openETCS, Task 4.1: “Identification of Tools and Profile Usage” Results of the Kickoff Meeting Paris, December 11th , 2012

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Results of the Contribution Collection

Please

- **add your interests to this list, including names/emails of contact persons!**
- **(email additions and comments to: hardi.hungar@dlr.de)**

General V&V plan

Identification of all ***steps*** to be performed

- Contributors so far
  - All4Tec: All4Tec proposes to split this topic according to the EN 50128 into a description of the verification plan and of the validation plan. All4Tec will work on the first version
  - DLR: general responsibility, first version
  - SQS
  - Systerel: Review

Tool support

Identification of ***tools*** which may be applied

- Contributors so far
  - All4Tec
  - SQS
  - Systerel: Review of proposals for test tool
  - UHB: probably model based testing, automatic test generation

Methods

Tool usage and ***complementing*** activities

- Contributors so far

- All4Tec
- SQS (e.g. Qtronics)

Adaptations

Standard-conformant V&V for (real) ***model-based*** development

Standard-conformant V&V for ***open-source*** development

Standard-conformant V&V for ***agile*** development

- Contributors so far
  - All4Tec: Frederique Vallee is very interested to work on these questions

Efforts and Topics

Please

- **confirm or update the PM figures, and**
- **detail the description of your contribution**

- **AeBT: 2 PM**
  - Creation of the Validation & Verification Strategy, Contribution to the identification of an appropriate V&V-Tool. Main input will be the output of the Task 2.3 from WP 2 and tools specification or manual.
- **All4Tec: 5 PM**
  - Contribution to the Validation & Verification Strategy definition and to the identification of tools and profile usage,
- **Alstom France Transport: 4 PM**
  - With its experience in V&V of Complex Railway systems, Alstom FR will contribute to the definition of the V&V strategy.
- **Alstom GmbH: 0,5 PM**
  - Alstom GmbH will review V&V strategy, reports
- **CEA: 8 PM**
  - Identify or define symbolic techniques for refinement testing / static analysis techniques for V&V of the implementation
- **CEDEX: 2 PM**
  - Participation in the verification and validation review activities
- **DB AG: 0,9 PM**
  - DB will bring in vehicle owner‟s experience with recertification of safety related equipment in railway operations.
- **DLR: 3 PM**
  - DLR will contribute its knowledge and experience in the creation and application of the V&V strategy.
- **Fraunhofer: 3 PM**
  - Identification and review of static analysis methods for verification and validation

- **Institut Telecom: 0 PM**
    - Institut Telecom will contribute to this work package by providing techniques and tools that permit to verify the models developed in WP3 but also the implementation generated in the same work package.
- **Lloyd's Register Rail**
    - Lloyds Register Rail Europe BV will contribute in assessing the safety case
- **Multitel: 6 PM**
    - MULTITEL will participate in the gathering of functional and safety requirements and specs for the tool chain and model which are to be verified against identified reqs and specs from WP2.
- **Siemens AG: 2 PM**
    - Validation & Verification Strategy: Review of the selected strategy and tool chain.
- **Software Quality Systems S.A.: 4 PM**
    - Contribution to the identification and specification of the tool chain, review of the methods chosen, Review of the reports
- **Systerel: 2 PM**
    - Systerel will participate to this work package, as reviewer
- **TU BS: 2 PM**
    - Deriving a verification & validation strategy from the work done in WP 2. Main input will be the knowledge of tools and the state of the art from WP 2.
- **TWT: 7 PM**
    - Evaluation of different methods and tools V&V of the formal model and its implementation: Model-checking methods and tools for timed, untimed systems, deterministic and non-deterministic systems. Analysis of how simulation approaches can be used to validate and verify certain aspects of the model. Methods for the static code analysis.
- **University Bremen. 4 PM**
    - identification of V&V activities that can be performed by (automated) model checking and testing
- **University Rostock: 1 PM**
    - Evaluation and identification of tool chain, state of the art analysis

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