PLATFORMS 4CPS

Market Landscape Workshop

General Overview

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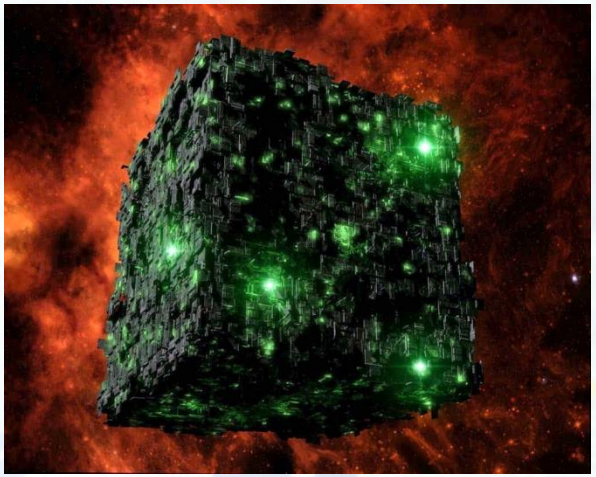
General Contributions to Platforms4CPS



1 –> Guidance & input where possible
Endorsement of the approach

2 –> CPS in its own right
Machines adjusting the physical world,
usually with inter-collaboration.

3 –> Opportunities for EU regarding CPS

4 –> Easing the SME access & connection with CPS.

Key Sessions this afternoon (related to the four domains)

1 –> Trends in the market :

Linked with report in progress

Top-down (classical sector views of advances within)

2 –> Current Platforms:

Linked with a recent survey

3 –> Parallel sessions :

Bottom-up (How market can be split up for a technology)

Contrasting Demography, Civil & Defence, End Buyers.

Application of Workshop Results

Current Tasks & Documents

- Market Landscape and Technology Perspective Segmentation
- CPS Platform Advancement

Upcoming Activities

- European ecosystem and market opportunities assessment
- Roadmap Advancement
- Foundations for CPS Engineering

Long term for CPS

- Priorities for next research calls
- (Cross-domain) community strengthening.

Extra Material

Agenda

	Platforms4CPS Workshop
12:30	LUNCH (Complimentary)
13:30	Welcome and Introduction About Platforms4CPS, Intro (CPS, Platforms & IIoT) : Holger Pfeifer, Event Host, fortiss / Charles Robinson, Coordinator of Platforms4CPS, Thales
13:40	CPS Market Segmentation • **Health Domain,** Charles Robinson, Thales, France (20min with Q&A) • **Transport Domain,** Haydn Thompson, THHINK Wireless Technologies Ltd, NL (30'with Q&A) • **Manufacturing Domain,** Björn Sautter, Festo AG, Germany (10' with Q&A) / Chris Decubber, EFFRA, Brussels (Guest speaker - 10') • **Energy Domain,** Charles Robinson, Thales, France (15' with Q&A) / Jean-Luc Dormoy, EDF & Entrepreneur (Guest speaker - 15')
15:20	Discussion on commonalities
15:35	Coffee break
15:55	Presentation of Platforms4CPS 'Platforms Survey': Johannes Linzbach, Festo AG, Germany
16:10	Discussion
16:20	Interactive Session Group Discussions Discussions include: Market today, Trends/Needs/Vision, Gaps, Evolution of Platforms
17:10	Wrap-up (synthesis from the groups)
17:30	END OF THE WORKSHOP

Cross-domain aspects (1)

Dependability inc. Self-healing / Self-powered

Sustainability inc: Ecological Impact / e-cycling / Biodegradable

Interoperability/Standardisation

Communication inc Wireless / NETWORK TYPE

Human Factors
Artifical Intelligence inc Service Oriented Architectures / Multi-agents

Co-engineering

Traceability of Design incl Agile / Co-engineering

Positioning inc Geospatial

Privacy / Data Protection

Low-power protocol

Scalability

Migration from Legacy Systems

Decentralisation

Increased efficiency/productivity

Cross-domain aspects (2) Road2CPS derived

Integration, Interoperability, Standards
Platforms, Reference Architectures, Tools
(Cyber)Security, Privacy, Confidentiality, Trust
Safety, Reliability, Resilience, Fault Tolerance
Complexity, Adaptability, Flexibility, Emergence
CPS Engineering (Requirements, Design, Testing)
Model Based Systems Science & Engineering Support
CPS Life-Cycle MGT
System-of-Systems, Coord. and Distributed MGT
CPS Foundations/ Science
Modelling & Simulation (Virtualisation)
(Big) Data, Real Time Analysis, Visualisation
Situational Awareness, Diagnostics, Prognostics, Decision Making & Support
AI, Cognitive Systems, Autonomous Systems
Human Machine Interface (HMI)
Humans in the Loop

Cross-domain aspects (3) Road2CPS derived

Education, Training, Skills and Re-Skilling
Eco-System, Community Building, Networks
Collaboration (regional/national/global)
Collaboration (across domains/value chains)
Cross-Disciplinary in Research
Societal Dialogue, Awareness Raising
Human in the Loop
Ethics
Open Innovation
Open Data, Architectures, Platforms
Open Environments, Open Eco-Systems
Demonstrators, Living Labs
Regulation, Legal Issues, Single Digital Market
Business Models

Cross-domain aspects (4) Road2CPS derived

Communication Technologies,
Communication Engineering,
Data Standards
Future Networks / Internet / IoT
Computing Technologies, High-Performance and Distributed Computing
Cloud / Edge Technologies
Neural Networks and SIMD Computing
Smart Sensors
System Integration
Knowledge Aggregation, Discovery Services
Nanoelectronics
Energy Efficiency, Power and Energy Storage
Network discovery, Software and Algorithms, Discovery and Search Engine
Hardware Technology
Data and Signal Processing