ITEA 2

INFORMATION TECHNOLOGY FOR EUROPEAN ADVANCEMENT

MANY

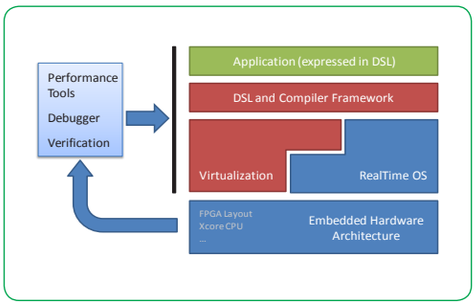
Many-core Programming and Resource Management for High-Performance Embedded Systems

PROJECT SUMMARY

The ability to reuse existing software code has grown in importance as software applications become more complex. With the arrival of many-core semiconductor architectures, application developers face an additional problem: how to rewrite software applications to exploit the increased parallel processing available. The MANY project is developing an improved programming environment for the embedded-systems realm; one which will facilitate faster development of applications for a variety of hardware platforms.

OBJECTIVES

- Behaviour of a parallel application
- Adapting performance measurement & analytical tools
- Source-to-source code translation
- Resource awareness at the programming level
- Supplying virtualisation services



UNIQUE SELLING POINTS / BUSINESS VALUE

- Reusing existing software is a norm to ensure semiconductor developers low time-to-market
- Many-core architectures with hundreds of cores per chip will require fast code development process
- The project aims to develop an efficient programming environment

(EXPECTED) RESULTS

- Tools and methods to fully exploit the capabilities of future many-core processors for the embedded domain
- Virtual Machine Monitor, to provide zero-downtime system and robust execution environment
- Provide Domain Specific Languages to be compiled to a variety of targets without changing the original source code
- Standardisation

EUREKA

CONTACT

Project Leader: Barbro Claesson
ENEA Services Stockholm / XDIN AB Kista ~ Sweden ~ Tel: +46 8507 14229
Email: barbro.claesson@xdin.com ~ Website: http://www.eurekamany.org

MANY

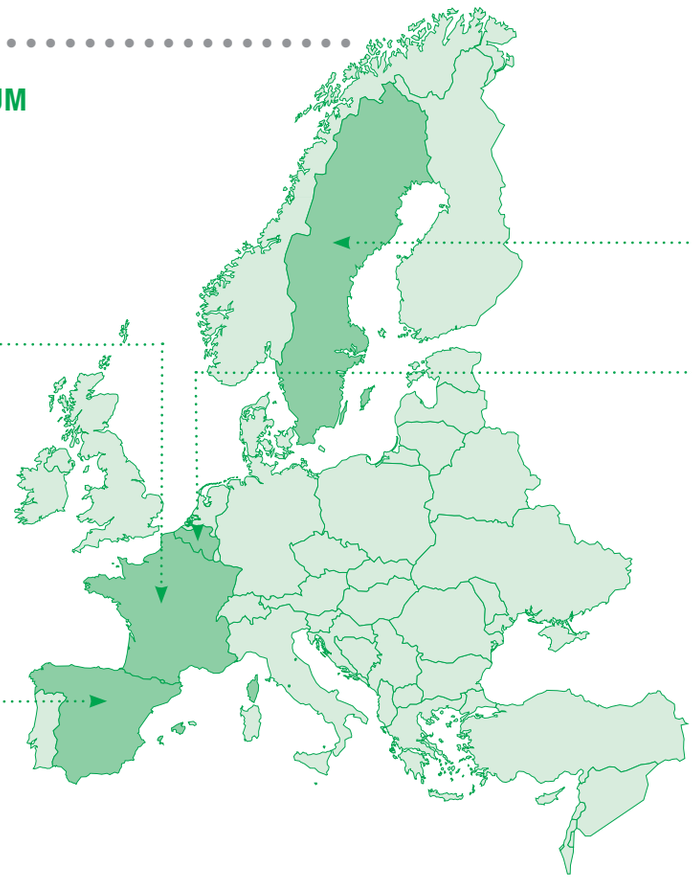
ITEA 2

INFORMATION TECHNOLOGY FOR EUROPEAN ADVANCEMENT

MANY

Many-core Programming and Resource Management for High-Performance Embedded Systems

PROJECT CONSORTIUM



THALES, TELECOM SudParis, CAPS, Inria — *France*

UAB Universitat Autònoma de Barcelona, bmat music innovation, ThalesAlenia Space — *Spain*

ENEA experts XDIN AN ALTEN COMPANY — *Sweden*

UMONS Université de Mons — *Belgium*

ETRI, SevenCore, TestMidas — *Rep. of South Korea*

PROJECT START 1 July 2011

PROJECT END 30 June 2014

MANY PARTNERS

- Large companies (3)
- Smal companies (4)
- Universities (2)
- Research institutes (3)

WORK PACKAGE OVERVIEW

1. Management & Dissemination
2. Programming Ease
3. Monitoring, Performance Analysis and Profiling
4. Appliciation Scenarios

EUREKA

CONTACT

Project Leader: Barbro Claesson

ENEA Services Stockholm / XDIN AB Kista ~ Sweden ~ Tel: +46 8507 14229

Email: barbro.claesson@xdin.com ~ Website: http://www.eurekamany.org

MANY