Call for Papers

Component-oriented approaches to context-aware computing

A workshop at ECOOP’04 – Oslo, Norway – 14-18 June 2004

Motivation

Context-aware ubiquitous computing systems aim to provide IT services that disappear into the fabric of users’ everyday activities. Systems that adapt to the context of their users facilitate new approaches to systems building, allowing designers to integrate IT systems directly into people’s everyday activities.

Like most new software projects, context-aware systems are often addressed using object- or component-oriented techniques. Experience has shown that object technology has difficulty representing some facets of highly adaptive, highly contextualised systems. These include the need for object views over rich data models with significant ontological structure; the need for complex reasoning when selecting components and matching interfaces; and the mixing of concerns across several levels of the design space. Many of the techniques being used ad hoc in context-aware applications might be better captured in tools, languages or methods; conversely new developments in infrastructure may be helpful (or not!) to the developers of context-aware systems.

This workshop is aimed at developing inputs into the research agenda for object-oriented technology in order to facilitate ubiquitous, context-aware systems development. It brings together the developers at either end of the spectrum – from practitioners building new context-aware applications to researchers investigating models and middleware.

Contributions

We are seeking short contributions in two strands:

1. Research and practitioner contributions on topics highlighting both the contributions object and component technology makes to context-aware distributed computing and the issues and shortcomings of current approaches

2. “What if we could” systems that can be used as a basis for case studies to be expanded during the workshop to drive discussion.

A representative selection of topic contributions and discussion systems will be selected by the programme committee. All contributions will be made available electronically for participants, and we intend to publish revised contributions as a post-workshop publication.

Contributions on any suitable topic are welcome, including but not limited to:

- Object- and component-oriented contextual programming platforms
- Novel approaches to representing context
• Applications of advanced programming language techniques to context
• Models of computation for context-aware systems
• Analysis and design methods for context-aware systems
• Methods for, and experiences in, adding context to existing developments
• Experiences in building contextual systems from scratch

Submissions will only be accepted electronically, in Postscript or PDF format, and should be made to the workshop chair, Dr Simon Dobson (simon.dobson@cs.tcd.ie).

Important dates

• Submission of contributions: 7 May 2004
• Notification of acceptance: 21 May 2004
• Contributions for inclusion: 1 June 2004
• Workshop: 14 June 2004 (to be confirmed)

Programme committee

• Simon Dobson, Trinity College Dublin, IE
• Paddy Nixon, University of Strathclyde, UK
• Siobhán Clarke, Trinity College Dublin, IE
• Gaetano Borriello, University of Washington, US
• Achilles Kameas, CTI, GR
• Dominic Duggan, Stevens Institute of Technology, US