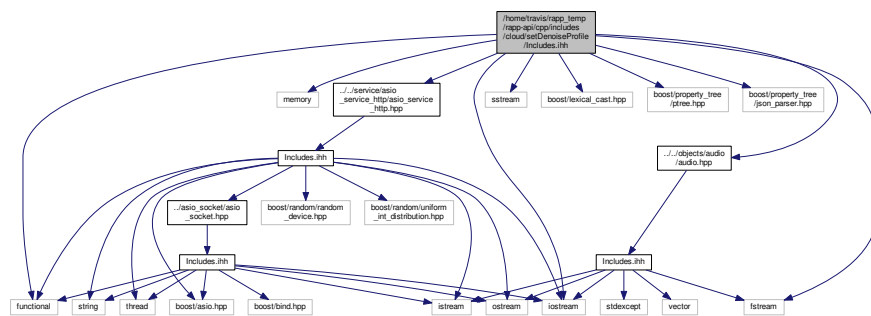




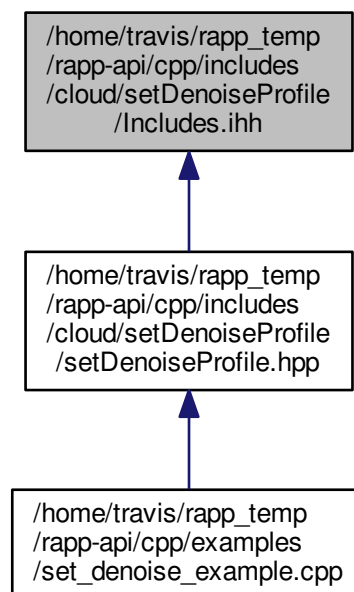
## 7.15 /home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/setDenoiseProfile/Includes.ihh File Reference

```
#include <functional>
#include <memory>
#include <iostream>
#include <fstream>
#include <sstream>
#include <boost/lexical_cast.hpp>
#include <boost/property_tree/ptree.hpp>
#include <boost/property_tree/json_parser.hpp>
#include "../service/asio_service_http/asio_service_http.hpp"
#include "../objects/audio/audio.hpp"
```

Include dependency graph for Includes.ihh:



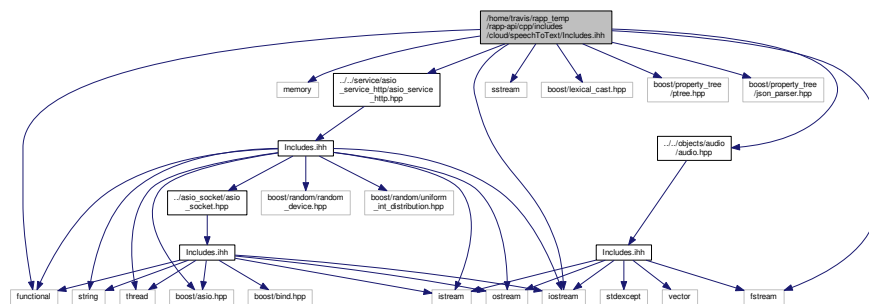
This graph shows which files directly or indirectly include this file:



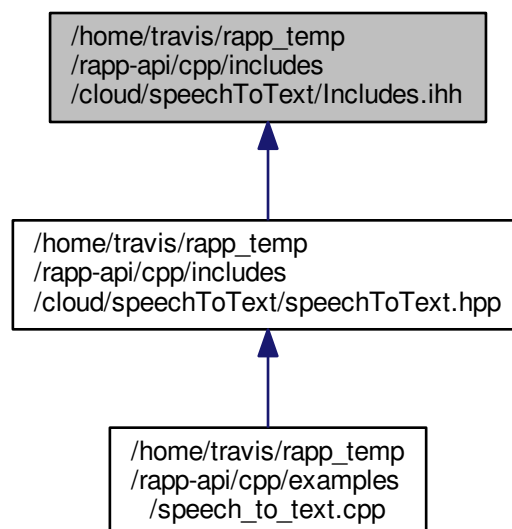
## 7.16 /home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/speechToText/Includes.ihh File Reference

```
#include <functional>
#include <memory>
#include <iostream>
#include <fstream>
#include <sstream>
#include <boost/lexical_cast.hpp>
#include <boost/property_tree/ptree.hpp>
#include <boost/property_tree/json_parser.hpp>
#include "../service/asio_service_http/asio_service_http.hpp"
#include "../objects/audio/audio.hpp"
```

Include dependency graph for Includes.ihh:



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

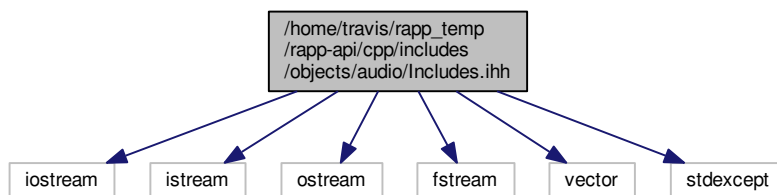


## 7.17 /home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/upServices/Includes.ihh File Reference

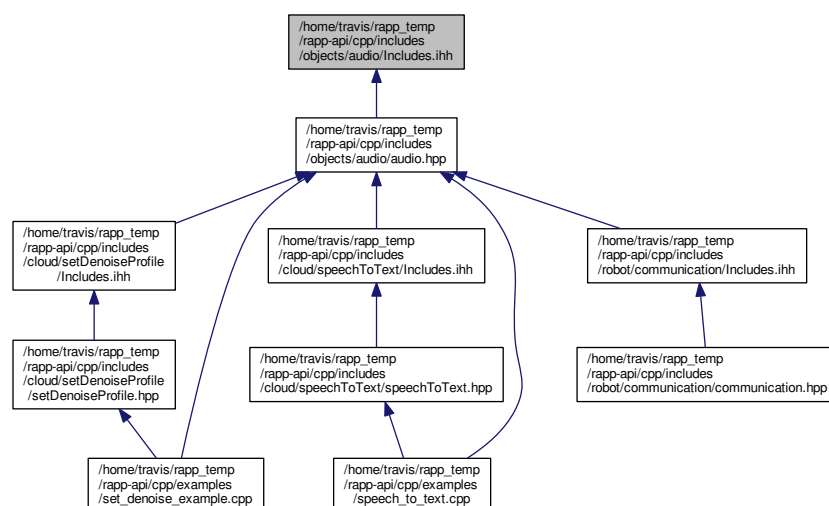
## 7.18 /home/travis/rapp\_temp/rapp-api/cpp/includes/objects/audio/Includes.ihh File Reference

```
#include <iostream>
#include <istream>
#include <ostream>
#include <fstream>
#include <vector>
#include <stdexcept>
```

Include dependency graph for Includes.ihh:

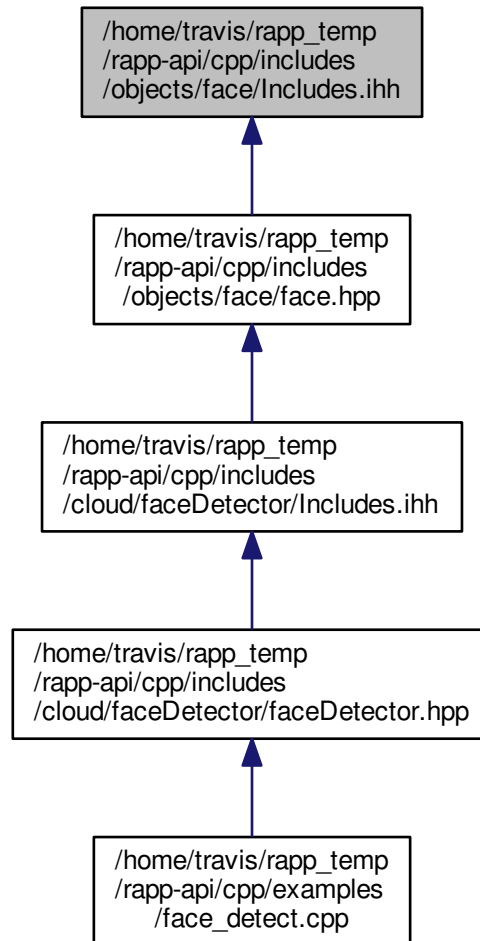


This graph shows which files directly or indirectly include this file:



## 7.19 /home/travis/rapp\_temp/rapp-api/cpp/includes/objects/face/Includes.ihh File Reference

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



## 7.20 /home/travis/rapp\_temp/rapp-api/cpp/includes/objects/picture/Includes.ihh File Reference

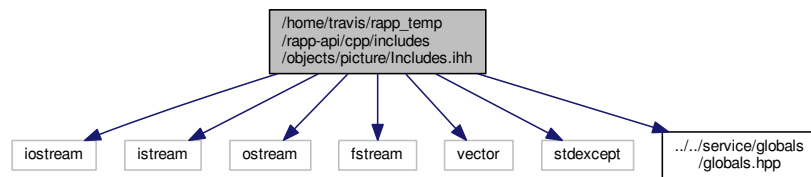
```

#include <iostream>
#include <istream>
#include <ostream>
#include <fstream>
#include <vector>
#include <stdexcept>
#include "../service/globals/globals.hpp"

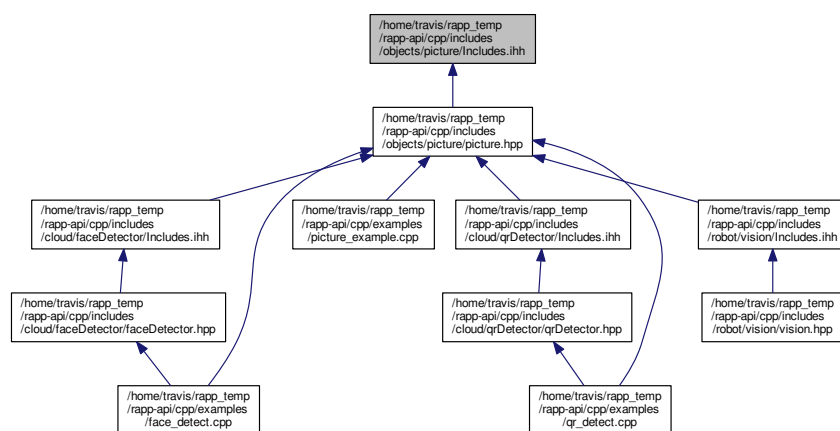
```



Include dependency graph for Includes.ihh:



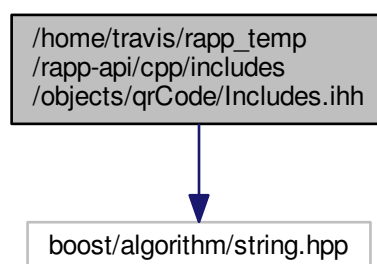
This graph shows which files directly or indirectly include this file:



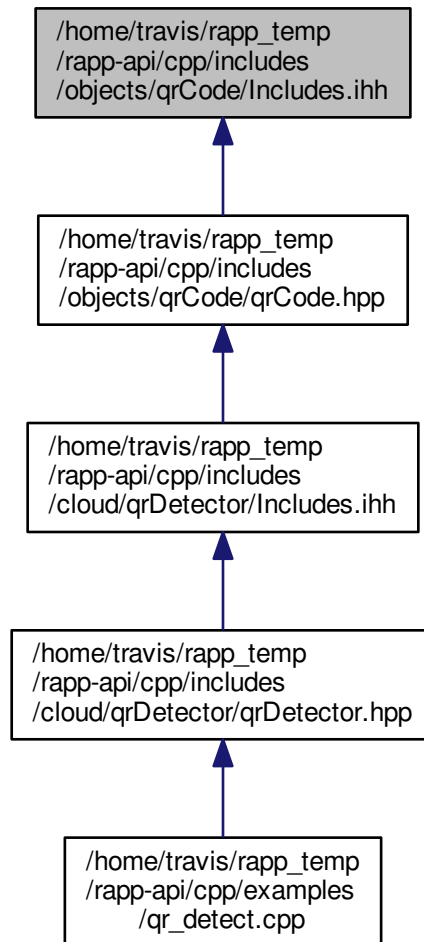
## 7.21 /home/travis/rapp\_temp/rapp-api/cpp/includes/objects/qrCode/Includes.ihh File Reference

```
#include <boost/algorithm/string.hpp>
```

Include dependency graph for Includes.ihh:



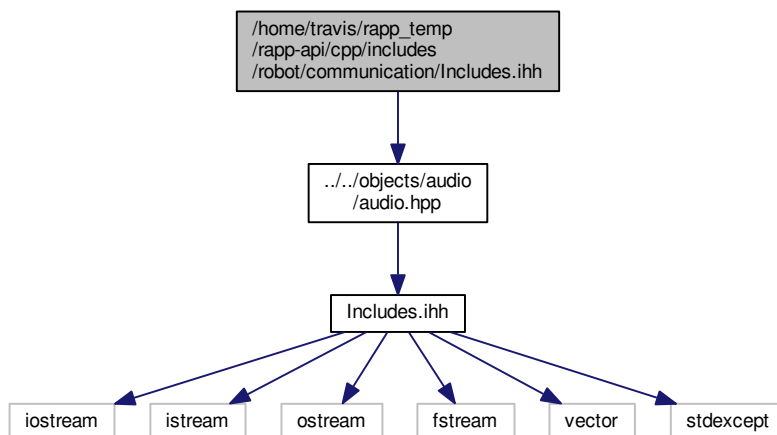
This graph shows which files directly or indirectly include this file:



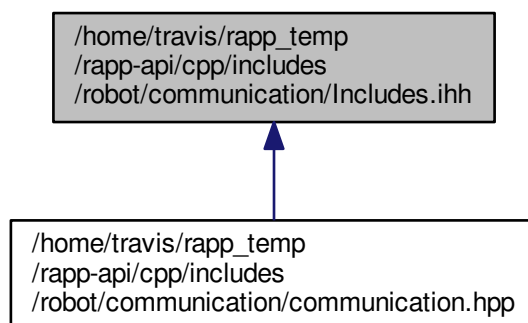
## 7.22 /home/travis/rapp\_temp/rapp-api/cpp/includes/robot/communication/Includes.ihh File Reference

```
#include "../..../objects/audio/audio.hpp"
```

Include dependency graph for Includes.ihh:

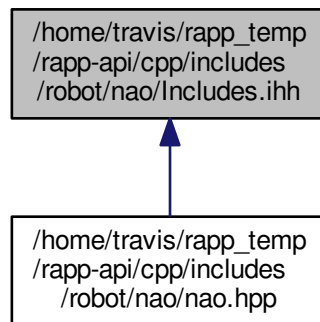


This graph shows which files directly or indirectly include this file:



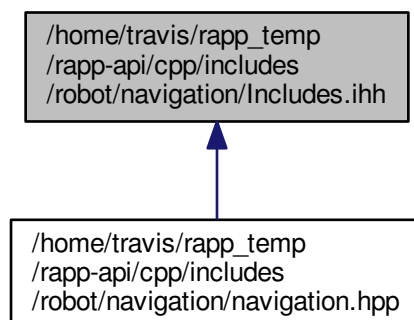
### 7.23 `/home/travis/rapp_temp/rapp-api/cpp/includes/robot/nao/Includes.ihh` File Reference

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



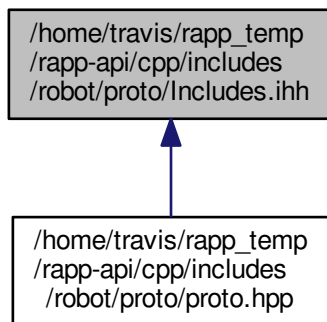
### 7.24 `/home/travis/rapp_temp/rapp-api/cpp/includes/robot/navigation/Includes.ihh` File Reference

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



## 7.25 /home/travis/rapp\_temp/rapp-api/cpp/includes/robot/proto/Includes.ihh File Reference

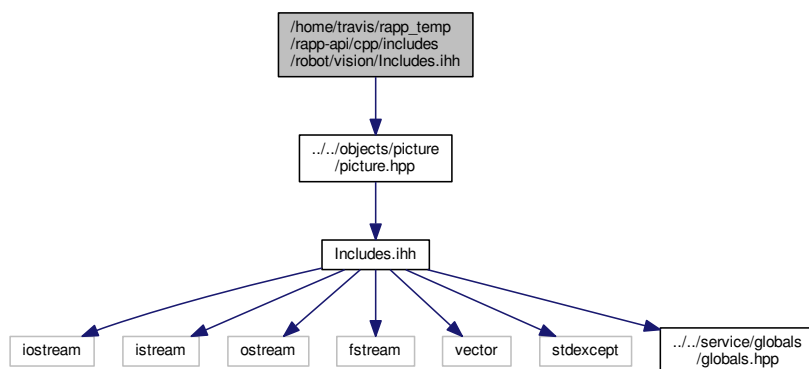
This graph shows which files directly or indirectly include this file:



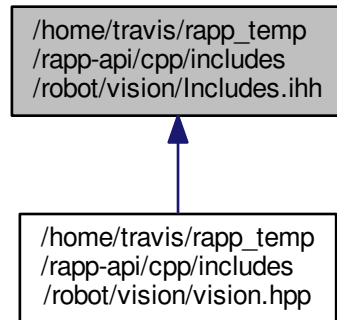
## 7.26 /home/travis/rapp\_temp/rapp-api/cpp/includes/robot/vision/Includes.ihh File Reference

```
#include ".../objects/picture/picture.hpp"
```

Include dependency graph for Includes.ihh:



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



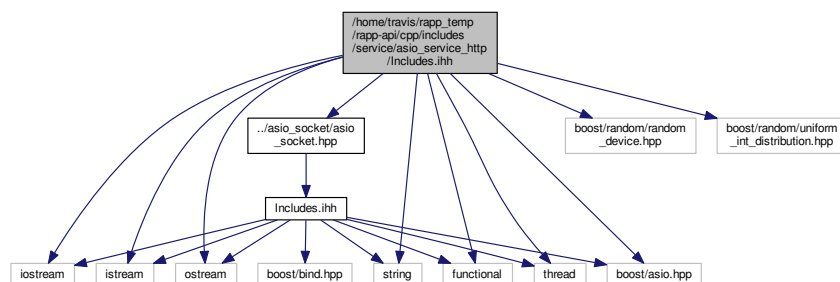
## 7.27 /home/travis/rapp\_temp/rapp-api/cpp/includes/service/asio\_service\_http/Includes.ihh File Reference

```

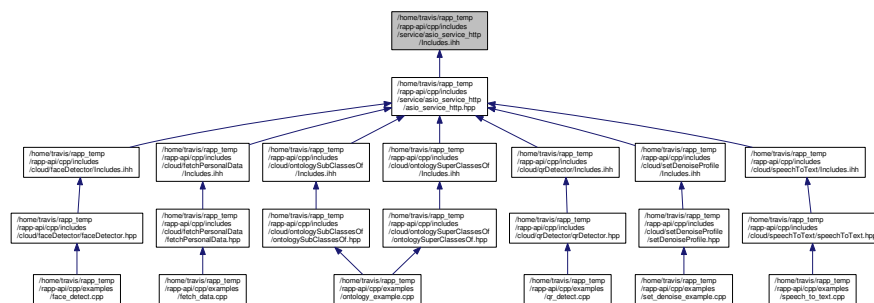
#include <iostream>
#include <istream>
#include <ostream>
#include <string>
#include <functional>
#include <thread>
#include <boost/asio.hpp>
#include <boost/random/random_device.hpp>
#include <boost/random/uniform_int_distribution.hpp>
#include "../asio_socket/asio_socket.hpp"

```

Include dependency graph for Includes.ihh:



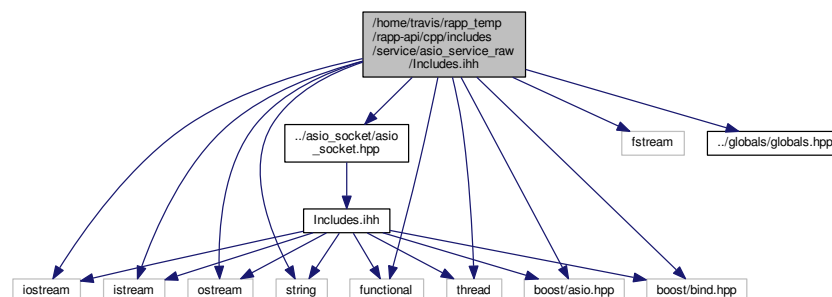
This graph shows which files directly or indirectly include this file:



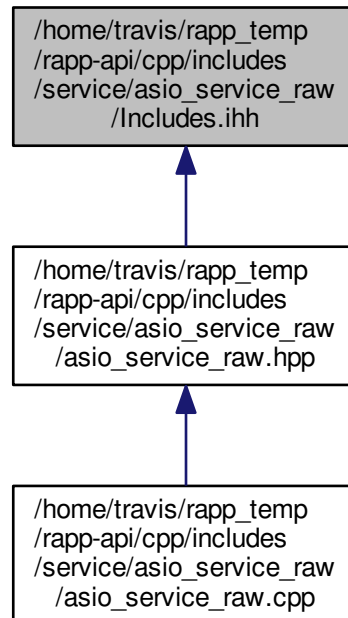
## 7.28 /home/travis/rapp\_temp/rapp-api/cpp/includes/service/asio\_service\_raw/Includes.ihh File Reference

```
#include <iostream>
#include <istream>
#include <ostream>
#include <fstream>
#include <string>
#include <functional>
#include <thread>
#include <boost/asio.hpp>
#include <boost/bind.hpp>
#include "../asio_socket/asio_socket.hpp"
#include "../globals/globals.hpp"
```

Include dependency graph for Includes.ihh:



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



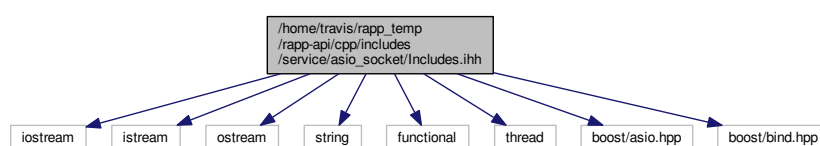
## 7.29 /home/travis/rapp\_temp/rapp-api/cpp/includes/service/asio\_socket/Includes.ihh File Reference

```

#include <iostream>
#include <istream>
#include <ostream>
#include <string>
#include <functional>
#include <thread>
#include <boost/asio.hpp>
#include <boost/bind.hpp>

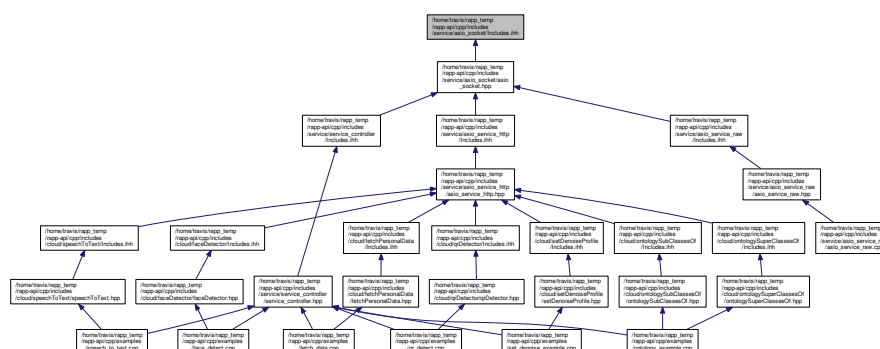
```

Include dependency graph for Includes.ihh:





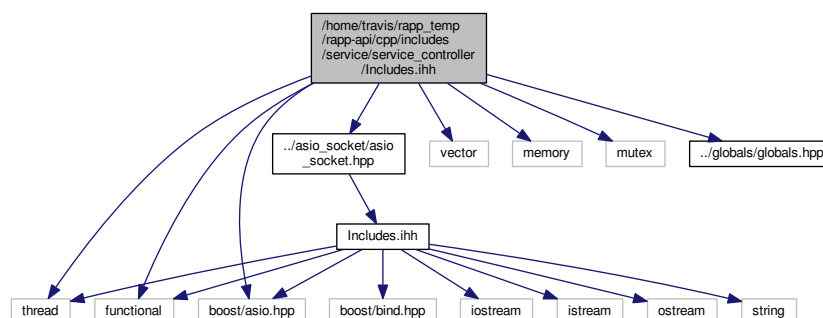
This graph shows which files directly or indirectly include this file:



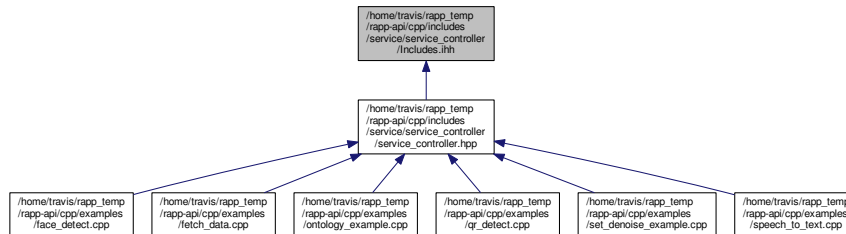
## 7.30 /home/travis/rapp\_temp/rapp-api/cpp/includes/service/service\_controller/Includes.ihh File Reference

```
#include <thread>
#include <functional>
#include <vector>
#include <memory>
#include <mutex>
#include <boost/asio.hpp>
#include "../asio_socket/asio_socket.hpp"
#include "../globals/globals.hpp"
```

Include dependency graph for Includes.ihh:



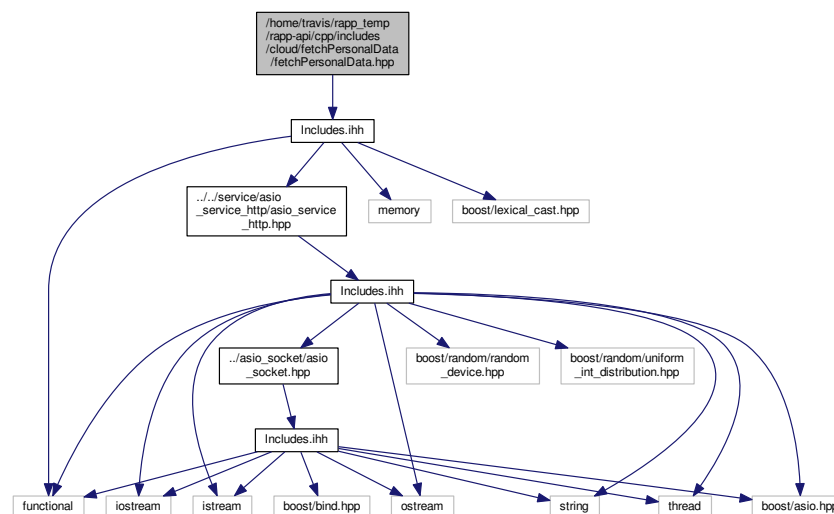
This graph shows which files directly or indirectly include this file:



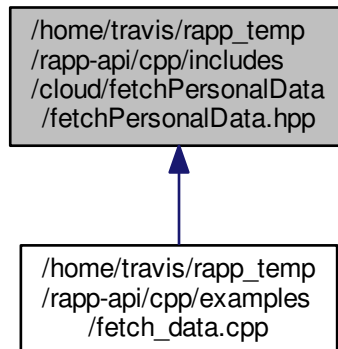
## 7.31 /home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/fetchPersonalData/fetchPersonalData.hpp File Reference

```
#include "Includes.ihh"
```

Include dependency graph for `fetchPersonalData.hpp`:



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



## Classes

- class `rapp::cloud::fetchPersonalData`  
*Get all personal data for a specific user.*

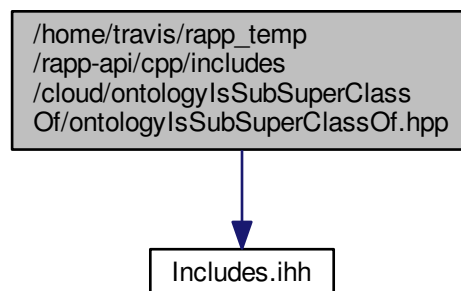
## Namespaces

- `rapp`
- `rapp::cloud`

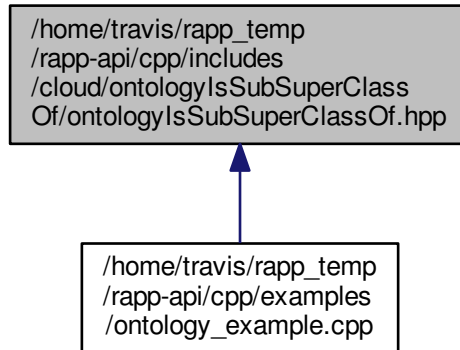
## 7.32 /home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/ontologyIsSubSuperClassOf/ontologyIsSubSuperClassOf.hpp File Reference

```
#include "Includes.ihh"
```

Include dependency graph for `ontologyIsSubSuperClassOf.hpp`:



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



## Classes

- class [rapp::cloud::ontologyIsSubSuperClassOf](#)

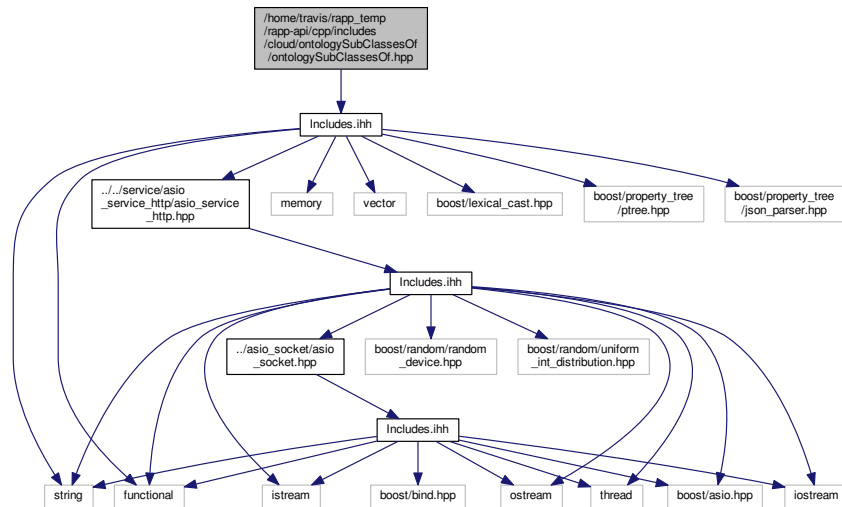
## Namespaces

- [rapp](#)
- [rapp::cloud](#)

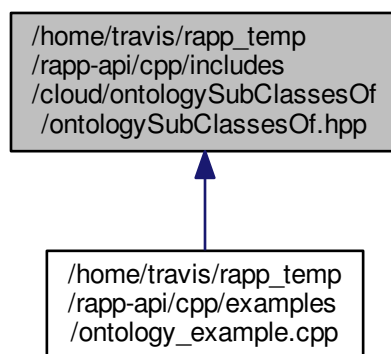
### 7.33 /home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/ontologySubClassesOf/ontologySubClassesOf.hpp File Reference

```
#include "Includes.ihh"
```

Include dependency graph for ontologySubClassesOf.hpp:



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



## Classes

- class [rapp::cloud::ontologySubClassesOf](#)

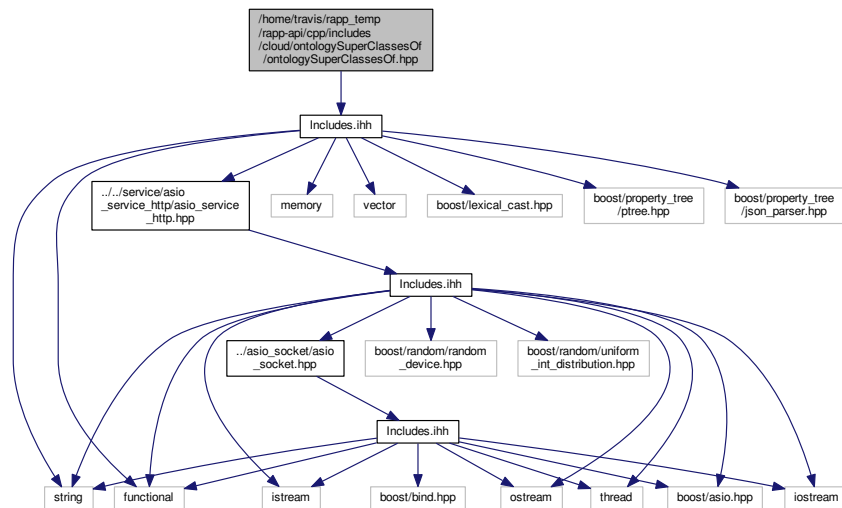
## Namespaces

- [rapp](#)
- [rapp::cloud](#)

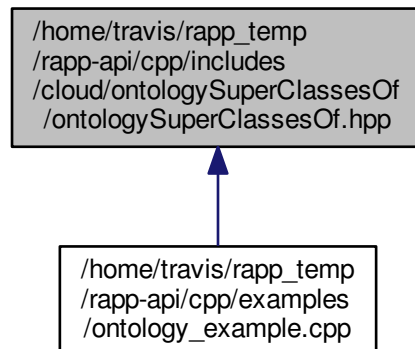
## 7.34 /home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/ontologySuperClassesOf/ontology-SuperClassesOf.hpp File Reference

```
#include "Includes.ihh"
```

Include dependency graph for ontologySuperClassesOf.hpp:



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



### Classes

- class [rapp::cloud::ontologySuperClassesOf](#)

### Namespaces

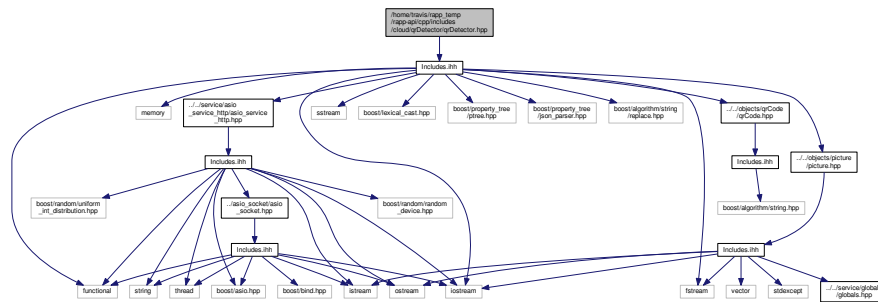
- [rapp](#)

- rapp::cloud

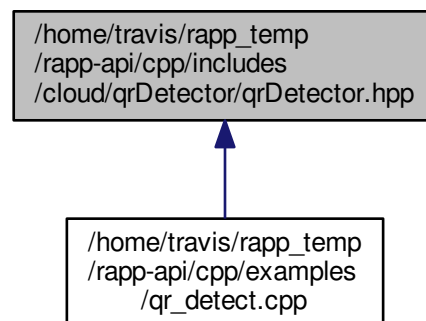
### 7.35 /home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/qrDetector/qrDetector.hpp File Reference

```
#include "Includes.ihh"
```

Include dependency graph for qrDetector.hpp:



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



## Classes

- class `rapp::cloud::qrDetector`

*Asynchronous Service which will request the cloud to detect QR codes.*

## Namespaces

- rapp
- rapp::cloud

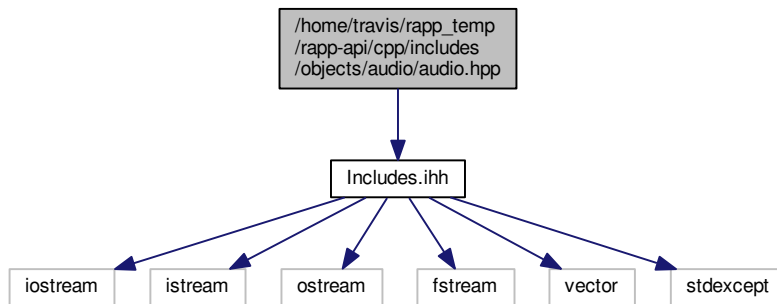




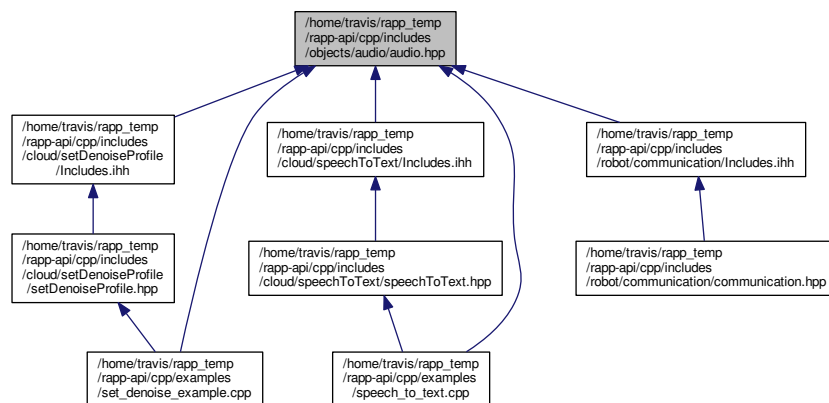


## 7.39 /home/travis/rapp\_temp/rapp-api/cpp/includes/objects/audio/audio.hpp File Reference

```
#include "Includes.ihh"
Include dependency graph for audio.hpp:
```



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



### Classes

- class `rapp::object::audio`  
*class which wraps around raw bytes of an audiofile*

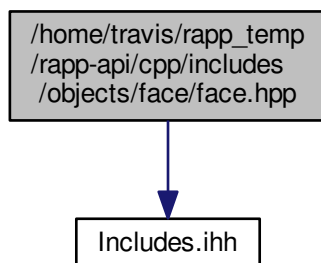
### Namespaces

- `rapp`
- `rapp::object`

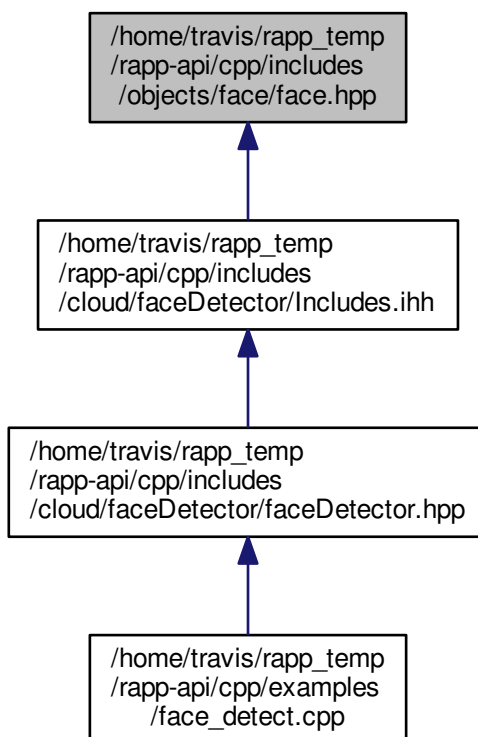
## 7.40 /home/travis/rapp\_temp/rapp-api/cpp/includes/objects/face/face.hpp File Reference

```
#include "Includes.ihh"
```

Include dependency graph for face.hpp:



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



## Classes

- class [rapp::object::face](#)

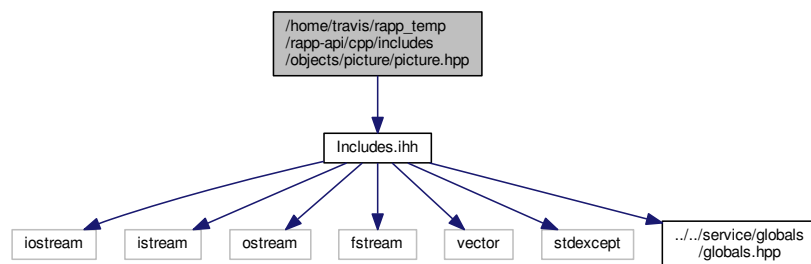
## Namespaces

- [rapp](#)
- [rapp::object](#)

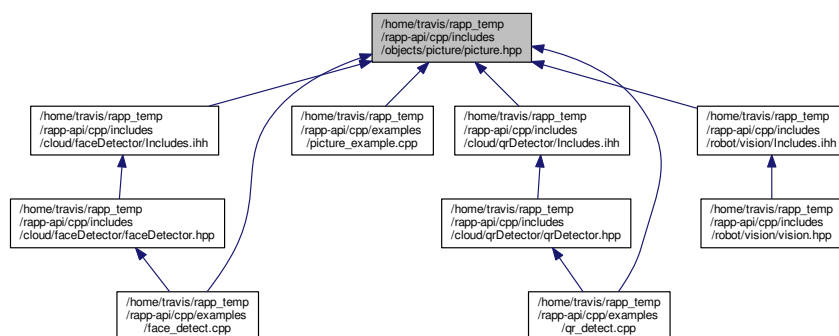
## 7.41 /home/travis/rapp\_temp/rapp-api/cpp/includes/objects/picture/picture.hpp File Reference

```
#include "Includes.ihh"
```

Include dependency graph for picture.hpp:



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



## Classes

- class [rapp::object::picture](#)

*class which wraps around raw bytes of a picture*

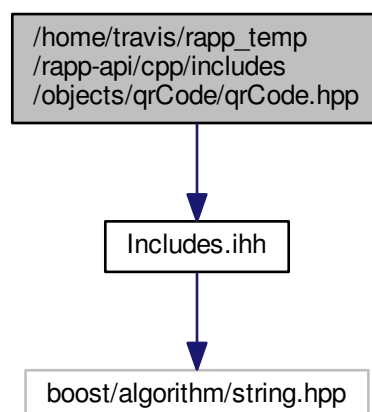
## Namespaces

- [rapp](#)
- [rapp::object](#)

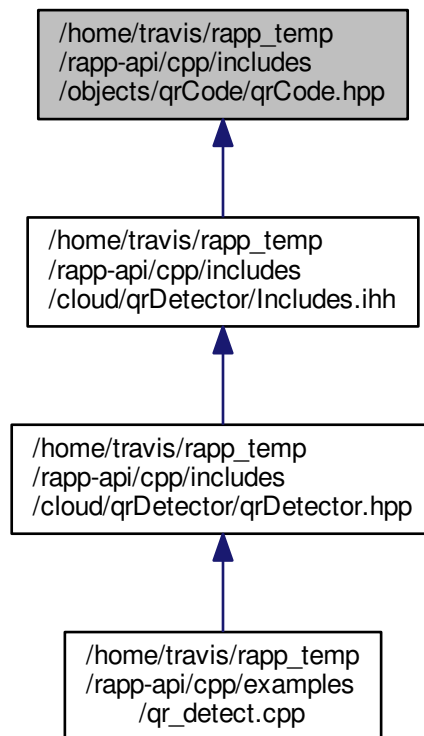
## 7.42 /home/travis/rapp\_temp/rapp-api/cpp/includes/objects/qrcode/qrcode.hpp File Reference

```
#include "Includes.ihh"
```

Include dependency graph for qrcode.hpp:



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



## Classes

- class [rapp::object::qrCode](#)

*class which should encapsulate a QR code*

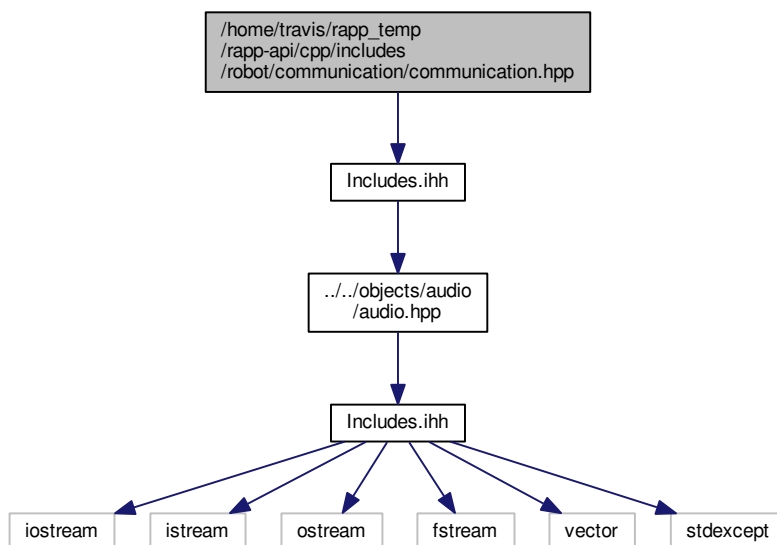
## Namespaces

- [rapp](#)
- [rapp::object](#)

## 7.43 /home/travis/rapp\_temp/rapp-api/cpp/includes/robot/communication/communication.hpp File Reference

```
#include "Includes.ihh"
```

Include dependency graph for communication.hpp:



## Classes

- class `rapp::robot::communication`

*Abstract Base Class (ABC) Interface for Robot Communication.*

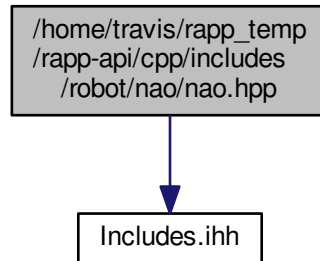
## Namespaces

- `rapp`
- `rapp::robot`

## 7.44 /home/travis/rapp\_temp/rapp-api/cpp/includes/robot/nao/nao.hpp File Reference

```
#include "Includes.ihh"
```

Include dependency graph for nao.hpp:



## Classes

- class `rapp::robot::nao`

*Implementation Class for Aldearan's NAO robot.*

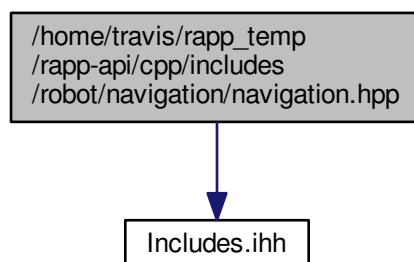
## Namespaces

- `rapp`
- `rapp::robot`

## 7.45 /home/travis/rapp\_temp/rapp-api/cpp/includes/robot/navigation/navigation.hpp File Reference

```
#include "Includes.ihh"
```

Include dependency graph for navigation.hpp:





## Classes

- class [rapp::robot::navigation](#)

*Abstract Base Class (ABC) Interface for Navigation.*

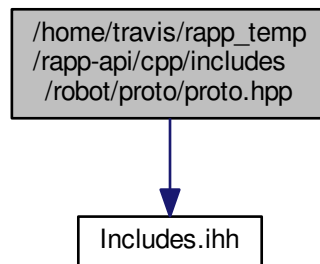
## Namespaces

- [rapp](#)
- [rapp::robot](#)

## 7.46 /home/travis/rapp\_temp/rapp-api/cpp/includes/robot/proto/proto.hpp File Reference

```
#include "Includes.ihh"
```

Include dependency graph for proto.hpp:



## Classes

- class [rapp::robot::proto](#)

*Abstract Base Class (ABC) Interface Prototype for all Robots.*

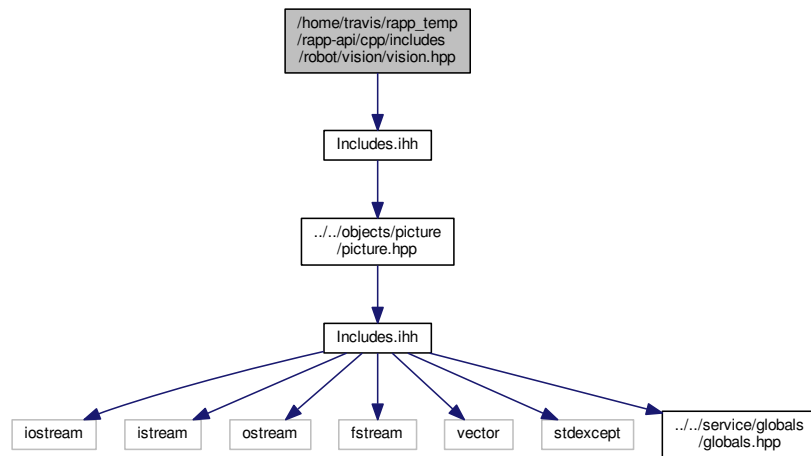
## Namespaces

- [rapp](#)
- [rapp::robot](#)

## 7.47 /home/travis/rapp\_temp/rapp-api/cpp/includes/robot/vision/vision.hpp File Reference

```
#include "Includes.ihh"
```

Include dependency graph for vision.hpp:



## Classes

- class [rapp::robot::vision](#)

*Abstract Base Class (ABC) Interface for Vision.*

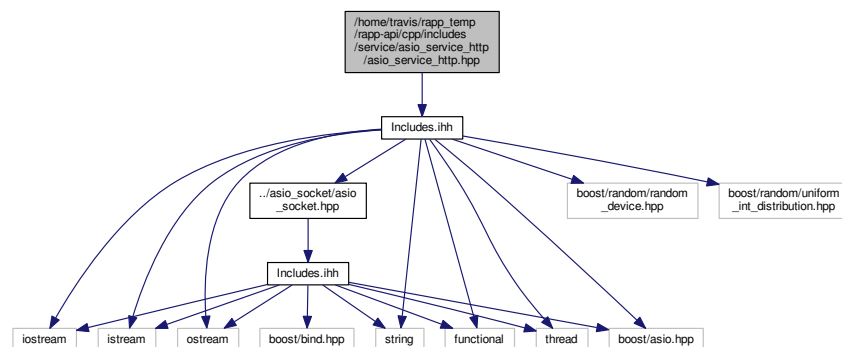
## Namespaces

- [rapp](#)
- [rapp::robot](#)

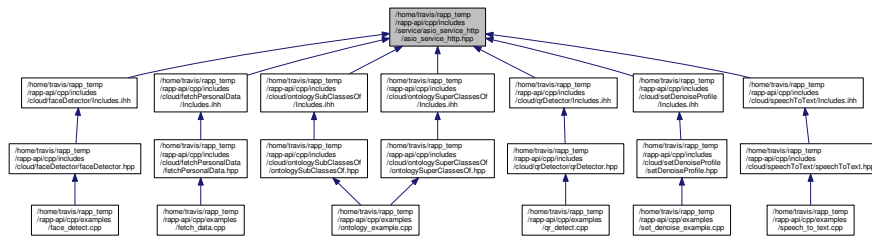
## 7.48 /home/travis/rapp\_temp/rapp-api/cpp/includes/service/asio\_service\_http/asio\_service\_http.hpp File Reference

```
#include "Includes.ihh"
```

Include dependency graph for asio\_service\_http.hpp:



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



## Classes

- class [rapp::services::asio\\_service\\_http](#)

*base class for asynchronous http websockets used for connecting to cloud services*

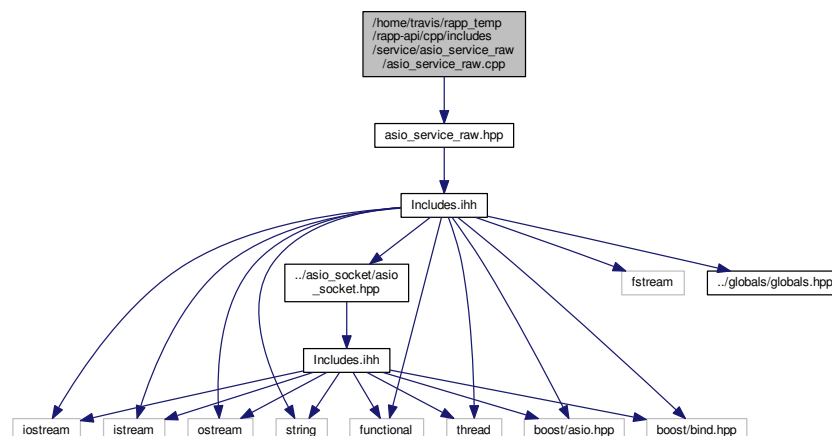
## Namespaces

- [rapp](#)
- [rapp::services](#)

## 7.49 /home/travis/rapp\_temp/rapp-api/cpp/includes/service/asio\_service\_raw/asio\_service\_raw.cpp File Reference

```
#include "asio_service_raw.hpp"
```

Include dependency graph for asio\_service\_raw.cpp:



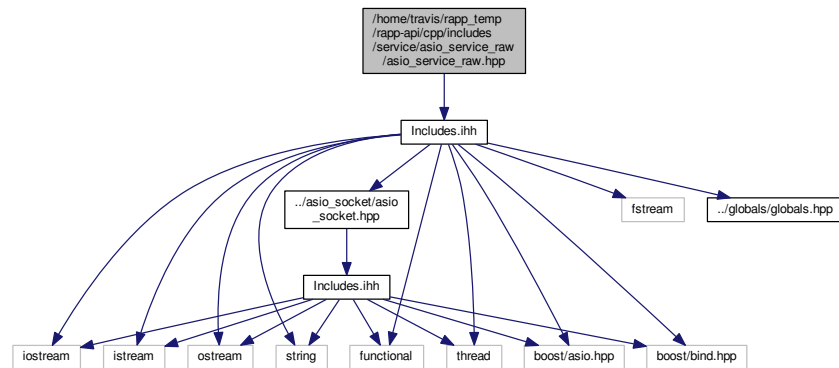
## Namespaces

- [rapp](#)
- [rapp::services](#)

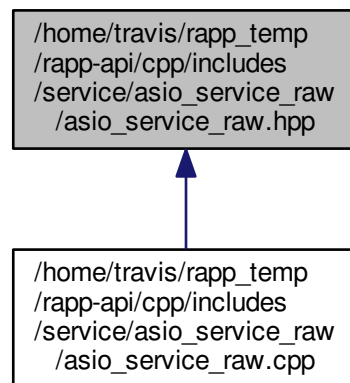
## 7.50 /home/travis/rapp\_temp/rapp-api/cpp/includes/service/asio\_service\_raw/asio\_service\_raw.hpp File Reference

```
#include "Includes.ihh"
```

Include dependency graph for asio\_service\_raw.hpp:



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



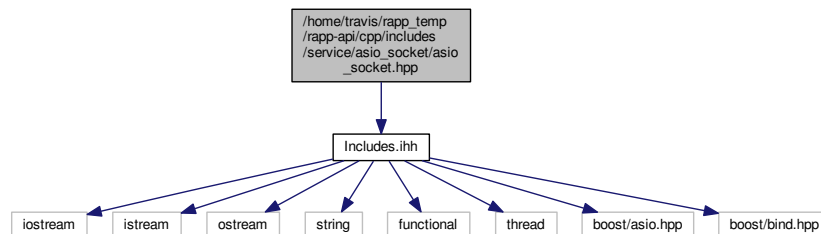
### Classes

- class `rapp::services::asio_service_raw`  
*base class for asynchronous sockets used for connecting to cloud services*

### Namespaces

- `rapp`
- `rapp::services`

Include dependency graph for asio\_socket.hpp:

[illegible]

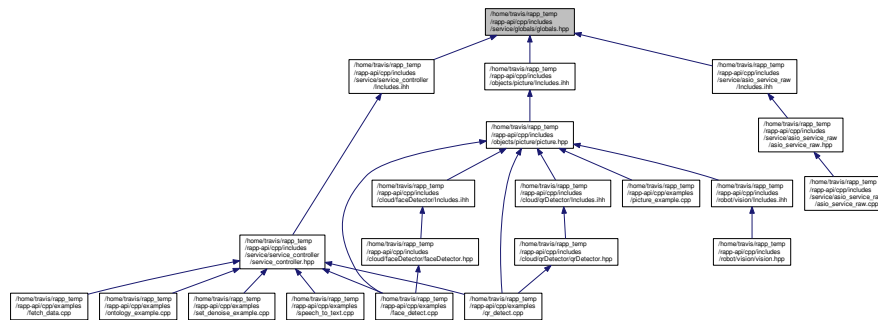
- class `rapp::services::asio_socket`

## Namespaces

- rapp
- rapp::services

## 7.52 /home/travis/rapp\_temp/rapp-api/cpp/includes/service/globals/globals.hpp File Reference

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



### Namespaces

- [rapp](#)
- [rapp::cloud](#)
- [rapp::types](#)

### Typedefs

- typedef char [rapp::types::byte](#)

### Variables

- constexpr char [rapp::cloud::address](#) [] = "localhost"

*api.rapp.cloud - use deployment IP*

- constexpr char [rapp::cloud::auth\\_token](#) [] = "cmFwcGRldjpyYXBwZGV2"

*base64 encoded authentication token*

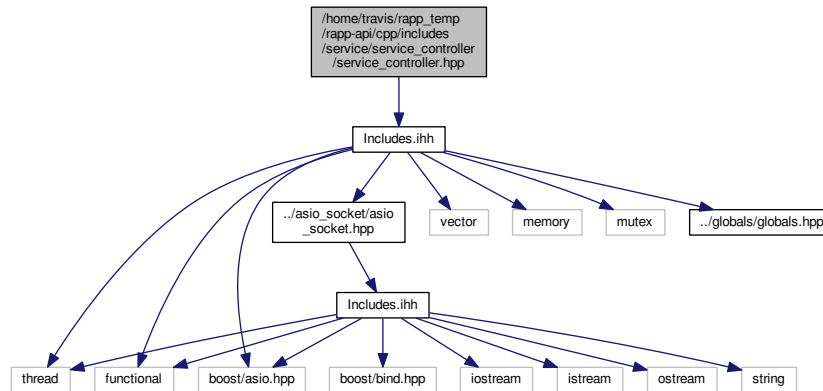
- constexpr char [rapp::cloud::port](#) [] = "9001"

*api.rapp.cloud - HOP server port*

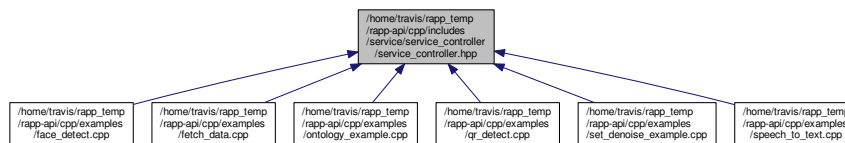
## 7.53 /home/travis/rapp\_temp/rapp-api/cpp/includes/service/service\_controller/service\_controller.hpp File Reference

```
#include "Includes.ihh"
```

Include dependency graph for service\_controller.hpp:



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



### Classes

- class [rapp::services::service\\_controller](#)  
Main class that controllers RAPP Services.

### Namespaces

- [rapp](#)
- [rapp::services](#)

## 7.54 /home/travis/rapp\_temp/rapp-api/python/RappCloud/\_\_init\_\_.py File Reference

### Namespaces

- [RappCloud](#)

## 7.55 /home/travis/rapp\_temp/rapp-api/python/RappCloud/CloudInterface/\_\_init\_\_.py File Reference

### Namespaces

- [RappCloud.CloudInterface](#)

## 7.56 /home/travis/rapp\_temp/rapp-api/python/RappCloud/RandStrGen/\_\_init\_\_.py File Reference

### Namespaces

- [RappCloud.RandStrGen](#)

## 7.57 /home/travis/rapp\_temp/rapp-api/python/RappCloud/CloudInterface/CloudInterface.py File Reference

### Classes

- class [RappCloud.CloudInterface.CloudInterface.CloudInterface](#)  
*Cloud Interface class.*

### Namespaces

- [RappCloud.CloudInterface.CloudInterface](#)

### 7.57.1 Detailed Description

#### Copyright

Rapp Projecty EU 2015

#### Author

Konstantinos Panayiotou, [[klpanagi@gmail.com](mailto:klpanagi@gmail.com)]

Definition in file [CloudInterface.py](#).

## 7.58 /home/travis/rapp\_temp/rapp-api/python/RappCloud/RandStrGen/RandStrGen.py File Reference

### Classes

- class [RappCloud.RandStrGen.RandStrGen.RandStrGen](#)  
*Random String Generator class.*



## Namespaces

- [RappCloud.RandStrGen.RandStrGen](#)

### 7.58.1 Detailed Description

#### Copyright

Rapp Projecty EU 2015

#### Author

Konstantinos Panayiotou, [[klpanagi@gmail.com](mailto:klpanagi@gmail.com)]

Definition in file [RandStrGen.py](#).

## 7.59 /home/travis/rapp\_temp/rapp-api/python/RappCloud/RappCloud.py File Reference

### Classes

- class [RappCloud.RappCloud.RappCloud](#)  
*Rapp Platform API class.*

## Namespaces

- [RappCloud.RappCloud](#)

### Variables

- tuple [RappCloud.RappCloud.\\_\\_path\\_\\_](#) = `os.path.dirname(__file__)`

### 7.59.1 Detailed Description

#### Copyright

Rapp Projecty EU 2015

#### Author

Konstantinos Panayiotou, [[klpanagi@gmail.com](mailto:klpanagi@gmail.com)]

Definition in file [RappCloud.py](#).

# Index

/home/travis/rapp\_temp/rapp-api/cpp/examples/face\_-  
detect.cpp, 75

/home/travis/rapp\_temp/rapp-api/cpp/examples/fetch\_-  
data.cpp, 76

/home/travis/rapp\_temp/rapp-api/cpp/examples/ontology\_-  
example.cpp, 76

/home/travis/rapp\_temp/rapp-api/cpp/examples/picture\_-  
example.cpp, 77

/home/travis/rapp\_temp/rapp-api/cpp/examples/qr\_-  
detect.cpp, 78

/home/travis/rapp\_temp/rapp-api/cpp/examples/set\_-  
denoise\_example.cpp, 78

/home/travis/rapp\_temp/rapp-api/cpp/examples/speech\_-  
to\_text.cpp, 79

/home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/face-  
Detector/Includes.ihh, 81

/home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/face-  
Detector/faceDetector.hpp, 80

/home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/fetch-  
PersonalData/Includes.ihh, 82

/home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/fetch-  
PersonalData/fetchPersonalData.hpp, 100

/home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/ontology-  
IsSubSuperClassOf/Includes.ihh, 83

/home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/ontology-  
IsSubSuperClassOf/ontologyIsSubSuper-  
ClassOf.hpp, 101

/home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/ontology-  
SubClassesOf/Includes.ihh, 83

/home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/ontology-  
SubClassesOf/ontologySubClassesOf.hpp,  
102

/home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/ontology-  
SuperClassesOf/Includes.ihh, 84

/home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/ontology-  
SuperClassesOf/ontologySuperClassesOf.-  
hpp, 104

/home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/qr-  
Detector/Includes.ihh, 86

/home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/qr-  
Detector/qrDetector.hpp, 105

/home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/set-  
DenoiseProfile/Includes.ihh, 87

/home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/set-  
DenoiseProfile/setDenoiseProfile.hpp, 106

/home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/speech-  
ToText/Includes.ihh, 88

/home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/speech-  
ToText/speechToText.hpp, 107

/home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/up-  
Services/Includes.ihh, 89

/home/travis/rapp\_temp/rapp-api/cpp/includes/cloud/up-  
Services/upServices.hpp, 107

/home/travis/rapp\_temp/rapp-api/cpp/includes/objects/audio/-  
Includes.ihh, 89

/home/travis/rapp\_temp/rapp-api/cpp/includes/objects/audio/audio.-  
hpp, 108

/home/travis/rapp\_temp/rapp-api/cpp/includes/objects/face/-  
Includes.ihh, 90

/home/travis/rapp\_temp/rapp-api/cpp/includes/objects/face/face.-  
hpp, 109

/home/travis/rapp\_temp/rapp-api/cpp/includes/objects/picture/-  
Includes.ihh, 90

/home/travis/rapp\_temp/rapp-api/cpp/includes/objects/picture/picture.-  
hpp, 110

/home/travis/rapp\_temp/rapp-api/cpp/includes/objects/qr-  
Code/Includes.ihh, 91

/home/travis/rapp\_temp/rapp-api/cpp/includes/objects/qr-  
Code/qrCode.hpp, 111

/home/travis/rapp\_temp/rapp-api/cpp/includes/robot/communication/-  
Includes.ihh, 92

/home/travis/rapp\_temp/rapp-api/cpp/includes/robot/communication/comm-  
unication.hpp, 112

/home/travis/rapp\_temp/rapp-api/cpp/includes/robot/nao/-  
Includes.ihh, 94

/home/travis/rapp\_temp/rapp-api/cpp/includes/robot/nao/nao.-  
hpp, 113

/home/travis/rapp\_temp/rapp-api/cpp/includes/robot/navigation/-  
Includes.ihh, 94

/home/travis/rapp\_temp/rapp-api/cpp/includes/robot/navigation/navigation.-  
hpp, 114

/home/travis/rapp\_temp/rapp-api/cpp/includes/robot/proto/-  
Includes.ihh, 95

/home/travis/rapp\_temp/rapp-api/cpp/includes/robot/proto/proto.-  
hpp, 115

/home/travis/rapp\_temp/rapp-api/cpp/includes/robot/vision/-  
Includes.ihh, 95

/home/travis/rapp\_temp/rapp-api/cpp/includes/robot/vision/vision.-  
hpp, 115

/home/travis/rapp\_temp/rapp-api/cpp/includes/service/asio-  
\_service\_http/Includes.ihh, 96

/home/travis/rapp\_temp/rapp-api/cpp/includes/service/asio-  
\_service\_http/asio\_service\_http.hpp, 116

/home/travis/rapp\_temp/rapp-api/cpp/includes/service/asio-  
\_service\_raw/Includes.ihh, 97

/home/travis/rapp\_temp/rapp-api/cpp/includes/service/asio-  
\_service\_raw/asio\_service\_raw.cpp, 117

/home/travis/rapp\_temp/rapp-api/cpp/includes/service/asio-

- `_service_raw/asio_service_raw.hpp`, 118
- `/home/travis/rapp_temp/rapp-api/cpp/includes/service/asio-socket/Includes.ihh`, 98
- `/home/travis/rapp_temp/rapp-api/cpp/includes/service/asio-socket/asio_socket.hpp`, 119
- `/home/travis/rapp_temp/rapp-api/cpp/includes/service/globals/globals.hpp`, 120
- `/home/travis/rapp_temp/rapp-api/cpp/includes/service/service_controller/Includes.ihh`, 99
- `/home/travis/rapp_temp/rapp-api/cpp/includes/service/service_controller/service_controller.hpp`, 121
- `/home/travis/rapp_temp/rapp-api/python/RappCloud/CloudInterface/CloudInterface.py`, 122
- `/home/travis/rapp_temp/rapp-api/python/RappCloud/CloudInterface/__init__.py`, 122
- `/home/travis/rapp_temp/rapp-api/python/RappCloud/RandStrGen/RandStrGen.py`, 122
- `/home/travis/rapp_temp/rapp-api/python/RappCloud/RandStrGen/__init__.py`, 122
- `/home/travis/rapp_temp/rapp-api/python/RappCloud/RappCloud.py`, 123
- `/home/travis/rapp_temp/rapp-api/python/RappCloud/__init__.py`, 121
- `__appendRandStr`
  - `RappCloud::RappCloud::RappCloud`, 60
- `__charsArray`
  - `RappCloud::RandStrGen::RandStrGen::RandStrGen`, 58
- `__defaultSize`
  - `RappCloud::RandStrGen::RandStrGen::RandStrGen`, 58
- `__init__`
  - `RappCloud::RappCloud::RappCloud`, 60
- `__parse_auth_cfg`
  - `RappCloud::RappCloud::RappCloud`, 60
- `__parse_platform_cfg`
  - `RappCloud::RappCloud::RappCloud`, 60
- `__parse_services_cfg`
  - `RappCloud::RappCloud::RappCloud`, 60
- `__path__`
  - `RappCloud::RappCloud`, 12
- `__randStrSize`
  - `RappCloud::RappCloud::RappCloud`, 65
- `address`
  - `rapp::cloud`, 10
- `asio_service_http`
  - `rapp::services::asio_service_http`, 15
- `asio_service_raw`
  - `rapp::services::asio_service_raw`, 20
- `audio`
  - `rapp::object::audio`, 25
- `auth_`
  - `RappCloud::RappCloud::RappCloud`, 65
- `auth_base64_`
  - `rapp::services::service_controller`, 68
- `auth_token`
  - `rapp::cloud`, 10
- `available_services`
  - `RappCloud::RappCloud::RappCloud`, 61
- `bottom_right_x__`
  - `rapp::object::face`, 32
- `bottom_right_y__`
  - `rapp::object::face`, 32
- `bottom_right_z__`
  - `rapp::object::face`, 32
- `byte`
  - `rapp::types`, 11
- `bytearray`
  - `rapp::object::audio`, 25
  - `rapp::object::picture`, 51
- `bytearray__`
  - `rapp::object::audio`, 26
  - `rapp::object::picture`, 52
- `bytes__`
  - `rapp::services::asio_service_raw`, 22
- `call_service`
  - `RappCloud::RappCloud::RappCloud`, 61
- `callService`
  - `RappCloud::CloudInterface::CloudInterface::CloudInterface`, 27
- `callback_`
  - `rapp::services::asio_service_http`, 17
  - `rapp::services::asio_service_raw`, 22
- `captureAudio`
  - `rapp::robot::communication`, 29
- `captureImage`
  - `rapp::robot::nao`, 39
  - `rapp::robot::vision`, 74
- `centre_x__`
  - `rapp::object::qrCode`, 55
- `centre_y__`
  - `rapp::object::qrCode`, 55
- `cfgFileDir_`
  - `RappCloud::RappCloud::RappCloud`, 65
- `cfgParser_`
  - `RappCloud::RappCloud::RappCloud`, 65
- `cognitive_test_chooser`
  - `RappCloud::RappCloud::RappCloud`, 61
- `complete_`
  - `rapp::services::asio_service_raw`, 22
- `create`
  - `RappCloud::RandStrGen::RandStrGen::RandStrGen`, 58
- `delegate_`
  - `rapp::cloud::faceDetector`, 35
  - `rapp::cloud::speechToText`, 73
- `delegate__`
  - `rapp::cloud::fetchPersonalData`, 38
  - `rapp::cloud::ontologyIsSubSuperClassOf`, 44
  - `rapp::cloud::ontologySubClassesOf`, 46
  - `rapp::cloud::ontologySuperClassesOf`, 49
  - `rapp::cloud::qrDetector`, 57
- `detect_objects`
  - `RappCloud::RappCloud::RappCloud`, 61

## ENGLISH

- rapp::robot::communication, [29](#)
- error\_handler
  - rapp::services::asio\_service\_http, [15](#)
  - rapp::services::asio\_service\_raw, [20](#)
- face, [32](#)
  - rapp::object::face, [31](#), [32](#)
- face\_detect.cpp
  - main, [75](#)
- face\_detection
  - RappCloud::RappCloud::RappCloud, [61](#)
- faceDetector
  - rapp::cloud::faceDetector, [35](#)
- fetch\_data.cpp
  - main, [76](#)
- fetchPersonalData
  - rapp::cloud::fetchPersonalData, [37](#)
- GREEK
  - rapp::robot::communication, [29](#)
- get\_platform\_services
  - RappCloud::RappCloud::RappCloud, [62](#)
- getMicrophoneEnergy
  - rapp::robot::communication, [29](#)
- handle\_connect
  - rapp::services::asio\_service\_http, [16](#)
  - rapp::services::asio\_service\_raw, [21](#)
- handle\_read\_content
  - rapp::services::asio\_service\_http, [16](#)
- handle\_read\_headers
  - rapp::services::asio\_service\_http, [16](#)
- handle\_read\_response
  - rapp::services::asio\_service\_raw, [21](#)
- handle\_read\_status\_line
  - rapp::services::asio\_service\_http, [16](#)
- handle\_reply
  - rapp::cloud::faceDetector, [35](#)
  - rapp::cloud::fetchPersonalData, [37](#)
  - rapp::cloud::ontologyIsSubSuperClassOf, [44](#)
  - rapp::cloud::ontologySubClassesOf, [46](#)
  - rapp::cloud::ontologySuperClassesOf, [49](#)
  - rapp::cloud::qrDetector, [57](#)
  - rapp::cloud::setDenoiseProfile, [71](#)
  - rapp::cloud::speechToText, [73](#)
  - rapp::services::asio\_service\_raw, [21](#)
- handle\_resolve
  - rapp::services::asio\_service\_http, [16](#)
  - rapp::services::asio\_service\_raw, [21](#)
- handle\_write\_request
  - rapp::services::asio\_service\_http, [17](#)
  - rapp::services::asio\_service\_raw, [21](#)
- Head
  - rapp::robot::nao, [39](#)
- header\_
  - rapp::services::asio\_service\_http, [17](#)
- invalid\_request
  - rapp::services::asio\_service\_http, [17](#)
- io\_service\_
  - rapp::services::service\_controller, [68](#)
- isJson
  - RappCloud::CloudInterface::CloudInterface::CloudInterface, [28](#)
- label
  - rapp::object::qrCode, [54](#)
- Language
  - rapp::robot::communication, [29](#)
- lookAtPoint
  - rapp::robot::nao, [39](#)
  - rapp::robot::navigation, [41](#)
- main
  - face\_detect.cpp, [75](#)
  - fetch\_data.cpp, [76](#)
  - ontology\_example.cpp, [77](#)
  - picture\_example.cpp, [78](#)
  - qr\_detect.cpp, [78](#)
  - set\_denoise\_example.cpp, [79](#)
  - speech\_to\_text.cpp, [79](#)
- message\_
  - rapp::object::qrCode, [55](#)
- model
  - rapp::robot::nao, [39](#)
  - rapp::robot::proto, [53](#)
- moveHead
  - rapp::robot::navigation, [41](#)
- moveJoint
  - rapp::robot::nao, [40](#)
  - rapp::robot::navigation, [42](#)
- moveStop
  - rapp::robot::nao, [40](#)
  - rapp::robot::navigation, [42](#)
- moveTo
  - rapp::robot::nao, [40](#)
  - rapp::robot::navigation, [42](#)
- moveVel
  - rapp::robot::nao, [40](#)
  - rapp::robot::navigation, [42](#)
- mutex\_
  - rapp::services::service\_controller, [68](#)
- nao
  - rapp::robot::nao, [39](#)
- ontology\_example.cpp
  - main, [77](#)
- ontology\_is\_subsuperclass\_of
  - RappCloud::RappCloud::RappCloud, [62](#)
- ontology\_subclasses\_of
  - RappCloud::RappCloud::RappCloud, [62](#)
- ontology\_superclasses\_of
  - RappCloud::RappCloud::RappCloud, [62](#)
- ontologyIsSubSuperClassOf
  - rapp::cloud::ontologyIsSubSuperClassOf, [44](#)
- ontologySubClassesOf

- rapp::cloud::ontologySubClassesOf, 46
- ontologySubSuperclassOf, 47
- ontologySubclassOf, 46
- ontologySuperClassesOf
  - rapp::cloud::ontologySuperClassesOf, 49
- ontologySuperclassesOf, 49
- openCopy\_
  - rapp::object::audio, 25
  - rapp::object::picture, 51
- operator=
  - rapp::object::audio, 26
  - rapp::object::picture, 51
- operator==
  - rapp::object::audio, 26
  - rapp::object::face, 32
  - rapp::object::picture, 51
  - rapp::object::qrCode, 54
- password\_
  - rapp::services::service\_controller, 68
- picture
  - rapp::object::picture, 51
- picture\_example.cpp
  - main, 78
- platform\_params\_
  - RappCloud::RappCloud::RappCloud, 65
- platformIP\_
  - RappCloud::RappCloud::RappCloud, 65
- playAudio
  - rapp::robot::communication, 29
- port
  - rapp::cloud, 10
- post\_
  - rapp::services::asio\_service\_http, 18
- qr\_detect.cpp
  - main, 78
- qr\_detection
  - RappCloud::RappCloud::RappCloud, 63
- qrCode
  - rapp::object::qrCode, 54
- qrDetector
  - rapp::cloud::qrDetector, 57
- query\_
  - rapp::services::service\_controller, 68
- queue
  - rapp::services::service\_controller, 67
- randomBoundary
  - rapp::services::asio\_service\_http, 17
- rapp, 9
- rapp::robot::communication
  - ENGLISH, 29
  - GREEK, 29
- rapp::cloud, 9
  - address, 10
  - auth\_token, 10
  - port, 10
- rapp::cloud::faceDetector, 33
  - delegate\_, 35
  - faceDetector, 35
  - handle\_reply, 35
- rapp::cloud::fetchPersonalData, 35
  - delegate\_, 38
  - fetchPersonalData, 37
  - handle\_reply, 37
- rapp::cloud::ontologyIsSubSuperClassOf, 42
  - delegate\_, 44
  - handle\_reply, 44
  - ontologyIsSubSuperClassOf, 44
- rapp::cloud::ontologySubClassesOf, 44
  - delegate\_, 46
  - handle\_reply, 46
  - ontologySubClassesOf, 46
- rapp::cloud::ontologySuperClassesOf, 47
  - delegate\_, 49
  - handle\_reply, 49
  - ontologySuperClassesOf, 49
- rapp::cloud::qrDetector, 55
  - delegate\_, 57
  - handle\_reply, 57
  - qrDetector, 57
- rapp::cloud::setDenoiseProfile, 69
  - handle\_reply, 71
  - setDenoiseProfile, 71
- rapp::cloud::speechToText, 71
  - delegate\_, 73
  - handle\_reply, 73
  - speechToText, 73
- rapp::object, 10
- rapp::object::audio, 24
  - audio, 25
  - bytearray, 25
  - bytearray\_, 26
  - openCopy\_, 25
  - operator=, 26
  - operator==, 26
  - save, 26
- rapp::object::face, 31
  - bottom\_right\_x\_, 32
  - bottom\_right\_y\_, 32
  - bottom\_right\_z\_, 32
  - face, 31, 32
  - operator==, 32
  - top\_left\_x\_, 32
  - top\_left\_y\_, 32
  - top\_left\_z\_, 32
- rapp::object::picture, 50
  - bytearray, 51
  - bytearray\_, 52
  - openCopy\_, 51
  - operator=, 51
  - operator==, 51
  - picture, 51
  - save, 52
- rapp::object::qrCode, 53
  - centre\_x\_, 55

- centre\_y\_\_, 55
- label, 54
- message\_\_, 55
- operator==, 54
- qrCode, 54
- rapp::robot, 10
- rapp::robot::communication, 28
  - captureAudio, 29
  - getMicrophoneEnergy, 29
  - Language, 29
  - playAudio, 29
  - textToSpeech, 29
  - voiceRecord, 29
  - wordSpotting, 31
- rapp::robot::nao, 38
  - captureImage, 39
  - Head, 39
  - lookAtPoint, 39
  - model, 39
  - moveJoint, 40
  - moveStop, 40
  - moveTo, 40
  - moveVel, 40
  - nao, 39
  - removeStiffness, 40
  - ruid, 40
  - takePredefinedPosture, 40
  - visOdom, 40
- rapp::robot::navigation, 40
  - lookAtPoint, 41
  - moveHead, 41
  - moveJoint, 42
  - moveStop, 42
  - moveTo, 42
  - moveVel, 42
  - removeStiffness, 42
  - takePredefinedPosture, 42
  - visOdom, 42
- rapp::robot::proto, 52
  - model, 53
  - ruid, 53
- rapp::robot::vision, 73
  - captureImage, 74
- rapp::services, 11
- rapp::services::asio\_service\_http, 13
  - asio\_service\_http, 15
  - callback\_, 17
  - error\_handler, 15
  - handle\_connect, 16
  - handle\_read\_content, 16
  - handle\_read\_headers, 16
  - handle\_read\_status\_line, 16
  - handle\_resolve, 16
  - handle\_write\_request, 17
  - header\_, 17
  - invalid\_request, 17
  - post\_, 18
  - randomBoundary, 17
  - request\_, 18
  - response\_, 18
  - Schedule, 17
  - socket\_, 18
- rapp::services::asio\_service\_raw, 18
  - asio\_service\_raw, 20
  - bytes\_, 22
  - callback\_, 22
  - complete\_, 22
  - error\_handler, 20
  - handle\_connect, 21
  - handle\_read\_response, 21
  - handle\_reply, 21
  - handle\_resolve, 21
  - handle\_write\_request, 21
  - request\_, 22
  - response\_, 22
  - Schedule, 22
  - socket\_, 22
- rapp::services::asio\_socket, 23
  - Schedule, 24
- rapp::services::service\_controller, 66
  - auth\_base64\_, 68
  - io\_service\_, 68
  - mutex\_, 68
  - password\_, 68
  - query\_, 68
  - queue, 67
  - resolver\_, 68
  - runJob, 67
  - runJobs, 67
  - server\_, 68
  - service\_controller, 67
  - username\_, 68
  - work\_, 69
- rapp::types, 11
  - byte, 11
- RappCloud, 11
  - RappCloud.CloudInterface, 11
  - RappCloud.CloudInterface.CloudInterface, 12
  - RappCloud.CloudInterface.CloudInterface.Cloud-Interface, 26
  - RappCloud.RandStrGen, 12
  - RappCloud.RandStrGen.RandStrGen, 12
  - RappCloud.RandStrGen.RandStrGen.RandStrGen, 57
  - RappCloud.RappCloud, 12
  - RappCloud.RappCloud.RappCloud, 58
  - RappCloud::CloudInterface::CloudInterface::Cloud-Interface
    - callService, 27
    - isJson, 28
  - RappCloud::RandStrGen::RandStrGen::RandStrGen
    - \_\_charsArray, 58
    - \_\_defaultSize, 58
    - create, 58
  - RappCloud::RappCloud
    - \_\_path\_\_, 12
  - RappCloud::RappCloud::RappCloud

- `__appendRandStr`, 60
- `__init__`, 60
- `__parse_auth_cfg`, 60
- `__parse_platform_cfg`, 60
- `__parse_services_cfg`, 60
- `__randStrSize`, 65
- `auth_`, 65
- `available_services`, 61
- `call_service`, 61
- `cfgFileDir_`, 65
- `cfgParser_`, 65
- `cognitive_test_chooser`, 61
- `detect_objects`, 61
- `face_detection`, 61
- `get_platform_services`, 62
- `ontology_is_subsuperclass_of`, 62
- `ontology_subclasses_of`, 62
- `ontology_superclasses_of`, 62
- `platform_params_`, 65
- `platformIP_`, 65
- `qr_detection`, 63
- `record_cognitive_test_performance`, 63
- `servicePort_`, 65
- `serviceUrl_`, 65
- `services_`, 65
- `set_noise_profile`, 63
- `speech_detection_google`, 64
- `speech_detection_sphinx4`, 64
- `text_to_speech`, 64
- `record_cognitive_test_performance`
  - `RappCloud::RappCloud::RappCloud`, 63
- `removeStiffness`
  - `rapp::robot::nao`, 40
  - `rapp::robot::navigation`, 42
- `request_`
  - `rapp::services::asio_service_http`, 18
  - `rapp::services::asio_service_raw`, 22
- `resolver_`
  - `rapp::services::service_controller`, 68
- `response_`
  - `rapp::services::asio_service_http`, 18
  - `rapp::services::asio_service_raw`, 22
- `ruid`
  - `rapp::robot::nao`, 40
  - `rapp::robot::proto`, 53
- `runJob`
  - `rapp::services::service_controller`, 67
- `runJobs`
  - `rapp::services::service_controller`, 67
- `save`
  - `rapp::object::audio`, 26
  - `rapp::object::picture`, 52
- `Schedule`
  - `rapp::services::asio_service_http`, 17
  - `rapp::services::asio_service_raw`, 22
  - `rapp::services::asio_socket`, 24
- `server_`
  - `rapp::services::service_controller`, 68
- `service_controller`
  - `rapp::services::service_controller`, 67
- `servicePort_`
  - `RappCloud::RappCloud::RappCloud`, 65
- `serviceUrl_`
  - `RappCloud::RappCloud::RappCloud`, 65
- `services_`
  - `RappCloud::RappCloud::RappCloud`, 65
- `set_denoise_example.cpp`
  - `main`, 79
- `set_noise_profile`
  - `RappCloud::RappCloud::RappCloud`, 63
- `setDenoiseProfile`
  - `rapp::cloud::setDenoiseProfile`, 71
- `socket_`
  - `rapp::services::asio_service_http`, 18
  - `rapp::services::asio_service_raw`, 22
- `speech_detection_google`
  - `RappCloud::RappCloud::RappCloud`, 64
- `speech_detection_sphinx4`
  - `RappCloud::RappCloud::RappCloud`, 64
- `speech_to_text.cpp`
  - `main`, 79
- `speechToText`
  - `rapp::cloud::speechToText`, 73
- `takePredefinedPosture`
  - `rapp::robot::nao`, 40
  - `rapp::robot::navigation`, 42
- `text_to_speech`
  - `RappCloud::RappCloud::RappCloud`, 64
- `textToSpeech`
  - `rapp::robot::communication`, 29
- `top_left_x_`
  - `rapp::object::face`, 32
- `top_left_y_`
  - `rapp::object::face`, 32
- `top_left_z_`
  - `rapp::object::face`, 32
- `username_`
  - `rapp::services::service_controller`, 68
- `visOdom`
  - `rapp::robot::nao`, 40
  - `rapp::robot::navigation`, 42
- `voiceRecord`
  - `rapp::robot::communication`, 29
- `wordSpotting`
  - `rapp::robot::communication`, 31
- `work_`
  - `rapp::services::service_controller`, 69