

DANCE'2010

International workshop on Distributed Architecture modeling for Novel
Component Based Embedded systems



Distributed Computing Paradigms in Embedded Systems, Why, What and How



CNRS - INPT - UPS - UT1 - UTM



Agenda

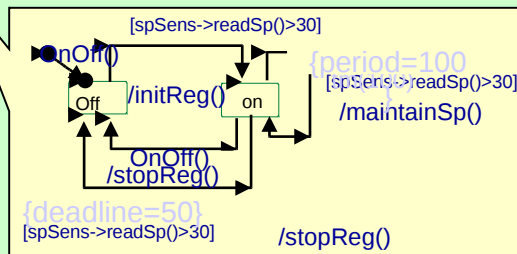
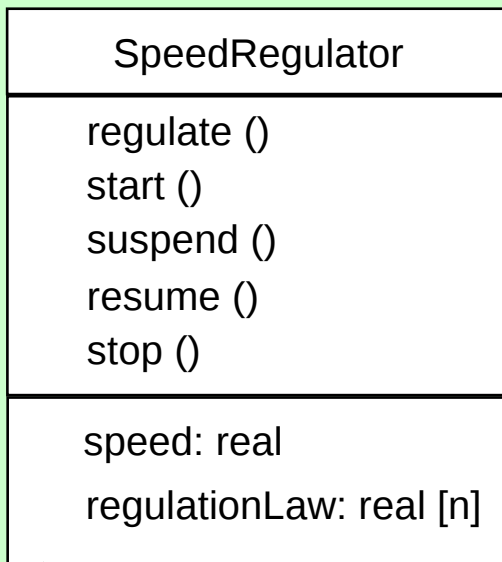


- Motivations
- Tools and technologies
- Current state of the academic research
- Standardization efforts
- Challenges

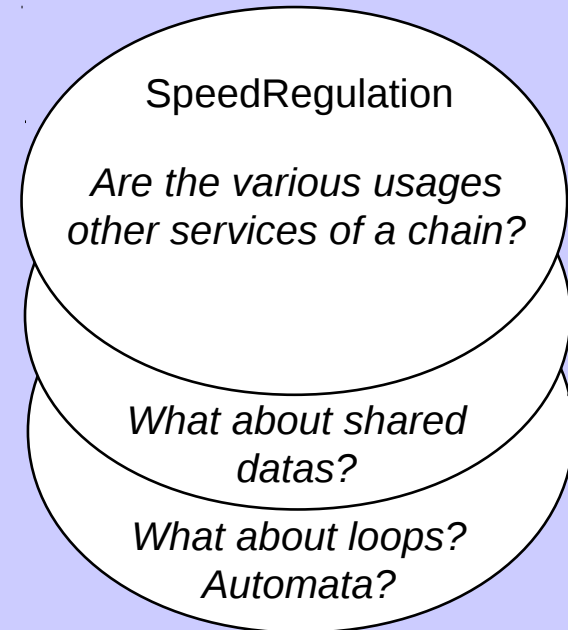


Description of what the user want to have (functionalities)

- Component view



- Service view





- Software design

- Need to use common language
- Robustness vs performance
- Dynamic system behavior
- Distributed systems
- Security and dependability
- Verification and validation
- Adaptivity
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- Hardware and Software

- Autonomy
- Geometry
- CPU and power management
- Adaptation to the environment
- Optimization
- ...

- Execution platforms

- Autonomous systems
- Guaranteeing security and dependability vs optimization and performance
- Distributed systems
- Reactivity and real time
- Dynamic environment and flexibility
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- Methodologies

- Define a system engineering process for DRTES
- Generic vs specif engineering (variability support)
- Enforcing non functional properties in DRTES with MDE
- How to generate efficient test cases and providing traceability of requirements and test cases
- ...