



Safe Automotive soFtware architEcture (SAFE)

Newsletter No. 1

Welcome to the first SAFE newsletter

The SAFE project will speed up the efficient development of safety features in cars. The objective is to enhance methods for defining safety goals and define development processes complying with the new ISO26262 standard for functional safety in automotive electrical and electronic systems.

Expected results are

- Assessment model for demonstration of compliance to ISO 26262 standard in the context of automotive products and AUTOSAR architecture, defining which safety-related inputs/outputs are required at which design stage;
- Technology platform for development of automotive products according ISO26262 to perform early safety analysis at architecture level and to demonstrate safety property propagation at hardware/software component level; and
- Proposals for extension of the AUTOSAR standard, as spelt out in the final results of the system, hardware and software meta-model, with specialized properties for safety analysis; but also AUTOSAR architecture recommendations and configuration through application rules obtained from the various use cases.

SAFE is a project with 18 partners from Austria, France, and Germany. The project started in July 2011 and will end June 2014. The first major milestone is planned for the end of April 2012.

This newsletter informs you about the organization of the project and the status with respect to the first major milestone.

The first newsletter has been sent to you because you were mentioned as possibly interested in the SAFE project. If you want to receive further newsletters in the future please register with an e-mail to the project coordinator stefan.voget@continental-corporation.com.

How is SAFE organized?

SAFE is organized in seven work-packages.

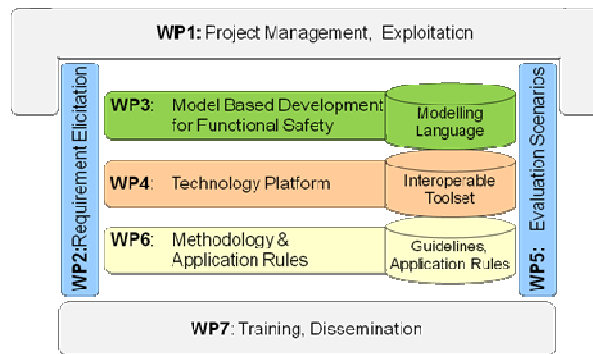


Figure 1: Overview about work-packages

WP3 is the core of the meta-modelling efforts in the SAFE project. Its main objective is to enhance existing techniques to be able to reach the ISO26262 requirements in the context of model based development of E/E-architectures in vehicles or sub-systems of vehicles.

The objective of **WP4** is to implement tools, based on conceptual results and specifications from WP3, which can be used in the industrial evaluation scenarios described in the tasks of **WP5**. The general outcome will be an open platform, which provides a basic model editor. It will support the SAFE meta-model for system, software, and hardware description.

WP6 tackles the introduction of a comprehensive functional safety process according to ISO26262 to a real engineering team. An assessment procedure for functional safety will be specified, which accompanies the development process until safety validation, also taking into account the collaboration of OEMs and tier 1 suppliers or between tier 1 and tier 2 suppliers.

Beside these - so to say - main results producing work-packages there are three more work-packages that enable the effective work. **WP1** is responsible for the project management and **WP7** for the dissemination of the results. Last but not least **WP2** analyses the ISO26262 standard, state-of-the-art, and industrial use cases to derive the project requirements

Major results in milestone 1

During the first period of SAFE mainly project setup and requirements analysis have been done. First technical work-packages started end of 2011. Others will not start before the mid of 2012.

The first milestone which will be reached at 30/04/2012 is named "Requirement elicitation" and finalizes the first iteration of requirements identification and analysis work. Requirements are identified with respect to three different sources

- The ISO26262 norm has been analyzed with respect to project targets of SAFE. 567 project requirements have been identified and allocated to the work-packages. Traceability within the project and requirements review meetings will guarantee that the requirements are fulfilled in later project phases.
- Main safety development related use case scenarios from the industrial partners have been described to ensure that the SAFE outcomes will fit to the needs of the industrial partners. This work created further 62 project requirements.
- A state-of-the-art analysis activity concentrated on the identification of related active or finalized projects, operating on topics pertinent to the SAFE project. As "safety" is an important

and very actual keyword a lot of public funded or industrial projects are related to the SAFE project. In this activity we identify the relevance of these projects for SAFE and possible synergies with and interfaces to these projects.

In addition to these results, a glossary was defined. In SAFE the ISO26262 and the AUTOSAR glossary are taken as reference glossaries. Only if an item is not defined in one of these standard glossaries, an additional entry is defined in SAFE.

Five industrial use cases will be implemented that evaluate the conceptual outcome of the project. To prepare the evaluation phase, common criteria for evaluation of project results are defined in this early phase of the project.

News on Website

For more information about SAFE, please have a look at our website www.safe-project.eu. Project information, publicly available results and news from the project are presented there.

Best regards by the SAFE consortium partners



(SAFE is an ITEA2 project)

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BMW Car IT GmbH
Continental Automotive France SAS
Continental Automotive GmbH
Continental Teves AG & Co. oHG
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FZI Forschungszentrum Informatik
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