RTP Demonstrator

Living Lab RTP

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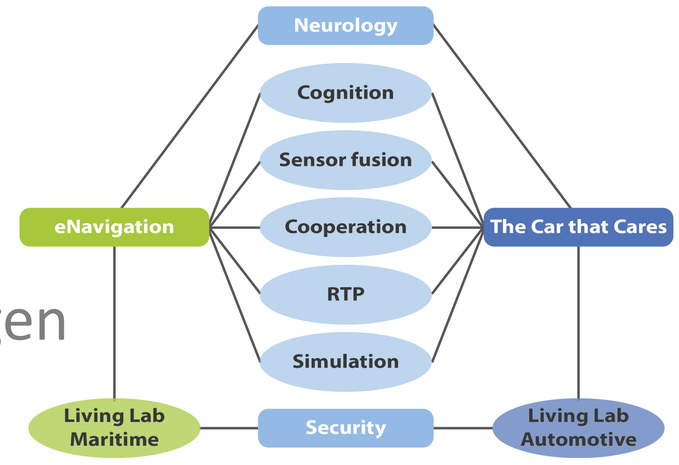


CSE

1. Objectives

The CSE RTP demonstrator presents the ability to exchange tools in a given toolchain without adjustments on the underlying workflow or modification of other tools in the given chain.
For demonstration purposes we integrated two independently developed engineering activities from the requirements engineering domain.

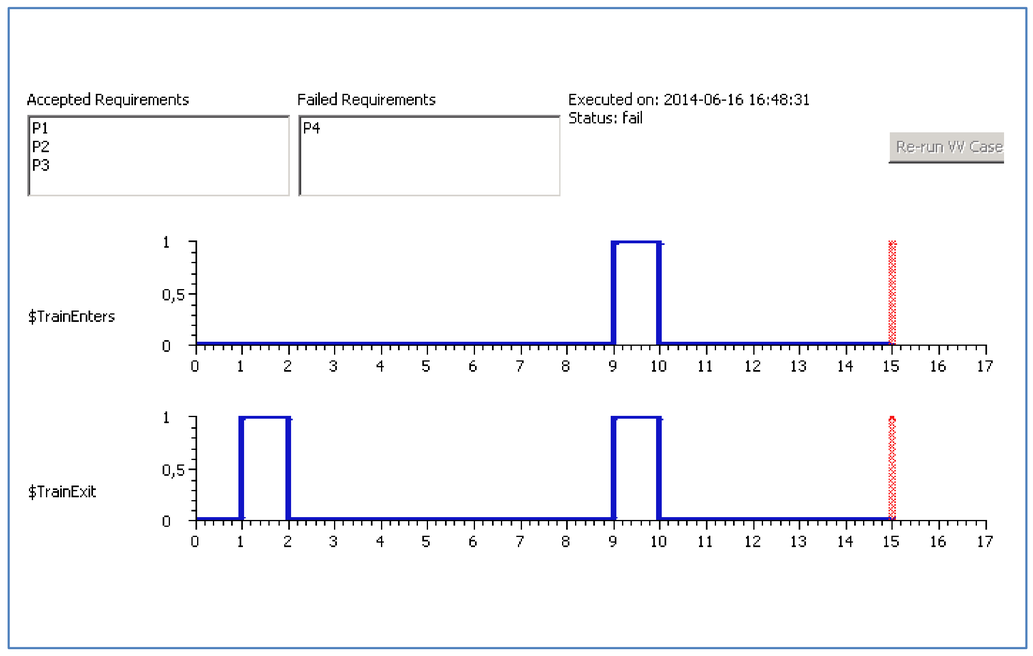
2. Engineering Activities

> Requirements Formalization (CESAR)

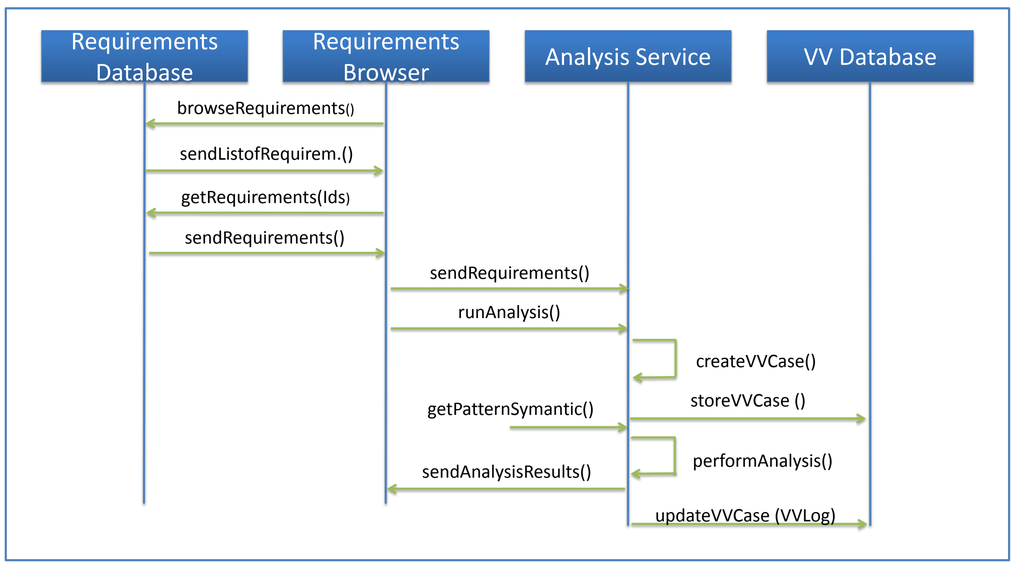
- Pattern based translation of natural language requirements into semi-formal requirements

> Consistency Analysis (MBAT & CRYSTAL)

- Proving the consistency of semi-formal requirements by generating example traces with liveness of the requirements.
- In case of inconsistency give examples for a minimal inconsistent set of requirements



Result Traces of the Consistency Analysis



Service-Flow and Tools for Consistency Analysis

Project	Requirements Database	Requirements Browser	Analysis Service	VV Server
MBAT	BTC Embedded Specifier	BTC Embedded Specifier	OFFIS Consistency Analysis	
CSE	IBM Doors	BTC Embedded Specifier	OFFIS Consistency Analysis	IBM RQM
CSE	IBM Doors	OFFIS Contract Editor	OFFIS Consistency Analysis	IBM RQM

Considered Tool Options for Consistency Analysis

3. Approach

> Identification of the tool roles in the engineering activities and their communication on service level for establishing semantic interoperability

> Using the OSLC standard as data input and output system for establishing syntactical interoperability for the shared artifacts

4. The RTP Demonstrator

> For the RTP demonstrator the initial toolchains of the engineering activities will be replaced by multiple options for each tool role

> Passing engineering artifacts between tools of different vendors and between the two different activities will be demonstrated

> A future version will extend the demonstrator by more engineering activities from the testing domain

Project: Interdisciplinary Research Center on Critical Systems Engineering for Socio-Technical Systems (CSE)
Web: http://www.uni-oldenburg.de/cse/