ARTEMIS Call 2009 Project
100208

ACROSS

*ARTEMIS **CROSS**-Domain Architecture*

EXECUTIVE *summary*

The ACROSS project will significantly reduce the development cost through a component-based architecture with support for composability and the capacity to fully exploit the economies of scale in the semiconductor industry. It does so by offering domain-independent architectural solutions for the automotive, aerospace and industrial-control domains, addressing common technological challenges such as complexity management and robustness.

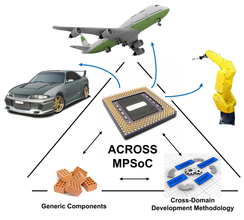
RELEVANCE CALL *2009 objectives*

The ACROSS project is dedicated to the industrial priority "reference designs and architectures" and will generate a reference platform with methods and tools, which supports the construction of embedded systems of all criticalities up to safety-critical hard-real-time systems.

MARKET *innovation*

The ACROSS project will contribute to the establishment of a common multi-domain architecture. In detail, ACROSS will

- offer a domain-independent technology (middleware, tools and IP cores) to enable the European supplier industry to increase its market share;
- provide OEMs with a mature cross-domain technology at lower cost;
- reduce development cost and accelerate time to market;
- ease the introduction of new cross-domain applications;
- enable the exploitation of the economies of scale in the semi-conductor industry;
- give the end user more robust products (e.g., fewer recalls and higher dependability of a car)



TECHNICAL *innovation*

In the automotive, avionics and industrial application domains no MPSoC-based framework for the component-based development of safety-related embedded systems is available today to support composability, robustness, integrated resource management, diagnosis and model-based development. ACROSS enables such component-based development, thereby reducing design, integration, and validation ef-forts. The ACROSS MPSoC offers a predictable on-chip interconnect that is free of interference, thus simplifying the integration and interoperation of independently developed components. ACROSS supports robustness by establishing a framework for fault isolation, the selective restart of components after a transient fault, and the masking of transient and permanent errors by component replication. ACROSS is a platform architecture that provides a minimal set of core services and a plurality of optional service that are predominantly implemented as self-contained system components.

ACROSS

PROJECT COORDINATOR Christian EL-SALLOUM	START April 2010
INSTITUTION Vienna University of Technology	DURATION 36 months
EMAIL office@across-project.eu	TOTAL INVESTMENT 16 M€
WEBSITE www.across-project.eu	PARTICIPATING ORGANISATIONS 16
	NUMBER OF COUNTRIES 4