

From embedded software to cyber physical systems in the automotive industry

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The mobility sector faces crucial societal challenges: reducing CO₂ emissions which increases at the same time energy efficiency, improving air quality, and eliminating congestion for improved logistics and traffic efficiency while advancing towards an accident-free mobility scenario. This will also address the needs of an ageing population for mobility. In this context, Europe must strive to maintain global leadership while serving the needs of society. The development and deployment of new capabilities provided by new embedded technologies is key to achieving this: Multicore hardware provides the calculation power to implement unprecedented algorithms using models of the reality, big data provides a near endless wealth of information. Thus cyber physical systems will provide vehicles and transportation systems with the required intelligence to solve the above mentioned challenges.

Dipl.-Ing. Dr. Michael Paulweber, MBA is heading the Research and Technology in the "Instrumentation and Test Systems" division of AVL. He completed his doctorate in control theory at the Technical University in Graz, Austria and an Executive MBA at St. Marys College of California, USA. He has more than 30 years of experience in managing globally distributed product development teams for embedded software products. From 1992 to 1993 he worked as expatriate in AVL North America to establish a software development team in Detroit, USA. He successfully introduced global software development processes (CMMI level 3) in the AVL ITS division and completed the first official SCAMPI-A CMMI appraisal in Austria. He holds lectures in control theory at University of Applied Science, Graz, Austria and in industrial software processes at Technical University Graz, Austria and the University of Applied Science, Graz, Austria. He has several patents and published various scientific papers. Since autumn 2014, he is a vice president of Artemis-IA, the largest industry association for embedded software and CPS in Europe.



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