Program

09.30 – 10.00: Coffee

10.00 – 10.15: Welcome and introduction

10.15 – 11.00: Navigating Complexity: Adapting Development in a Dynamic World. Christopher Jouannet, Saab Aeronautics.

11.00 – 12.00: Industry views on complex systems.

- Scania
- Volvo Cars
- Saab Aeronautics

12.00 – 13.30: Lunch

13.30 – 15.00: Core competence views on complex system

15.00 – 15.30: Coffee

15.30 – 16.00: Managing Complex and Increasingly Intelligent Systems, Nicolette Lakemond, Linköping University

16.00: Discussion and closing

19.00: Dinner at Restaurant Alfama, Apotekaregatan 8

Why this workshop?

- Interests from partners to discuss various aspects around complex systems.

From the SEDDIT application:

"SEDDIT comprises several of Sweden's leading system-building companies ...... "

- Our intention is to offer an occasion and an arena to share ideas, experiences, and challenges around complex systems.

Center partners

Linköping University
Uppsala University
Saab Aeronautics
Saab Dynamics
Scania
Volvo Cars
Atlas Copco Industrial Technique
Väderstad
Actia Nordic
SafeLine
UMS Skeldar
Sensorbee

Why "Dealing with complex systems"?

We intentionally decided to avoid words that would lead in some specific direction, like e.g.

- Systems-of-systems

- Systems engineering

- Cyber-physical systems

- Internet-of-things

- ………………….

Perspectives

- General overview – Christopher Jouannet
- Industry perspectives – Scania, Saab, Volvo Cars
- Core competence perspectives
- Management perspectives – Nicolette Lakemond

Core competences

- Sensor fusion and sensor systems

- Data-driven modeling and diagnostics

- Learning methods for control

- Control-oriented physics-based modeling

- Optimization and planning for control and autonomy

Questions

- Which aspects and problems are more suitable for research, and which are more about solid engineering work?

- How do we handle the mix between hardware and software?

- How much can a problem be simplified without loosing its features?

- To what extent can learning-based approaches be used?

- Which aspects of complex systems are within the scope of SEDDIT?

- Are there reasons for SEDDIT to widen its scope?

- How should handling of complex systems be included in the engineering education?

- ……………………………………………………………

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