Mobile Middleware: Embracing the Personal Communication Device

MobMid 2008

In conjunction with the 9th International Middleware Conference (Middleware'08)
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http://kyle.gsd.inesc-id.pt/minema

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Goal

The goal of the workshop is to foster exchange of ideas and lively discussions in order to identify problems and solutions on building mobile middleware for personal communication devices. The presentation of completed research as well as work in progress is expected to create a dynamic programme which should encourage fruitful discussions and new collaborations. We welcome papers focused on identifying open issues in the field, describing limits and advantages of existing solutions, or introducing novel techniques.

Scope

The rise of relatively powerful communication devices and in particular mobile phones has enabled the deployment of a large spectrum of novel applications, such as context-aware applications, health-care monitoring, sport tracking, collaborative computing, etc. Extending middleware approaches designed for mobile computing environments to personal communication devices calls for an effective system design that can cope with the resource-constrained nature of such devices and provide adequate services when operating in highly heterogeneous environments.

It is still unclear and to many respects an unexplored research area how and to what extent traditional middleware services for mobile computing can be provided on personal communication devices. Porting existing middleware platforms to new computing devices such as mobile phones turns out to be, in many cases, an unfeasible approach. Instead, mobile phones require a thorough rethinking of middleware architectures and their supporting software modules to allow applications to make effective use of the available computational power, memory, and communication technologies. Additionally, programming novel computing devices such as mobile phones is still a complex and time consuming development process.

Topics

The main topics of the workshop include, but are not limited to:

- Architectures and protocols to support widespread development of mobile applications
- Software management techniques for personal communication devices
- Power and memory management for resource-constrained personal communication devices
- Dynamic resource discovery in mobile and heterogeneous computing environments
- Multi-device heterogeneous interactions
- Mobile data synchronization in networks of mobile phones and other consumer electronic devices
- Mobile communication and data encoding
- Location monitoring and tracking for personal communication devices
- Application personalization and user-centric models
- Mobile information access on personal communication devices
- Experiences in programming mobile applications using Java ME, Android, Windows Mobile, etc.
- Tools and programming support for middleware development, deployment and debugging on personal mobile devices such as mobile phones, PDAs, etc.
- Performance evaluation and experimentation with mobile devices

Format

Potential participants may submit three types of contributions:

- **Research paper**: presents ongoing research and preliminary insights on mobile middleware for personal communication devices (4-6 pages).
- **Research topic**: identifies potentially open questions in the domain and sets out a plan for how to answer those questions during the workshop - based on a presentation (3-4 pages).
- **Experience paper**: a summary of complete research tracks and/or projects. This work can be submitted by sending a position paper (4-6 pages), optionally complemented with references to existing publications describing the work.

Submissions should not exceed 6 pages and should be formatted using the ACM proceeding style. Submission implies that at least one of the authors will register and present the paper. The proceedings will be uploaded to the ACM Digital Library.

Important Dates

- Abstract submission deadline: July 25, 2008
- Paper submission deadline: August 1, 2008
- Notification of acceptance: September 15, 2008
- Final camera ready papers due: October 8, 2008
- Workshop date: December 2, 2008