smacc::ISmaccUpdatable

- periodDuration_
- lastUpdate_

+ ISmaccUpdatable()
+ ISmaccUpdatable()
+ executeUpdate()
+ setUpdatePeriod()
# update()

---

cl_move_base_z::CpTFListener

- m_mutex_
- poseTracks_
- tfListener_
- listenerMutex_

+ CpTFListener()
+ update()
+ getLastTransform()
+ waitForNextTransform()

---

cl_move_base_z::Pose

+ isInitialized
- pose_
- poseFrameName_
- referenceFrame_
- m_mutex_
- tfListener_
- listenerMutex_

+ Pose()
+ update()
+ waitTransformUpdate()
+ toPoseMsg()
+ toPoseStampedMsg()
+ getReferenceFrame()
+ getFrameId()

---

cl_move_group_interface ::CbMoveEndEffectorTrajectory

+ group_
+ tipLink_
+ allowInitialTrajectoryState
JointDiscontinuity_
endEffectorTrajectory_
movegroupClient_
beahiorMarkers_
- markersPub_
- markersInitialized_
- iksrv_
- m_mutex_
- postJointDiscontinuityEvent
- postIncorrectInitialState
Event
- postMotionExecutionFailure
Events

+ CbMoveEndEffectorTrajectory()
+ CbMoveEndEffectorTrajectory()
+ onOrthogonalAllocation()
+ onEntry()
+ onExit()
+ update()
# computeJointSpaceTrajectory()
# executeJointSpaceTrajectory()
# generateTrajectory()
# createMarkers()
- initializeROS()

---

cl_ros_publisher::CbDefault PublishLoop

- client_

- deferedPublishFn

+ CbDefaultPublishLoop()
+ CbDefaultPublishLoop()
+ setMessage()
+ onEntry()
+ update()
+ onExit()

---

sm_fetch_six_table _pick_n_sort_1::cl_Constraint LateralWorkspace

- planningSceneInterface_
- movegroupclient_
- referenceFrame_
- lateralDistance_
- offset_
- size_
- enabled_
- alreadyRemoved_

+ enable()
+ disable()
+ CpConstraintLateralWorkspace()
+ onInitialize()
+ update()
+ createCollisionBox()
+ createVirtualCollisionWalls()

---

sm_fetch_six_table _pick_n_sort_1::cl_move _group_interface::CpConstraint TableWorkspaces

- planningSceneInterface_
- sceneState_
- safeTableHeightOffsetFor
CubeCollisions

+ setBigTableCollisionVolume()
+ setSmallTableCollisionVolume()
+ disableTableCollisionVolume()
+ onInitialize()
+ update()

---

sm_fetch_six_table _pick_n_sort_1::cl_move _group_interface::CpConstraint VirtualSideWall

- planningSceneInterface_
- movegroupclient_
- referenceFrame_
- offset_
- size_
- enabled_
- alreadyRemoved_

+ enable()
+ disable()
+ CpConstraintVirtualSideWall()
+ onInitialize()
+ update()
+ createCollisionBox()
+ createVirtualCollisionWalls()

---

sm_fetch_six_table _pick_n_sort_1::cl_perception _system::CIPerceptionSystem

+ decissionsCount
+ currentCube
+ sceneState_
+ gazeboPerceptionSimulation_

+ CIPerceptionSystem()
+ ~CIPerceptionSystem()
+ onOrthogonalAllocation()
+ getMainTablePose()
+ getTargetTablePose()
+ printCubesState()
+ nextCube()
+ update()
+ getTargetCurrentCubeInfo()
+ decidePickCubePose()
+ decidePlacePose()
+ computePregraspPoseFromCubePose()
+ decidePrePlacePose()
+ computePlaceCubeGrasping
Orientation()

---

sm_fetch_two_table _pick_n_place_1::cl _perception_system::CIPerception System

+ detectedCubePose0
+ detectedCubePose1
+ detectedCubePose2
+ originalCube0Pose
+ originalCube1Pose
+ originalCube2Pose
+ cube0DestinationInTable1
+ cube1DestinationInTable0
+ cube2DestinationInTable1
+ startTime
+ readDelay
+ decissionsCount
+ currentCube

+ CIPerceptionSystem()
+ ~CIPerceptionSystem()
+ nextCube()
+ retryCubeAfterFail()
+ update()
+ getCurrentTable()
+ decidePickCubePose()
+ decidePlacePose()

---

sm_moveit_screw_loop ::cl_move_group_interface ::CpConstraintLateralWorkspace

- planningSceneInterface_
- movegroupclient_
- referenceFrame_
- lateralDistance_
- offset_
- size_
- enabled_
- alreadyRemoved_

+ enable()
+ disable()
+ CpConstraintLateralWorkspace()
+ onInitialize()
+ update()
+ createCollisionBox()
+ createVirtualCollisionWalls()

---

sm_moveit_screw_loop ::cl_move_group_interface ::CpConstraintTableWorkspaces

- planningSceneInterface_
- sceneState_
- safeTableHeightOffsetFor
CubeCollisions

+ setBigTableCollisionVolume()
+ setSmallTableCollisionVolume()
+ disableTableCollisionVolume()
+ onInitialize()
+ update()

---

sm_moveit_screw_loop ::cl_move_group_interface ::CpConstraintVirtualSideWall

- planningSceneInterface_
- movegroupclient_
- referenceFrame_
- offset_
- size_
- enabled_
- alreadyRemoved_

+ enable()
+ disable()
+ CpConstraintVirtualSideWall()
+ onInitialize()
+ update()
+ createCollisionBox()
+ createVirtualCollisionWalls()

---

sm_moveit_screw_loop ::cl_perception_system ::CIPerceptionSystem

+ decissionsCount
+ currentCube
+ sceneState_
+ gazeboPerceptionSimulation_

+ CIPerceptionSystem()
+ ~CIPerceptionSystem()
+ onOrthogonalAllocation()
+ getMainTablePose()
+ getTargetTablePose()
+ printCubesState()
+ nextCube()
+ update()
+ getTargetCurrentCubeInfo()
+ decidePickCubePose()
+ decidePlacePose()
+ computePregraspPoseFromCubePose()
+ decidePrePlacePose()
+ computePlaceCubeGrasping
Orientation()

---

smacc::state_reactors ::SrRandomGenerator

+ mode_
- postEventA
- postEventB
- postEventC
- evAMin_
- evAMax_
- evBMin_
- evBMax_
- evCMin_
- evCMax_
- minValue
- maxValue

+ SrRandomGenerator()
+ onEntry()
+ declareObjectTag()
+ postRandomEvents()
+ update()
+ onEventNotified()

---

cl_move_group_interface ::CbCircularPivotMotion

+ angularSpeed_rad_s_
+ linearSpeed_m_s_
+ relativeInitialPose_
# planePivotPose_
# deltaRadians_

+ CbCircularPivotMotion()
+ CbCircularPivotMotion()
+ CbCircularPivotMotion()
+ generateTrajectory()
+ createMarkers()
- computeCurrentEndEffector
PoseRelativeToPivot()

---

cl_move_group_interface ::CbCircularPouringMotion

+ angularSpeed_rad_s_
+ linearSpeed_m_s_
# pivotPoint_
# deltaHeight_

+ CbCircularPouringMotion()
+ generateTrajectory()
+ createMarkers()
+ getCurrentEndEffectorPose()
- computeCurrentEndEffector
PoseRelativeToPivot()

---

cl_move_group_interface ::CbExecuteLastTrajectory

+ CbExecuteLastTrajectory()
+ ~CbExecuteLastTrajectory()
+ onEntry()

---

cl_move_group_interface ::CbEndEffectorRotate

+ CbEndEffectorRotate()
+ ~CbEndEffectorRotate()
+ onEntry()