Electronic data exchange in Automotive

This talk will present an overview of the electronic data exchange in the automotive industry used by partners of AUTOSAR and exemplified by Volvo Cars Group experience.

Since 2004 the automotive industry has been collaborating to create a worldwide standard for exchanging data between numerous stakeholders during the design and implementation of new electronic systems. This initiative is called "Automotive open system architecture", or AUTOSAR for short, engaging the majority of European Automotive OEM's including their counterparts in China, Korea, India, Japan, US, ….

The description of Basic SW components (Diag, COM, etc.) and application SW (SW-C) is done using the .arxml format, developed and maintained by the Autosar consortium with the intention to have a human readable format intended for data exchange between tools used in different stage of the system development.

The Classic track of Autosar provides several .arxml templates intended for e.g. System description, SW component description, ECU resource description etc.

The Adaptive track of Autosar uses manifests to express e.g the need of Adaptive applications in manifests which is standardised using .arxml.

Volvo Cars Group has been involved since the start of Autosar in 2004, and is using Autosar as the base for tools and processes while developing new systems.