Embedded systems for Service-based control of Open Manufacturing and Process Automation

eScop Overview
eScop is made possible by funding from the Artemis Joint Undertaking.

Project Targets

- eScop aims to develop **alternative Manufacturing Execution System (MES)** solution based on ontologies and service oriented architecture
- eScop produces Knowledge-Driven hardware and software platform
- eScop provides a reference architecture

Knowledge-Driven Systems – from Enterprise Solutions to Embedded Devices

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eScop

Motivation

• eScop platform aims to overcome the current problems of system integration at shop-floor level in process and manufacturing industry

• eScop aims to satisfy the needs of target customers (SMEs in production industry)
  – Flexible use of equipment
  – Capability to integrate a process with other ones
  – Fast combination of different processes and adaptation of the plant to a new production
  – Smart and easy re-configuration

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Benefits for SMEs

• **Flexibility** – Flexible re-configuration and knowledge update of equipment

• **Fast to Market** – Fast combination of different processes and adaptation of the plant to a new production

• **Cost Efficient** – Reduce time and cost

• Facilitate the *human-to-machine* and *machine-to-machine* interaction
Impact for Industry

- **New market opportunities** for embedded systems – larger markets for system providers
- **Increase of SME Competitiveness**
  - Use of eScop platform enhances competitiveness/productivity of end-users
  - Different providers can easily develop and provide solutions
- **Sustainability**
  - Possibility to select proper equipment and embedded systems
  - Efficient and more suitable systems can be selected allowing reduction of cost, use of resources (material, energy)
Project Details

- **Time**: March 2013 – February 2016
- **Duration**: 36 months
- **Total Investments**: €5,82M
- **Participating Organizations**: 10
- **Number of Countries**: 4
- **Project Coordinator**: Tampere University of Technology
Distribution of Efforts

**Effort per Partner Type (%)**
- SME: 6%
- R&D: 52%
- Large: 42%

**Effort per Country (%)**
- Italy: 32%
- Finland: 18%
- Czech Republic: 18%
- Poland: 32%
Coordinated by

Tampere University of Technology

Project Leader: Prof. Dr. Jose L. Martinez Lastra, jose.lastra@tut.fi
Project Manager: Sari Räsänen, sari.rasanen@tut.fi
Technical Coordinator: Dr. Andrei Lobov, andrei.lobov@tut.fi

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