

Call for Papers for
The 1st International Workshop on
Process Management for Highly Dynamic and Pervasive Scenarios
(PM4HDPS)

Milan, Italy, 1 September 2008
In conjunction with
the 6th International Conference on Business Process Management (BPM'08)
Milan, Italy, 1-4 September 2008

Workshop Themes

Nowadays, process management systems are widely used in many business scenarios, such as government agencies, insurances, banks, etc. Besides such scenarios, which present mainly static characteristics, PMSs can be used also in pervasive and highly dynamic situations.

Some examples of Highly Dynamic and Pervasive scenarios are:

- **Emergency situations.** Several devices, robots and/or sensors must be coordinated in accordance with a process schema (e.g., based on a disaster recovery plan) to cope with environmental disasters.
- **Pervasive healthcare.** The purpose is to make healthcare available to anyone, anytime, and anywhere by removing location, time and other restraints while increasing both the coverage and quality of healthcare.
- **Ambient intelligence.** In this vision, devices/robots work in concert to support people in carrying out their everyday life activities, tasks and rituals in an easy, natural way using information and intelligence that is hidden in the network connecting these devices. Devices and Robots are intelligent agents that act and react to external stimuli. So-called “Domotics” or “Home automation” is a specific application in such a field.

In many such scenarios there are often special requirements:

1. The execution environment may be continuously changing in an unpredictable manner and deviations are not exceptions but the rule.
2. An underlying communication infrastructure is not available “in situ” but it is built up on-the-fly in a transitional way (i.e. MANET, Wi-Fi Max, TETRA networks, Vehicular ad-hoc Networks). These communication infrastructures are typically unreliable and slow, in addition they do not guarantee a proper security level against malicious attacks since they are based on an “open-air” medium. Moreover they can not guarantee the coverage of all involved actors at all times.
3. The managed processes are short-term and often need to be carried out within strictly specified deadlines.
4. Typically, processes are created in an ad-hoc manner upon the occurrence of certain events. These processes are designed starting from provided templates or simple textual guidelines and are used only in the context for which they were created.
5. Human resources are usually equipped with low-profile devices such as PDAs or Smart phones, which typically do not possess powerful computation capabilities. Reduced screen sizes also raises many problems when visualizing information.

This workshop aims at providing a forum to draw attention to Highly Dynamic and Pervasive settings and to exchange the latest individual research and development ideas. Such scenarios can cut across different research fields: on the one hand traditional BPM, and on the other artificial intelligence, agent programming and robotics. Therefore, we are encouraging researchers to show

their contributions to the field from their own viewpoints, the current state of research efforts as well as practical experiences.

Finally, the BPM Workshop Chairs are in contact with the editor in charge of the "Software Process Improvement and Practice" Journal, and the best paper will be selected for a special issue.

Workshop Topics

The research in the field of "Process Management" has mainly been focussed in classic domains. For Highly Dynamic and Pervasive PMSs approach, many research issues need to be approached in a different way (for example, exception handling, UI design and process modelling). In addition, new problems arise such as the development of strategies to deal with unreliable communications.

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

1. Modelling of Highly Dynamic and Pervasive processes: formal representations and technologies.
2. New resource and process patterns in Highly Dynamic and Pervasive scenarios.
3. Graphical user interfaces in Highly Dynamic and Pervasive scenarios: design, implementation and evaluation through HCI techniques.
4. Services supporting the execution of Highly Dynamic and Pervasive processes.
5. Service compositions for Highly Dynamic and Pervasive processes.
6. Verification and validation of Highly Dynamic and Pervasive processes.
7. Exception handling and adaptation in PMSs to cope with dynamic behaviour and pervasiveness.
8. Techniques to guarantee appropriate QoS and to cope with unreliable communication for Highly Dynamic and Pervasive.
9. Algorithms for resource planning, re-planning and work assignment in adaptive and pervasive PMSs.
10. Techniques for Access Control, Attack Prevention and Detection for PMSs in Highly Dynamic and Pervasive settings.
11. Simulation of process enactment in Highly Dynamic and Pervasive settings: techniques and tools.
12. Agent-based approaches for Highly Dynamic and Pervasive process management.
13. Tools for dealing with Highly Dynamic and Pervasive scenarios.
14. Experiences with Real-world Process Management in Highly Dynamic and Pervasive settings.

Submissions

See workshop website for further details: <http://pm4hdps.deleoni.it>

Important dates

- Paper submission deadline: ~~23 May 2008~~ **2 June 2008 (extended!)**
- Notification of acceptance: 27 June 2008
- Camera-ready paper: 6 July 2008
- Workshop day: 1 September 2008
- Post-proceedings version: 23 September 2008
- Springer's Volume Delivery to authors: Christmas 2008

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