Workshop on Efficient Software Development

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Electronic Spark Timing (EST) System (1 ECU)

2000 functions enabled by software (70-100 ECUs)

90% innovation
50-70% development cost
Observations

- Moore’s law for transistors applies to software as well
  - The amount of software doubles more or less with every new version of the equipment
Observations

• **Software has become big data:**
  • size of software (amount of LOC)
  • complexity of software
  • features in (software) systems
  • number of programming languages in software systems
  • variants of hardware
  • costs and time to build and maintain the software
Observations

• Software has become leading in high-end equipment engineering
  • Without software no production

• Two concerns with respect to software:
  • Correctness of software
  • Efficiency of the development of software
Theme of today

• Efficiency of software development
  • Is model driven software development the solution?
  • How to deal with legacy software?
  • Would virtualization lead to a better performance when developing software?
Workshop

- Afternoon program:
  - 15 minutes for 3 pitches:
    - Virtualization framework (Cordis)
    - Model management (OCE)
    - DSL development (OCE)
    - Make notes based on pitches
  - Inventory of notes, grouping and topic selection
  - 30 minutes of discussion on topic 1
  - 30 minutes of discussion on topic 2