

MDE, Embedded Systems and SysML

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Ongoing: Breaks, Lunch ...

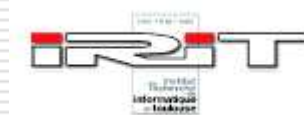
□ Today

- Breaks and lunch **with ERTS** at

- ***Caravelle 1***

→ Downstairs

→ Note: *you can visit ERTS' Exposition*



Economic stakes (J. Sifakis – 2008)

- ❑ Factor of innovation and differentiation
- ❑ Main source of added value
- ❑ Sector of strong growth in information technologies

Where to find embedded systems?

(E. Bantegnie – 2009)

- Transportation:
 - Cars, trains, planes, ...
- Electric & electronic products:
 - Camera, Washer, Microwave, iPod, PDA, GPS,...
- Control of process:
 - Robotic, Automated industrial production,...
- Telecommunication
 - Network, telephone, Satellite
- Security
 - Smart card, e-business,...
- Health
 - Pacemaker, equipment,...
- Sustainable development
 - Wind turbine, Street lighting
- Toys

SysML and Embedded Systems

- Is sysML the modeling language to design embedded systems?
- SysML vrs UML2: Complementary or Redundant?
- Which future for SysML?

Keynote and technical presentation

- MDE: from design-time to runtime – J.-M. Jezequel (Univ. Rennes 1 & INRIA)
- Applying MDE for the validation of correct Eclipse Plugin Bundles - G. Doux (AtlanMod - INRIA&EMN)

Presentations: MDE and embedded systems

- Flexibility in embedded real-time applications: the Flex-eware Project - J. Pulou (Orange-telecom)
- Applying MDE to Embedded System Design: First results and perspectives from the Lambda project - S. Demathieu (Thales)

Presentations: MDE and embedded systems

- ❑ Assessing quality in SysML models - O. Casse (Artisan)
- ❑ VETESS : MDE, Testing approaches and SysML - F. Fondement (Univ. de Haute Alsace)
- ❑ Functional validation with a practical SysML / Simulink transformation - R. Snyder (B2i automotive Engineering)
- ❑ A SysML Based Approach to Perform FMEA - J. Shi (Continental Engineering Services GmbH)

Source

- Les systèmes embarqués : enjeux économiques et défis scientifiques – J. Sifakis – September 2008
 - <http://sen.enst.fr/filemanager/active?fid=148>
- Le livre blanc des systèmes embarques – E. Bantegnie (Syntec) – June 2009
 - http://download.microsoft.com/documents/France/windows/2009/Livre_blan_c_Embarque.pdf