Two Architecture Approaches for MILS Systems in Mobility Domains (Automobile, Railway and Avionik)

Abstract:
Systems with mixed and independent levels of security and safety become more and more important in the future. In the German funded Bundesministerium für Bildung und Forschung (BMBF) research project ARAMiS (Automotive, Railway and Avionic Multicore Systems) different industry and scientific partners concerned on using multi-core processor for different security and safety critical use-cases. This paper describes the motivation and use-cases behind the research actives in different mobility domains. Also two detailed descriptions and a comparison of two implementation for Multiple Independent Levels of Security and Safety (MILS) systems in mobility domains are included. In the end of the paper a outlook is given on potential further research activities on this research topic.

Stichworte:
MILS; Mobility; Safety; Security; Automotive; Railway; Avionics; FPGA

Dewey Dezimalklassifikation (Liste):
000 Informatik, Wissen, Systeme