

Vehicle Electric/Electronic Architecture – One of The Most Important Challenges For OEM's

Gerhard Hettich, Thomas Thurner
DaimlerChrysler Research & Technology, Stuttgart, Germany
{Gerhard.Hettich,Thomas.Thurner}@daimlerchrysler.com

Abstract

One of the most important challenge of a vehicle manufacturer is the management of the increasing number of networked E/E-Systems and their complex functional dependencies.

To master this challenge, sophisticated E/E-architecture approaches will be presented which cover both, the vertical functional orientation, as well as the horizontal integration aspects of a vehicle manufacturer.

Therefore we will present architectures and methods to support the development of future

E/E-Systems, whereby the typical requirements of a vehicle system integrator will be considered, such as composability, hardware and software independence, network-wide distribution of software components, and the ability for separation between indication, operation and behavior.

The paper describes the motivation, the system integration requirements, actual existing solutions, future technical challenges, and some detailed architecture approaches itself. Furthermore the impacts of the architecture on the development process and the OEM-supplier relationship will be highlighted.