Engineering Cyber-Physical Systems

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Abstract: Cyber-physical systems are different from information systems. The need to monitor and steer real-world objects from business processes yields in different software architectures. Requirements engineering for, testing of, deployment of and observing cyber-physical systems demand for techniques which are partially known from the field of information systems and which are partially known from the field of embedded systems. We strongly believe that systems of this nature deserve a dedicated engineering approach. We present such an approach called EngCPS.

Bio: Volker Gruhn holds the chair for Software Engineering at the University of Duisburg-Essen. His research interests in this field of investigation are mobile applications, software processes and digital transformation methods.

Before that he held the chair for Applied Telematics and e-Business at the Computer Science Department of University of Leipzig. His research interests were software architectures, mobile applications, and distributed software processes. An application focus was on point-of-sale systems and always online solutions for mobile systems.

He received a diploma degree (1987) and a PhD (1991) both in computer science from the University of Dortmund. Volker Gruhn is author and co-author of about 250 national and international journal and conference articles.

He founded the software company adesso in 1997, where currently more than 2200 persons are employed. The main business of adesso is consulting in system integration and software development, process modelling and electronic business. adesso is a major partner for industrial internet applications for major banks, insurance companies and utilities in German, Switzerland and Austria.