

Virtual prototyping competence center

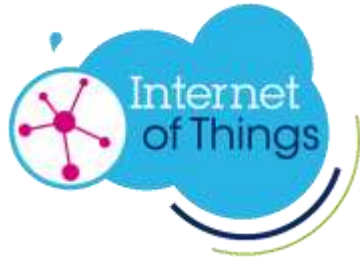
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Application Strategic Focus



Smart Things



Smart Home & City



Smart Industry



Smart Driving

- System(-of-systems) composed of
 - 100+ to 1000+ elementary nodes (Sensors, MCU, actuators, connectivity)
 - Gateway
- Heterogeneity of ingredients
- Security, (ultra) low power

- Complex SoC
 - Clusters of computing cores
 - Hardware accelerators
 - I/Os (SPI, CAN, ethernet, ...)
- Security and safety

Virtual Prototyping competence center

- SystemC, Cycle Accurate and Transaction Level Modeling (TLM) expertise
- Development of TLM modeling elements toolkit
 - Compliant to SystemC IEEE 1666 standard
 - Increase model developer productivity
 - Enforce guidelines and infrastructure for model reuse across projects
- Model development flow from specification
- Model development and virtual prototype integration for projects in Business Units
- Active in international standardization (Accellera Systems Initiative & IEEE)

Cooperation areas

Acceleration of SystemC/TLM simulation

- Better exploit available computing resources for fast simulation
- Co-execution with real hardware

Heterogeneous simulation

- Models in incompatible technical states
- Integration of incompatible models of computation

Integration of extra-functional properties

- Performance models vs functional models
- Energy-aware models

System exploration, Verification and validation

- Contract-based simulation
- Early investigation & validation of architectural concepts



Thank you!

Who We Are

- A global semiconductor leader
- 2016 revenues of **\$6.97B**
- Listed: NYSE, Euronext Paris and Borsa Italiana, Milan

- Research & Development
- Main Sales & Marketing
- Front-End
- Back-End



- Approximately **43,500** employees worldwide
- Approximately **7,500** people working in R&D
- **11** manufacturing sites
- Over **80** sales & marketing offices