

Call For Contributions (deadline extended to 26 May)

International Workshop on Object-Oriented Software Development
for the Embedded World (OOSDEW 2008)

<http://www.imec.be/SE4ES/ECOOP08/>

(In conjunction with ECOOP 2008 – Paphos, Cyprus)

Overview

The purpose of this workshop is to bring hardware and software communities closer together in order to explore the current and future challenges in application development and integration in different embedded system domains. We wish to examine software engineering technologies for addressing those challenges, without neglecting the often stringent constraints imposed by hardware.

exist for distributed applications, and so on. Nevertheless, the very nature of embedded systems imposes additional constraints on object-oriented software development. One of the most stringent constraints continues to be resource efficiency, especially with respect to power consumption. The central question of the workshop will be how we can adapt and transfer the knowledge in object-oriented software development to address these issues in embedded systems.

Description

New challenges arise in embedded software development in addition to the traditional ones of power efficiency, memory usage and execution time. Productivity, and thus time to market, become serious issues due to the shift at the application level and new developments at the hardware level, for example:

- several interactive or dynamic applications, often from different vendors, have to be mapped to multi- or even many-core processor architectures
- distributed applications have to run on a number of devices such as regular PCs, nomadic battery-operated consumer devices, and/or programmable sensors
- device mobility and hardware failure, e.g. due to sub 32 nm technology, make unreliability the rule rather than the exception

In traditional software engineering the application-level problems are far from new: numerous approaches deal with application integration, higher-level languages and tools improve productivity, tried-and-true software architectures

Topics of Interest

Topics of interests include, but are not limited to:

- assessing and dealing with limited performance, limited amounts of memory, and the requirement of minimal power consumption prevalent in resource-constrained embedded devices on object-oriented technologies;
- virtual machines and runtime architectures for object-oriented languages for embedded systems;
- object-oriented language features for embedded devices;
- supporting heterogeneous architectures of embedded devices (combining a CPU with a DSP, for example) with object-oriented technology;
- dealing with adaptability, heterogeneity and mobility in embedded devices;
- software techniques and tools for optimizing code for embedded devices;
- object-oriented operating systems for embedded devices;
- resource-aware computing.

ECOOP 2008

The Workshop is organised in conjunction with the “22nd European Conference in Object-Oriented Programming” ECOOP’2008, to be held in Paphos, Cyprus from July 7-11, 2008 (see <http://2008.ecoop.org/>).

Intended Audience

Anyone who is concerned with object-oriented embedded software development for the mobile, consumer, automotive, healthcare, or any other domain. We hope to welcome both industrial and academic people, with backgrounds in software and/or hardware.

Submission Guidelines

Submit your position paper in PDF, so that we can collect all of the submissions on a web-site. Please keep all position papers under five pages. A separate abstract including the e-mail addresses of the authors and URL’s of their home pages MUST be submitted in ASCII text. Submit everything by e-mail to the following e-mail address roel.wuyts@imec.be.

Make sure to propose a single idea. We all know that you are a quality researcher with plenty of good ideas. Only, we have limited resources and we must focus. Feel free to propose a recent idea that still has some unfinished sides to it. It is supposed to be a WORKshop, not a mini-conference.

Preparation

In order to make efficient use of the day, we want to pay special attention to the preparation of the workshop. We request each participant to submit a position paper in advance, so that all participants can get acquainted with the ideas that exist within the group. Each participant is supposed to read all the submitted material, so that the workshop itself can be devoted to discussion instead of presentations. Submissions will be made electronically to facilitate the rapid exchange of information.

The upper limit for the number of participants is 30 and the participants will be selected on the basis of the submitted material. The maximum number of participants per position paper is limited to 2.

Important Dates

Submission deadline:	May 26, 2008
Notification of acceptance:	May 29, 2008 (before ECOOP early registration)
Final version:	June 13, 2008
Workshop date:	July 7, 2008

Organizers Contact Information

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