VARIES

VARiability In safety-critical Embedded Systems

ARTEMIS

EXECUTIVE *summary*

VARIES helps embedded systems (ES) builders to unleash the full potential of variability in safety-critical ES through:

> Variability Modelling
> A Reference Platform
> Centre of Innovation Excellence (CoIE)

RELEVANCE CALL *2011 objectives*

Industrial priorities:

> Reference Design and Architectures
> System Design Method and Tools

ASP-1 objectives:

> A model-driven process for the compositional development of safety-critical systems
> A methodology to explore design spaces, multi-criteria constraint satisfaction and decision making, with particular regard to safety properties

MARKET *innovation*

VARIES aims to boost the competitiveness of the European ES industry through:

> discovering what drives variability decisions
> enabling variability information to be described and exchanged
> improving variability management in safety-critical ES across the entire lifecycle

VARIES targets the following concrete industrial objectives:

> reusability by combining product lines and variability management
> more predictable and shorter time to market
> improved productivity through reuse strategies adapted for ES
> reduction of product engineering effort while delivering the functionality required and

guaranteeing reliability and quality levels
> smooth transition to a product line approach

VARIES will enhance variability modelling concepts in the fields of ES analysis and towards product line certification.

TECHNICAL *innovation*

The 'variability paradox':
How can the benefits offered by introducing variability into ES outweigh the increased product complexity caused by variability?

Three key objectives:

> Enable companies to make an informed decision on variability use
> Provide effective variability architectures and approaches
> Develop consistent, integrated and continuous variability management

Results:

> Reference platform for managing variability in safety-critical ES
  o methods, tools, models, reference architectures and relevant knowledge
  o validating the results across industry domains will ensure broad applicability of the results.

> Enhanced variability modeling concepts for
  o variability analysis on ES
  o product line certification

> Centre of Innovation Excellence (CoIE)
  o helping the European ES industry address its specific variability challenges
  o access to the long tail market of variability services

VARIES

PROJECT COORDINATOR Mr. Dominique Segers	**START** May 2012
INSTITUTION Barco	**DURATION** 36 months
EMAIL dominique.segers@barco.com	**TOTAL INVESTMENT** € 13.0 M
WEBSITE www.varies.eu	**PARTICIPATING ORGANISATIONS** 22
	NUMBER OF COUNTRIES 7

FINLAND
metso
MOBiSOFT
HiQ
VTT

NORWAY
SINTEF
AUTRONICA FIRE AND SECURITY

UNITED KINGDOM
atego

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BARCO Visibly yours
FMTC
sirris driving industry by technology
VLERICK BUSINESS SCHOOL
DANA
Macq trafic & automation
SoftKinetic

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GERMANY
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SPAIN
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tecnalia
HI iberia