VECTOR

Eclipse SDV blueprint around the Automotive API Framework project

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Track: Software-defined vehicle
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Abstract:

This contribution introduces a practical approach for development and test of automotive applications for modern software-defined vehicle platforms. Core of the blueprint is the Eclipse Automotive API Framework project with its existing contributions. That is the VSS catalogue editing tool by ZF and the Application Framework by Vector. Building on this, the blueprint adds new features to the Automotive API Framework and, at the same time, combines it with other projects from Eclipse.SDV and automotive open-source community. The developer's journey can be described as follows:

Starting point is adding COVESA IFEX support to the framework. This allows to convert datatype and interface definitions from various existing formats into IFEX from where the Application Framework consumes it. Imported catalogs can be enriched in an intuitive way using Configuration as Code. Based on the resulting model, application logic can be developed and unit-tested in a modular way. Next, system-level tests are facilitated through the integration with the Vector SIL Kit open-source project. As final step, application modules get integrated with executables for the target platform. Adding support for the communication module provided by S-CORE allows to map the ECU-internal communication between executables accordingly.

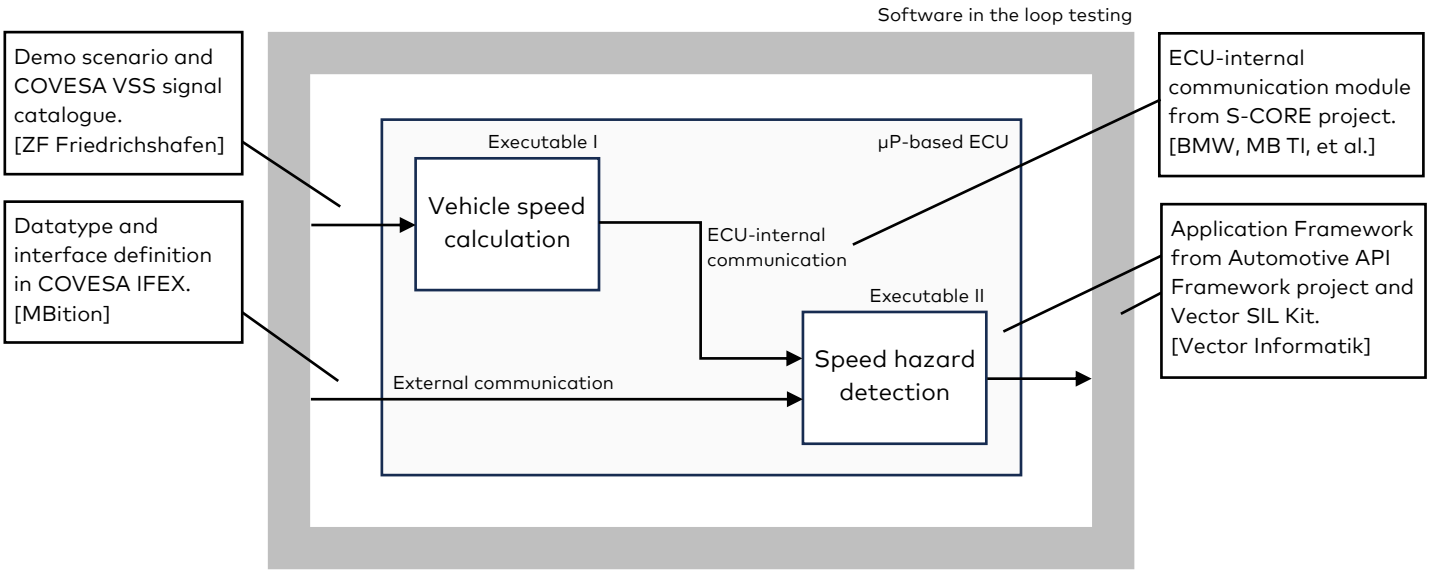

Figure 1 - Illustration of sample scenario and involvement of project partners

In sum, this contribution presents platform independent development for SDV projects in practice. It shows new features to the Automotive API Framework as well as its combination with Eclipse S-CORE and COVESA VSS and IFEX projects.