ADVANCED SPECIALIZATION AND ANALYSIS FOR PERVASIVE SYSTEMS

Results in Brief

Towards a new generation of pervasive computing

The ASAP project resulted in a set of techniques and tools for enabling the development of sophisticated and reliable software systems to be deployed on new generation, pervasive computing platforms.

DIGITAL ECONOMY

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The recent advancements in electronic, particularly wireless technologies and the Internet led to the emerging pervasive computing. By integrating computation in the environment pervasive computing employs ubiquitous, interconnected computing devices that are not personal computers. These devices are extremely small, even invisible and may be either mobile or embedded in any object including cars, tools, appliances, consumer goods and even living organisms.

Taking into account industrial needs for optimisation of development cost, reliability, and time to market, the ASAP project focused on the automated generation and validation of specialised systems from general ones. Thereby, system development and validation techniques can meet the requirements for intelligent, user-oriented applications that are able to run on devices with reduced computing resources. This approach allows for the increase of productivity and for the reliability of current

software engineering techniques without wasting computing resources.

The ASAP project resulted in the development of a generic toolkit that is available online that includes the Ciao Pre-Processor (CiaoPP). The CiaoPP is the abstract interpretation-based pre-processor of the Ciao multi-paradigm program development environment. This tool performs a number of program debugging, analysis and source-to-source transformation tasks on Prolog programs. Potential users of the CiaoPP may be researchers in abstract interpretation-based program analysis and users that may employ this tool for debugging, verification, optimisation, and certification of their programs. For further information click at: http://clip.dia.fi.upm.es/Projects/ASAP/

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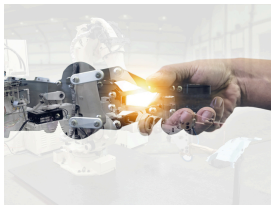

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Project Information

ASAP

Grant agreement ID: IST-2001-38059

Project website

Project closed

Start date
1 November 2002

End date
31 January 2006

Funded under
Programme for research, technological development and demonstration on a "User-friendly information society, 1998-2002"

Total cost
€ 1 444 959,00

EU contribution
€ 1 118 700,00

Coordinated by
UNIVERSIDAD POLITECNICA DE MADRID
Spain

Last update: 8 January 2007