



IEEE Communications Magazine – Call for Papers Special Issue on "Communications Middleware for Mobile Devices and Applications"

Important Dates:

- Paper submission deadline: **December 31, 2010**
- Notification to authors: **April 15, 2011**
- Submission of camera-ready versions: **May 15, 2011**
- Special issue publication: September 2011

Guest Editors of the Special Issue:

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Increasingly capable mobile devices and the need to run enterprise and other complex applications on such devices prompt the development of the next generation of middleware (either infrastructure based or peer-to-peer) to simplify the authoring, deployment, and runtime management of mobile applications. This special issue intends to disseminate the latest research in the emergent and large area of middleware for mobile devices and applications, by providing a fresh snapshot of the current state-of-the-art about middleware architectures, mechanisms, algorithms, and integrated frameworks. Practical experiences, extensive experimentation, and lessons learnt from deployment over real wide-scale environments are welcome, as well as original disruptive proposals and groundbreaking ideas. In other words, we are seeking high-quality papers reporting original research results and practical experiences of system design/prototyping/deployment related to topics that include, but are not limited to:

- Original mechanisms, algorithms, architectures, and frameworks for middleware support to heterogeneous mobile connectivity (always best served, simultaneous exploitation of multiple heterogeneous wireless interfaces, ...);
- Original mechanisms, algorithms, architectures, and frameworks for middleware support to location-dependent mobile applications;
- Original mechanisms, algorithms, architectures, and frameworks for middleware support to context-dependent mobile applications;
- Power-aware middleware for mobile devices and mobile applications;
- Middleware for better exploitation of ubiquitous under-utilized connectivity:
- Infrastructure-based or peer-to-peer middleware for mobile collaborations and emerging aggregated behaviors of collaborative sharing;
- Performance, reliability, and efficiency of middleware for mobile applications;
- Scalability of middleware solutions over large deployment environments;
- Practical experience with standards, standardized cross-layer APIs, and open deployment environments;
- Middleware for mobile application porting and device fragmentation issues;
- Predictive mobility/traffic models for proactive middleware management;
- Simulation aspects and tools for mobile middleware;
- Security (in particular, privacy) for mobile middleware;
- Middleware for mobile application and smartphone platforms (Java ME, Windows Mobile, .NET Compact Framework, Android, iPhone, Symbian, etc.);
- Middleware for mobile communications in urban-scale smart environments (smart homes, smart cars, smart cities, etc.);
- Middleware for mobile applications for social networking, gaming, healthcare, culture, tourism, commerce, targeted advertising, etc.

Submission process:

Articles should be tutorial in nature and should be written in a style comprehensible to readers outside this special field. Authors must follow the IEEE Communications Magazine's guidelines for preparation of the manuscript. Complete guidelines for prospective authors can be found at http://dl.comsoc.org/livepubs/ci1/info/sub_guidelines.html. Please send PDF (preferred) or MS Word formatted papers to Manuscript Central (http://commag-ieee.manuscriptcentral.com), register or log in, go to the Author Center and follow the instructions there.