

# Call for Papers

## International Journal on Semantic Web and Information Systems

<http://www.idea-group.com/journals/details.asp?ID=4625>

### *Special Issue on Mobile Services and Ontologies*

Submission Deadline: May 31, 2007

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#### Scope and Topics

Today, computers are changing from big, grey, and noisy equipment on our desks to small, portable, and constantly connected devices most of us are carrying around. This new form of device mobility imposes a shift in how we view computers and the way we use them.

Services offer the possibility to overcome the limitations of individual mobile devices by making functionality offered by others available on an as-needed basis. Thus, using the service-oriented computing paradigm in mobile environments will considerably enlarge the variety of accessible applications and will enable new business opportunities in the mobile space by delivering integrated functionalities across wireless networks. Network-hosted mobile services will allow mobile operators and third party mobile service providers to extend their businesses by making their services available to a broader audience (e.g. developers, service providers, etc.); device-hosted services will allow great potential for major innovations for applications and services that can be provided to individual mobile device owners.

These mobile services offer functionalities and behaviours that can be described, advertised, discovered, and composed by others. Eventually, services will be able to interoperate even though they have not been designed to work together. This type of interoperability is based on the ability to understand other services and reason about their functionalities and behaviours when necessary. In this respect, mobile services could

benefit from the techniques developed for the Semantic Web. Use of Semantic Web languages, techniques and technologies, including ontologies, semantic annotations (of both content and services), automatic metadata extraction, reasoning, etc. may offer new capabilities for mobile applications. However, standard semantic web tools and technologies are too heavy-weight for small mobile devices. The need to appropriately combine and adapt mobility and semantic grounded data sharing has generated and is continuously triggering challenging questions in several areas of computer science, engineering and networking.

This special issue will cover research problems around methods, concepts, models, languages and technologies that enable new opportunities in the mobile space through adoption, usage, and integration of mobile services with ontologies and other Semantic Web enablers. Of particular interest are methodologies and technologies that will allow automatic tasks to be performed with respect to mobile services and the use of ontologies and semantic techniques in this context.

Topics of interest include, but are not limited to the following which involve ontologies or other Semantic Web capabilities:

- architectures for mobile internet services
- languages for describing mobile services
- discovery and matchmaking of ontology based mobile services
- adaptive selection of mobile services
- ontology management in mobile environments
- contracting and negotiation with ontology-based mobile services (service level agreements)
- semantic annotation and reasoning involving semantic metadata
- combining thematic metadata with locational/georeference metadata in mobile applications
  - approaches to composition of ontology based mobile services
  - invocation, adaptive execution, monitoring, and management of mobile services
  - interaction protocols and conversation models for mobile services
  - ontology-based security and privacy issues in mobile services
  - mobile service applications
  - analysis and design approaches for mobile services
  - reasoning with mobile services
  - ontology-based policies for mobile services
  - tools for discovery, matchmaking, selection, mediation, composition, management, and monitoring of mobile services
  - mobile service development
  - multi agent systems and mobile services

### Submission Process

Submissions to this special issue should follow the journal's guidelines for submission (<http://www.idea-group.com/journals/details.asp?ID=4625&v=guidelines>). After

submitting the paper, please also inform guest editors by an email with the paper ID assigned by the submission system. Papers must be of high quality and should clearly state the technical issue(s) being addressed as related to mobile services and ontologies. Research papers should present a proof of concept for any novel technique they are proposing. Case studies should discuss the significance and applicability of their proposed architecture/system. If a submission is based on a prior publication in a workshop or conference, the journal submission must involve substantial advance (a min. of 30%) in conceptual terms as well as in exposition (e.g., more comprehensive testing/evaluation/validation or additional applications/usage).

All papers must be submitted by April 30, 2007. The editors recommend that the number of pages should not exceed 35. All papers are subject to peer review performed by three established researchers selected from a panel of reviewers established for this special issue. Accepted papers have an opportunity for further revision and an additional round of reviewer feedback. Information on the journal with online submission can be found at: <http://www.ijswis.org>. Please submit manuscripts through that online system.

#### Important Dates

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- Submissions: May 31, 2007
- Completion of first round of reviews July 31
- Notifications: August 15, 2007
- Revised papers: October 31, 2007
- Notifications of final acceptance: November 30, 2007
- Final papers: December 31, 2007
- Publication: First or Second issue 2008 (Vol. 4, issue 1 or 2)