



SmartSoft

SmartMDSD

Open Source Integrated Model-Driven Development Environment for Robotics Software

The screenshot displays the Eclipse IDE interface for the SmartSoft - SmartAmcl model. The central workspace shows a UML class diagram for the 'SmartAmcl' component. The diagram includes classes such as 'smartParameterSlave', 'smartStateSlave', 'smartTask', and 'smartEventTestHandler'. A video player in the center of the workspace shows a robot arm performing tasks on a workbench. The left sidebar contains the Project Explorer and Properties views, while the right sidebar contains the Palette and Nodes/Edges lists.

Component Developer

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- A **structured approach** (separation of roles) to manage software efforts and system complexity in building your real world robotic applications
(The SmartSoft Approach)
- An **integrated toolchain** (model driven software development) that realizes this approach and supports your system development
(The SmartMDSD Toolchain)
- A **set of reusable software components** for localisation, navigation, mobile manipulation, task coordination, human robot interaction, object recognition and many more for immediate reuse in your applications
(Components)



SmartSoft

SmartMDSD

Open Source Integrated Model-Driven Development Environment for Robotics Software

SmartMDSD

(service oriented component model)

- Meta-Model
- Toolchain

SmartSoft

(implementation)

- CORBA / SmartSoft
- ACE / SmartSoft
- Linux, Windows, etc.

SmartTCL

(Task Coordination Language)

VML

(Variability Modeling Language)

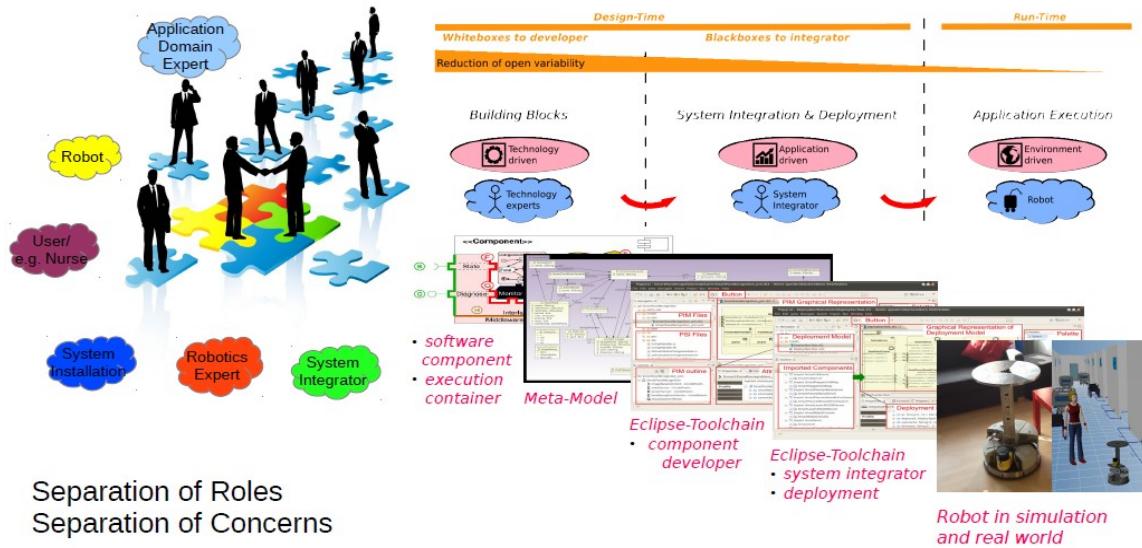
Domain Specific Languages

DSL Communication Object

DSL Parameter

DSL Documentation of Components

MDSD (SmartMDSD) / SmartMARS (Meta-Model) / SmartSoft (Execution Platform) / SmartTCL (DSL)



SmartSoft - DeployserveUKrankenhausSimulation/model/DeployserveUKrankenhausSimulation.di - Eclipse

File Edit Diagram Navigate Search Papyrus Project Run Window Help

Ubuntu 11 B A Quick Access SmartSoft

Project Explorer Navigator

- CommManipulatorObjects
- CommNavigationObjects
- CommObjectRecognitionObjects
- CommPersonDetectionObjects
- CommPTUObjects
- CommRobotinoObjects
- CommSmartISLAMObjects
- CommSmokeDetectorObjects
- CommSpeechObjects
- CommSymbolicPlannerObjects
- CommTestRepo
- CommTrackingObjects
- CommVisionObjects
- DeployserveUKrankenhausSimulation
- JRE System Library [JavaSE-1.6]
- Plug-in Dependencies
- model
- META-INF
- model
- DeployserveUKrankenhausSimulation
- src
- src-gen
- build.properties
- DeployUSArsimLocalization
- DeployUSArsimLocalization-Joystick
- SmartCdServer
- SmartMapping
- SmartJoystickNavigation
- SmartJoystickServer
- SmartLispServer
- SmartMapperGridMap

*DeployserveUKrankenhausSimulation.di

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graph TD
    SSConfig[«smartSystemConfiguration» SmartSystemConfiguration structure] --- SLispServer[+ SmartLispServer: SmartLispServer [1] structure]
    SLispServer --- WebInterfaceEventClient[+ webInterfaceEventClient: <Undefined> [1]]
    SLispServer --- WebInterfaceSendClient[+ webInterfaceSendClient: <Undefined> [1]]
    SLispServer --- KBQueryClient[+ kbQueryClient: <Undefined> [1]]
    SLispServer --- BaseBatteryEventClient[+ baseBatteryEventClient: <Undefined> [1]]
    SLispServer --- PlannerEventClient[+ plannerEventClient: <Undefined> [1]]
    SLispServer --- CDGoalEventClient[+ cdGoalEventClient: <Undefined> [1]]
    SLispServer --- SimpleKB[+ SmartSimpleKB: SmartSimpleKB [1] structure]
    SLispServer --- KBQuery[+ kbQuery: <Undefined> [1]]
    SLispServer --- WebInterface[+ SmartWebInterface: SmartWebInterface structure]
    SLispServer --- SequencerSendServer[+ sequencerSendServer: <Undefined> [1]]
    SLispServer --- SequencerEventServer[+ sequencerEventServer: <Undefined> [1]]

    SLispServer --- SRB[+ SmartRobotinoBaseServer: SmartRobotinoBaseServer [1] structure]
    SRB --- NavigationVelocityServer[+ navigationVelocityServer: <Undefined> [1]]
    SRB --- BatteryEventServer[+ batteryEventServer: <Undefined> [1]]
    SRB --- PlannerBFS[+ SmartPlannerBreadthFirstSearch: SmartPlannerBreadthFirstSearch structure]
    PlannerBFS --- BaseStateClient[+ baseStateClient: <Undefined> [1]]
    PlannerBFS --- PlannerEventServer[+ plannerEventServer: <Undefined> [1]]
    PlannerBFS --- CurMapClient[+ curMapClient: <Undefined> [1]]
    PlannerBFS --- PlannerGoalServer[+ plannerGoalServer: <Undefined> [1]]
    PlannerBFS --- SmartCdServer[+ SmartCdServer: SmartCdServer [1] structure]
    SmartCdServer --- PlannerClient[+ plannerClient: <Undefined> [1]]
    SmartCdServer --- LaserClient[+ laserClient: <Undefined> [1]]
    SmartCdServer --- NavVelSendClient[+ navVelSendClient: <Undefined> [1]]
    SmartCdServer --- GoalEventServer[+ goalEventServer: <Undefined> [1]]
    SmartCdServer --- NavVelSendServer[+ navVelSendServer: <Undefined> [1]]

    SRB --- SLaser[+ SmartRobotinoLaserServer: SmartRobotinoLaserServer [1] structure]
    SLaser --- PushNewestServer[+ pushNewestServer: <Undefined> [1]]
    SLaser --- LaserClient[+ laserClient: <Undefined> [1]]
    SLaser --- CurQueryServer[+ curQueryServer: <Undefined> [1]]
    SLaser --- SmartMapperGridMap[+ SmartMapperGridMap: SmartMapperGridMap structure]
    SmartMapperGridMap --- LaserClient[+ laserClient: <Undefined> [1]]
    SmartMapperGridMap --- CurQueryServer[+ curQueryServer: <Undefined> [1]]

    SLaser --- JoystickServer[+ SmartJoystickServer: SmartJoystickServer [1] structure]
    JoystickServer --- JoystickClient[+ joystickClient: <Undefined> [1]]
    JoystickServer --- JoystickNavigation[+ SmartJoystickNavigation: SmartJoystickNavigation structure]
    JoystickNavigation --- JoystickClient[+ joystickClient: <Undefined> [1]]
    JoystickNavigation --- NavigationClient[+ navigationClient: <Undefined> [1]]
  
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SystemConfiguration Deployment

Properties SmartParameterEditor Console Problems

SmartSystemConfiguration

UML	Name	SmartSystemConfiguration
	Qualified name	DeployserveUKrankenhausSimulation::SmartSystemConfiguration
	Is abstract	<input type="radio"/> true <input checked="" type="radio"/> false
		Is active
		<input type="radio"/> true <input checked="" type="radio"/> false

System Integrator