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A RAPID INNOVATION FRAMEWORK FOR CONNECTED MOBILITY APPLICATIONS

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1 MANAGEMENT SUMMARY

Connected Mobility Applications help to continuously improve traffic safety and efficiency. Today, much time and effort have to be invested to bring an idea into a safe prototype and to finally launch a reliable product.

REQUIREMENTS ON DEVELOPMENT TOOLS

Software development tools have to adapt to these requirements. They have to support a rapid and continuous development process, that allows to test and validate the distributed application as one overall system. When developing cooperative applications, a higher design complexity has to be handled, as components are distributed over heterogeneous systems that interact with a varying timing behavior and less data confidence. Also, test and validation become more complex.

Our Innovation Framework is intended to rapidly bring an idea for a connected application into a prototype so the investment risk for innovative applications is reduced.

FIELDS OF EXPERTISE

Generally, we provide technical knowledge at the highest levels of science and technology, especially wide-ranging and vendor-neutral expertise in the area of safety and security covering hardware, embedded systems software as well as network technologies and connected applications. We provide state-of-the-art laboratories and analysis methods for verifiable product quality through security assessments.

RAPID APPLICATION DEVELOPMENT

In this whitepaper we describe the approach of a Rapid Innovation Tool Kit that is intended to speed up the development process for connected mobility applications. Thereby, a safe and secure prototype is available at an early development phase to gain experience within field tests that help to rapidly improve the intended application. Our software tool kit is able to find deviations from the specified behaviour and also it can instantly locate and identify erroneous functions within distributed systems. Extensive security tests can then be applied on the implemented application to ensure a secure operation.

COMMUNICATION TECHNOLOGY EVALUATION

Another use case for the described testbed is to evaluate communication technologies and to find the most suitable transmission technology for a certain application. For example, short range communication with the 802.11p WLAN technology or the upcoming LTE enhancement LTE-V2X are comparable within specific scenarios. This evaluation can help to reduce the investment risk for the deployment of connected applications.

CONTACT

Are you interested in collaborating with us? Please feel free to contact us for further information!

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