



Software Center

Theme #2

Continuous Architecture

Jan Carlson

Reporting Workshop, Sprint 14

2018-06-07

Current projects

- #2 Managing Architectural Technical Debt
Antonio Martini, Terese Besker, Jan Bosch
- #16 Managing Interoperability Concerns in Large Systems
Romina Spalazzese, Patrizio Pelliccione
- #25 Closing the Safety-Security gap in software intensive systems
Kaj Hänninen, Aida Causevic, Hans Hansson, Henrik Thane
- #32 Model-based Development and Continuous Integration
Jan Carlson, Robbert Jongeling, Antonio Cicchetti, Federico Ciccozzi
- #34 Improving the Design and Realization of Situational Aware
Internet of Things Systems for Emergency Situations Handling
*Romina Spalazzese, Mahyar Moghaddam,
Henry Muccini, Ivica Crnkovic*

#2 Managing Architectural Technical Debt

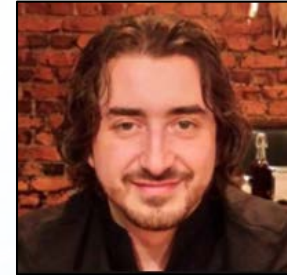
Investigate how much companies suffer from technical debt, and how is it currently managed. Introduce systematic ways to manage technical debt.

Started: *Sprint 1*

Team: *Antonio Martini
Terese Besker
Jan Bosch*

Companies: *Ericsson, SAAB, Axis, Volvo Trucks, Volvo Cars,
Grundfos, Jeppesen, TetraPak, Siemens*

Sprint 14: *Study on how companies prioritize technical debt.
AnaConDebt: A tool for managing technical debt.*



#16 Managing Interoperability Concerns in Large Systems

Identify interoperability issues and risks and measure their impact. Develop methods to reduce these risks and perform trade-off analysis

Started: *Sprint 9*

Team: *Romina Spalazzese
Patrizio Pelliccione*

Companies: *Axis, Ericsson, Volvo Group, Volvo Cars*

Sprint 14: *Industrial validation of the INTERO model.
Definition of prescriptive guidelines for using INTERO.*



#25 Closing the Safety-Security gap in software intensive systems

Investigate safety work can be extended to include aspects of security during the context establishment and initial risk assessment.

Started: *Sprint 10.5*

Team: *Kaj Hänninen
Elena Lisova
Aida Causevic
Hans Hansson
Henrik Thane*

Companies: *SAAB Avionics, Tetra Pak,
Volvo Construction Equipment*

Sprint 14: *Extended hazard analysis considering security threats and vulnerabilities.*



#32 Model-based Development and Continuous Integration

Identify key factors that hinder the introduction of continuous integration practices in model-based development, and to develop methods, techniques and tools to help alleviate them.

Started: *Sprint 14*

Team: *Jan Carlson
Robbert Jongeling
Antonio Cicchetti
Federico Ciccozzi*

Companies: *Saab, Volvo Construction Equipment*

Sprint 14: *Recruitment of PhD student.
Tool review of CI support in modeling tools.*



#34 Improving the Design and Realization of Situational Aware IoT Systems for Emergency Situations Handling

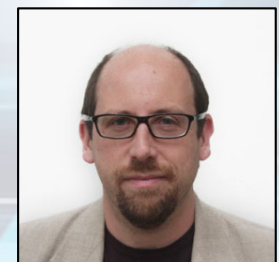
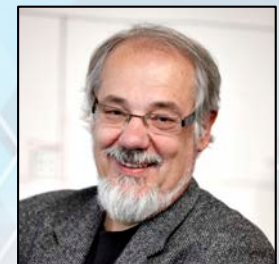
Identify how to improve the design and realization of situational aware IoT systems for emergency situation handling.

Started: *Sprint 14*

Team: *Romina Spalazzese,
Mahyar Moghaddam,
Ivica Crnkovic,
Henry Muccini*

Companies: *Ericsson, Siemens, Axis*

Sprint 14: *Focused project scope.
Survey of IoT architectures in practice among the
partner companies.*



New project proposal: Modeling of End-to-end Service-level Agreements in Industrial IoT

Develop new ways to model service level agreements between a service provider and an end device of an IoT system.

Restart of project #24 in closer collaboration with the partner companies.

Team: *Saad Mubeen,
Séverine Sentilles,
Alessandro Papadopoulos*

Companies: *Grundfos, Tetra Pak*





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