



# ITEA 2

INFORMATION TECHNOLOGY FOR EUROPEAN ADVANCEMENT

## ATAC - Advanced Test Automation for Complex Software Systems

Daniel Molina, Grupo Gesfor

Jornada de Cooperación Internacional, AETIC Madrid 25-02-2010



$\Sigma$ !  
Σ 3674

European leadership in Software-intensive Systems and Services. The Future of Embedded and Distributed Software.

# Project idea description

---

- **Problem**

- Software-intensive systems are growing in complexity and continually evolving
- Economic pressure versus dynamic innovation cycles
- Quality of testing: proving product quality
- Systems with changing environments and configurations
- Inefficient modelling on system/subsystem level concerning testing
- Processes lack support for test automation

→ **Testing on sub-system integration and system level still inefficient**

# Project idea description

---

*The ATAC project addresses the problem of automated testing of highly-complex software-intensive systems with complicated and changing environments and configurations.*

- **Solution**

- High-level modelling for testing (functional and non-functional requirements, e.g., real-time)
- More efficient processes, guidelines and tooling
- Re-usability, maintenance and traceability of models
- Configuration and parameter modelling
- Impact of changing requirements and environment
- Support for earlier system level testing

## Key selling points

---

- Solving industrial test automation challenges by adopting the state-of-the-art methodologies.
- Better maintenance and re-use of test artifacts
- Higher product quality (especially safety, reliability) and higher confidence by higher coverage of requirements and configurations
- Easy introduction by specific guidelines and a systematic process
- Increased productivity in testing and faster TTM with better quality of software
- Reduction in costs and work needed for testing and maintenance
- Better proof of product quality

# Proposed work package structure

---

- WP 1: Case studies
- WP 2: Research/Methodology
  - Configuration & parameter modelling
  - High-level Test Modelling (functional/non-functional, e.g. real-time)
  - Re-use, maintenance and traceability of models
  - Processes and modeling guidelines
- WP 3: Tooling
- WP 4: Evaluation and Experiments
- WP 5: Dissemination
- WP 6: Exploitation
- WP 7: Management

Duration: 36 months

# Partners & expertise

---

## Partners involved (tentative)

- Finland: VTT Technical Research Centre
- **Spain: Mondragon University, Universidad Politecnica de Valencia, University Deusto, AQD, Technical Center Murcia, Gesfor Group**
- Turkey: Ctech, Turkcell
- Lithuania: Kaunas University of Technology, Equinox Europe, Singleton Labs
- Germany: Fraunhofer IESE, Siemens Mobility, DCo/EADS, TU Kaiserslautern, IFAK
- Egypt: Unisoft, ITIDA

## Missing partners / expertise

- Case study providers

## Contact details

---

- Spanish consortium coordinator
  - Daniel Molina (Gesfor Group)
  - [dmolina@germinus.com](mailto:dmolina@germinus.com)
  - +34 617 418425



<http://innovacion.grupogesfor.com>



# ITEA 2

INFORMATION TECHNOLOGY FOR EUROPEAN ADVANCEMENT

Thank you **for your attention**



$\Sigma!$   
ΣΙ 3674

European leadership in **Software-intensive Systems and Services**. The Future of **Embedded and Distributed Software**.