ARTEMISPROJECTS
CALL 2010 & 2011

ARTEMIS

ASTUTE 269334

ASTUTE aims to define reference architecture for the development of HMIs, creating a platform for building embedded products that capture and act upon user intentions, taking account of user context and state. For instance, in the automotive domain, information from various sources will be proactively presented to support decisions according to the context by discarding annoying or distracting low-level information.

CRAFTERS 295371

CRAFTERS aims to significantly reduce total cost of ownership, time-to-market and the number of development assets by introducing a holistically designed ecosystem through a tightly integrated multi-vendor solution and tool chain that complements existing standards. Feature-limited releases of reference tools will be released and platforms will become available to support the evaluation and adoption of the results.

D3CoS 269336

Complex human-machine interplay in advanced automated assistance systems for transport modes requires adequate human-machine cooperation with shared authority. The Distributed Cooperative Human-Machine Systems (DCoS) project will develop affordable methods, techniques and tools that address the specification, development and evaluation of cooperative systems from a multi-agent perspective, with human and machine agents in charge of common system tasks.

DEMANES 295372

DEMANES aims to provide component-based methods, framework and tools for the development of runtime adaptive systems, enabling them to react to changes in themselves, in their environment and in user needs. The concept, methodology and tools developed in DEMANES will be validated and demonstrated in three use cases: smart urban transport, smart airport and smart home.
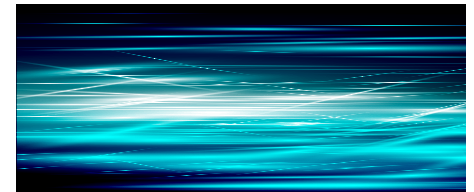
DESERVE 295364

DESERVE aims to build an innovation ecosystem for European leadership in embedded systems in the rapidly growing Advanced Driving Assistance Systems, based on the automotive R&D actors, with possible applications in other industrial domains, by designing and building an ARTEMIS Tool Platform to manage the expected increase of function complexity and necessary cost reduction.

e-GOTHAM 295378

e-GOTHAM aims to implement a new aggregated energy demand model (based on the microgrid concept) to effectively integrate renewable energies sources, increase management efficiency, reduce carbon emissions, raise energy consumption awareness and stimulate the development of a leading-edge market for energy-efficient technologies. Relevant stakeholders will be able to develop the project results into new products and services.
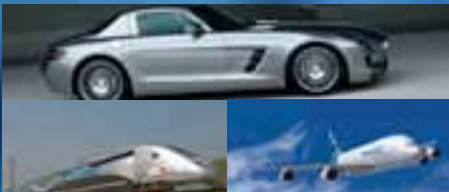
ENCOURAGE
269354

The ENCOURAGE project aims to develop embedded intelligence and integration technologies that will directly optimise energy use (20% savings) in buildings and enable active participation in the future smart grid environment by developing supervisory control strategies and orchestrating device operation, supporting inter-building energy exchange and through novel virtual sub-metering technologies and event-based middleware application supporting advanced monitoring and diagnostics concepts.

HIGH PROFILE
269356

HIGH PROFILE aims to advance the state-of-the-art by integrating imaging equipment for diagnostics to support combinations of images from different medical equipment modalities (MRI, MRS, fMRI and EEG) and compare/fuse images with physiological models of central nervous systems. Multi-scale, adaptive algorithms will allow the data to be merged and delivered so that physicians can monitor the status of the patient.

IoE
269374

Internet of Energy (IoE) aims to develop hardware, software and middleware for seamless, secure connectivity and interoperability by connecting the Internet with energy grids to create an electric mobility infrastructure. The project will address reference designs and ES architectures for highly efficient, innovative smart network systems regarding requirements of compatibility, networking, security, robustness, diagnosis, maintenance, integrated resource management, and self-organisation.
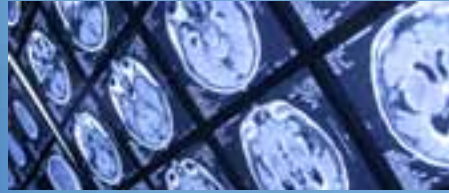
MBAT
269335

Europe enjoys an excellent reputation in transportation where integrated embedded systems are becoming significant and numerous. To boost Europe's leadership in high-quality embedded systems, the MBAT project will provide European industry with a new leading-edge the application of affordable and effective powerful validation and verification (V&V) technology in form of a Reference Technology Platform (the MBAT RTP).

nSafeCer
295397

nSafeCer targets increased efficiency and reduced time-to-market via the composable safety certification of safety-relevant embedded systems. Through the development of efficient and industrial-strength methods and processes for the development and certification of these systems, European industry can achieve a leading position in the growing global market of safety-relevant embedded systems.

nSHIELD
269317

nSHIELD is a project that will provide a roadmap to address Security, Privacy and Dependability (SPD) by developing new technologies and consolidating those already explored in pSHIELD. The state of the art in SPD of single technologies and solutions will be improved and integrated with an innovative, modular, composable, expandable and high-dependable architectural framework, concrete tools and common SPD metrics.

PaPP
295440

The PaPP project aims to make performance predictable in every development phase, from system modelling and implementation to execution by enabling the early specification and analysis of system performance and adaptation to different hardware platforms. The methods and tools developed will be evaluated according to the Multimedia, Avionics and Space, and Mobile Communication application domains.

PRESTO
269362

The PRESTO project aims to improve test-based embedded systems development and validation within the constraints of industrial development processes. Focusing on industrial development constraints will minimise specification time and need for expertise, keep the use of tools simple, enable smooth integration in the current design process and a versatile tool framework, design languages and integration test frameworks, and analyse results.

pSAFECER
269265

pSafeCer targets greater efficiency and reduced time-to-market by composable safety certification of safety-relevant embedded systems in the automotive and construction equipment, avionics and rail segments. pSafeCer will also develop certification guidelines and a training example for other domains, thus considerably increasing its market impact. pSafeCer brings together leading companies and SMEs across Europe along with selected universities and research institutes.

SESAMO
295354

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ABOUT ARTEMIS

Innovations made possible by embedded systems make our lives healthier and more interesting, our transport safer, and our energy use more sustainable. They are at the heart of industrial innovation and competitiveness, creating and sustaining jobs and economic well-being. Over 4 billion embedded processors were sold in 2006 and the global market is worth €60 billion with annual growth rates of 14%. The economic impact in terms of jobs and growth is expected to exceed €100 billion over ten years.

Computing technology is facing many threats and challenges from fragmentation, globalisation and fierce competition. In recognition of the strategic importance of embedded computing systems the European Union launched the ARTEMIS Joint Technology Initiative as a Joint Undertaking or publicprivate partnership, between: The European Commission, Member States (22 countries) and ARTEMIS Industry Association (a non-profit association with 200+ members).

ARTEMIS aims to tackle the research and structural challenges faced by European industry by defining and implementing a coherent research agenda for embedded computing systems. Its ambition is to help European industry consolidate and reinforce its world leadership in embedded computing technologies. The ARTEMIS Industry Association represents the research community including industry (large, small and medium sized companies), universities and research institutes. It continues the work of the European Technology Platform and is therefore responsible for the ARTEMISETP Strategic Research Agenda set up by the European Technology Platform in March 2006.

The ARTEMIS Joint Undertaking adopts a commonly agreed research agenda closely following the recommendations of the Strategic Research Agenda developed by the ARTEMIS Technology Platform.

VeTeSS

e-GOTHAM aims to implement a new aggregated energy demand model (based on the microgrid concept) to effectively integrate renewable energies sources, increase management efficiency, reduce carbon emissions, raise energy consumption awareness and stimulate the development of a leading-edge market for energy-efficient technologies. Relevant stakeholders will be able to develop the project results into new products and services.

VARIES

DEMANES aims to provide component-based methods, framework and tools for the development of runtime adaptive systems, enabling them to react to changes in themselves, in their environment and in user needs. The concept, methodology and tools developed in DEMANES will be validated and demonstrated in three use cases: smart urban transport, smart airport and smart home.

WSN DPCM

This project will address large-scale application of Wireless Sensor Networks (WSN) by developing an integrated platform for smart environments comprising a middleware for heterogeneous wireless technologies, an integrated engineering tool for quick system development, a planning tool and a commissioning & maintenance tool. Two demonstrators will be built to evaluate the impact of the middleware and tools.

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