ARTEMIS Call 2011 Project
295371

CRAFTERS

"ConstRaint and Application driven Framework for Tailoring Embedded Real-time Systems"

EXECUTIVE *summary*

CRAFTERS will produce a holistically designed ecosystem from application to silicon. This ecosystem will provide a tightly integrated multi-vendor solution and tool chain that complements existing standards.

RELEVANCE CALL *objectives*

The design tools and associated runtime support developed within CRAFTERS will enable the composability, predictability, parallelisation, aggregation and management of systems. This will entail a service-driven or data-centric approach that allows performance and energy modelling and analysis, verification and scalability while preserving system-level predictability.

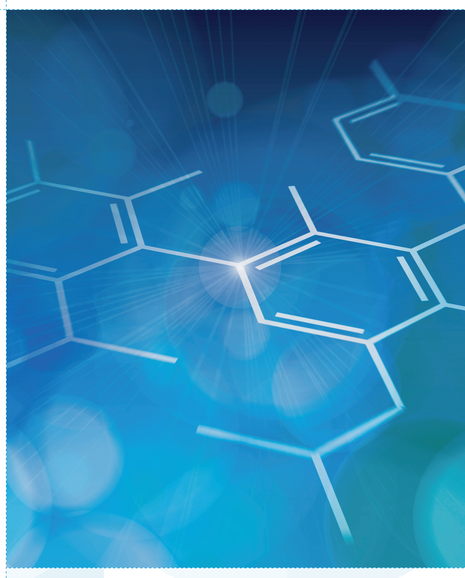
MARKET *innovation*

CRAFTERS integrates an innovation ecosystem spanning application to silicon and is thus relevant to all ARTEMIS Industrial Priorities. The project results centre around **reference designs and architectures** that are firmly supported by **design methods and tools** developed specifically for these reference architectures. CRAFTERS directly addresses **seamless connectivity and middleware** by realising a common middleware layer that is designed to support new wireless communication standards while being portable across different platforms.

TECHNICAL *innovation*

CRAFTERS will bring added value and advances beyond the state-of-the-art products and techniques within the following areas:

- Compiler-generated parallelism and high application portability
- Holistically optimised system services through technology aware HW/SW co-design
- System-wide real-time support and timing exposure through abstraction levels
- HW/SW implementations for real-time communication and computation
- Combined on/off-line real-time scheduling for many-core architectures
- HW/SW implementation for energy management with scalable performance
- Communication-centric computation platform analysis and integration
- Technology aware techniques accelerating disruptive migration, e.g., to 3D-SIC
- Tool-based adaptation of technology and platform independent middleware
- NoC-centric integration framework for many-core platform composition
- Homogeneous and heterogeneous (open-source) many-core reference platforms



PROJECT COORDINATORS
Ivan Ring Nielsen/Tapani Ahonen

INSTITUTION
Technoconsult ApS

EMAIL
info@technoconsult.dk

WEBSITE
www.crafters-project.org

START
June 2012

DURATION
36 months

TOTAL INVESTMENT
€17.6 M

PARTICIPATING ORGANISATIONS
24

NUMBER OF COUNTRIES
10