Call for Papers

International Workshop on Integrating the Edge with the Enterprise for Planning and Management

As part of
June 29-July 1 2009
Groningen, The Netherlands

The ability to embed sensing and intelligence into devices and at the same time provide ubiquitous access to these devices through wireless communication has resulted in computing becoming increasingly pervasive. These pervasive computing networks are often called as the Edge.

Enterprise systems can leverage the Edge in many ways. The application of RFID tags and other smart sensors in tracking inventory is well known. Edge systems can also detect the state of deployed products, monitor and control the usage of resources, detect new conditions in the environment that are critical to improved service, as well as deliver new services. Moreover the Edge is not limited to sensor networks. If the Edge is thought of as the boundary where the Enterprise meets its environment, web portals that enable interactivity with external actors are also part of the Edge.

By offering enhanced visibility, Edge systems can provide enterprises with clues to long-term planning. Further, by providing convenient and ubiquitous access to information, the Edge can enable collaborative applications within and among enterprises. Edge systems also provide opportunities for new business models such as context and location sensitive advertising to travelling customers and on-the-go transactions using mobile payment systems.

Apart from various challenges in designing the Edge, such as resource constrained devices, mobility and loss-prone wireless channels, there are also many challenges in integrating the Edge with the Enterprise, such as:

- Adapting existing enterprise resource planning systems to integrate with Edge systems.
- Providing users of enterprise systems with interfaces for configuring the Edge in a business relevant manner to look for and react to business-critical events, and yet keep them abstracted away from the details of the Edge implementation.
- Ensuring that the autonomous agents in the Edge act quickly with accurate information.
- Using the Edge for continuous improvement of Enterprise business capability, enabling sense-and-respond innovations (i.e. those without the overhead of long-planning and execution cycles), and enterprise resilience.
- Seamlessly integrating existing enterprise software with pervasive middleware services. (As an example consider a person or object location / tracking service that is integrated with enterprise software such as *Lotus Sametime*.)
• Designing enterprise and system architectures with autonomous agents that strike the balance between local capabilities, communicating to enterprise systems, and acting on global directives.
• Efficiently storing and mining the vast amount of Edge data to facilitate planning in real-time.
• Monitoring complex architectures to reason about the health of the enterprise.
• Using information in the Enterprise to reason about the health of the Edge – including the health of people wearing pervasive computing devices.
• Ensuring data security in an Edge integrated Enterprise.
• Standardizing the Edge in order to permit interoperability and collaboration among multiple enterprises.
• Reasoning about variations in the environment to leverage dynamic assembly for needed service capability.

The focus of the workshop is on pervasive Edge systems that enable long term strategic and operational planning as well as those that enable real time management. The goal of this workshop is to bring together researchers in industry and academia and jointly address challenges involved in applying pervasive computing with enterprise systems. **Topics** include, but are not limited to:

1. Innovative applications, application design, case studies, prototypes, real-world-systems
2. Reference architectures
3. Integration of enterprise software with Edge systems
4. Design of middleware services and infrastructure to support collaborative applications
5. Applying Edge systems for industrial control and automation
6. Algorithms for data fusion and mining
7. Standardization for interoperability and collaborative applications
8. Modeling methodologies for analysis and design of Edge-to-Enterprise systems to enable innovation, streamlined operations and enterprise resilience.
9. New business models enabled by the integration of the Edge and the Enterprise

**Submission**

Papers should contain original contributions not published or submitted elsewhere, and with references to related work. Authors of accepted papers are expected to present their papers at the workshop. Papers up to **six pages (including figures, tables and references)** can be submitted. Papers should follow the **IEEE format, which is single-spaced, two columns, 10 pt font**. Papers should include a title, the name and affiliation of each author, an abstract of up to 150 words and no more than eight keywords. Please submit papers, in PDF or PS format, to either of the Co-Chairs. All submitted papers will be peer-reviewed by a minimum of three program committee members. The accepted papers and the summary report produced by each group will be published in the post-conference proceedings (to be published by the IEEE Computer Society Press). If you have further questions or remarks, please do not hesitate to contact the workshop organizers.
Important Dates

**Deadline for paper submission:** March 6, 2009
**Decision to paper authors:** March 27, 2009
**Final version of accepted papers due to IEEE:** April 10, 2009
**WETICE-2009:** June 29 – July 1, 2009

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