Press release

ÆTHER is a new EU-funded collaborative R&D project (contract n° FP6-IST-027611) that was officially launched on January 1st, 2006. ÆTHER is part of the Future and Emerging Technologies (FET) proactive initiative on Advanced Computing Architectures (ACA) supported by the European Commission to develop novel system architectures, methods and tools for high performance computing engines and advanced operating systems technology.

ÆTHER integrated project has the objective to demonstrate that self-adaptive computing architectures can be a powerful approach to address the major technical issues (e.g. heterogeneous computing devices, embedded systems, new processor technologies, reconfigurable architectures) raised by pervasive computing in a rapidly changing world where virtually every object is getting a processing capability.

The European citizen is now living in a world of "pervasive computing" where computing devices are more ubiquitous and interconnected than ever, able to perform the most varied tasks with little human intervention. The size of these "pervasive computing" networks is significantly increasing, as well as the variety of the computing devices, both at chip (multicore and reconfigurable architectures) and system level (distributed processing). It is expected that by the year 2020, embedded computing architectures will be far more complex by a level of magnitude, due mainly to the convergence of High Performance Computing and Embedded Computing technologies, as well as the emergence of new hardware technologies.

ÆTHER is committed to study, evaluate and propose novel computing architectures responding to the most demanding embedded applications in the next 10+ years. The project will tackle the issues of performance and technological scalability**,** increased complexity and programmability of future embedded computing architectures by introducing self-adaptive technologies in computing resources. The project will explore the concept of self-adaptive networked entities (SANE) based on reconfigurable computing architectures, and study their impact at various levels of the computing chain such as operating environments, programming tools and application design. The potential benefits of the proposed approach will be assessed and validated with industrial partners on realistic application scenarios, in order to define a prospective roadmap for self-adaptive computing.

ÆTHER kick-off meeting took place on January 16-17, 2006 at CEA headquarters in Paris. The project is co-ordinated by CEA (F), and involves 13 partners: the universities of Amsterdam (NL), Hertfordshire (UK), Karlsruhe (D), the Università della Svizzera Italiana (CH), the Imperial College of London (UK), the VTT Technical Research Centre (FI), the Universitat Politecnicà de Catalunya (SP), the University UTIA of Prague (CZ), the CNRS (F), 3 industrial companies INTRACOM (GR), THALES Research and Technologies (F), ATMEL Hellas (GR), and ACIES (F) which will undertake management tasks in the project.
The project will span over 36 months. In addition to the 4 Millions Euro from the European Commission, the partners will also invest research resources on their own to achieve the objectives of the project.

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