Press Release

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AUTOSAR Opening Strategy of Software Defined Vehicle in the Automotive Development Ecosystem

AUTOSAR (AUTomotive Open System ARchitecture) is a large, worldwide development partnership with AUTOSAR standards being used by numerous OEMs along with suppliers and tool providers.

Since some time, Automotive Software is no longer limited to the vehicle. The scope is extended to the interaction between onboard and offboard software, which finally represents the complete Software Defined Vehicle (SDV).

The AUTOSAR standards as core for safe and secure automotive onboard software and the essential building blocks for future SDV solutions. AUTOSAR has planned several opening use cases in the near future to support collaboration of the AUTOSAR partnership with other organizations in the automotive development ecosystem, especially with respect to global SDV activities.

To foster this development, AUTOSAR decided to introduce a new standard called “Vehicle API” to simplify to interact with AUTOSAR in the vehicle for the world outside AUTOSAR, i.e. connecting the IoT world. This standard will be developed in a new framework, which will also be open to non-AUTOSAR Partners. AUTOSAR is currently elaborating this framework.

The next step is to clarify the opening protocols on network level, such as SOME/IP for service-oriented communication and Dlt (Diagnostics, Log and Trace), to support the development of compatible applications beyond AUTOSAR.

Furthermore, the introduction of an additional license is under consideration, which would allow the use of AUTOSAR specifications and implementations for non-AUTOSAR partners, e.g. universities and startups, before actual industrialization or without intention of commercial exploitation. Further strengthening these activities, AUTOSAR has decided to introduce a new program for Premium Partners to be launched in 2022: Premium Partner Plus. In this new partnership level, the Premium Partner plus can have extended influence on shaping the AUTOSAR standards.

Additionally, the usage of AUTOSAR has never been limited to automotive applications only. To support potential users in using AUTOSAR for non-automotive applications, AUTOSAR plans to provide a list of examples with derived applications.

From the AUTOSAR perspective, the complexity of the Software Defined Vehicle is a challenge for the entire automotive industry that can only be mastered collaboratively, openly and flexibly. With the named aspects of opening, AUTOSAR is ready to join
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forces and tackle this challenge together with others as part of the Automotive Development Ecosystem.

About the AUTOSAR Adaptive Platform

AUTOSAR first released its Adaptive Platform on March 31st, 2017 as a standardized integration platform for microprocessor-based electronic control units (ECU). The AUTOSAR Adaptive Platform is based on POSIX operating systems and is the ECU standard for new automotive megatrends. It provides an unique holistic AUTOSAR safety and security approach for microcontroller-based ECUs and high performance microprocessor-based ECUs throughout the whole EE-Architecture with a consistent software and methodology design. Additionally, AUTOSAR Adaptive Platform also introduces a holistic approach for updatability (over the air) throughout the whole EE-Architecture. By doing so, the new standard avoids the costly alternative for OEMs and their suppliers of repeatedly developing the critical and complicated functionality of such software platforms with proprietary and individual solutions.

About the AUTOSAR Classic Platform

The AUTOSAR Classic Platform is the well-established standardized software and methodology framework for deeply embedded electronic control units (microcontroller ECUs), which offers OEMs and suppliers a safe, secure, and stable foundation to build up their distributed software systems. By using a layered software architecture based on a methodology that configures the software stack as well as the complete communication for a given EE-Architecture, the AUTOSAR Classic Platform supports all kinds of interconnected microcontroller-based ECUs.

About AUTOSAR (AUTomotive Open System ARchitecture)

AUTOSAR (AUTomotive Open System ARchitecture) is a global partnership of leading companies in the automotive and software industry to develop and establish the standardized technical framework enabling scalable E/E system architectures for intelligent mobility. Since 2003, they have been working on the development and introduction of several open, standardized software platforms including the joining methodology for the automotive industry. By simplifying replacement and update for software and hardware, the AUTOSAR approach forms the foundation for reliably controlling the growing complexity of electronic and software systems in today’s and future vehicles. As AUTOSAR is open to new features in the Automotive area it will continuously adapt the standards. In addition, AUTOSAR improves cost efficiency and quality by enabling its partners to cooperate in a competitive way but on the same solution. The "Core Partners" of AUTOSAR are the BMW Group, Bosch, Continental, Daimler, Ford, General Motors, Stellantis, Toyota and the Volkswagen Group. The AUTOSAR partnership of over 320 partners play an important role in the success of the partnership and can use the standards free of charge.