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Jacques Calmet and **Pierre Maret**



Special Issue on
**Networking Mobile Virtual
Knowledge**

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EDITORIAL (Vol. 6, No. 2, March 2009)

This special issue of the journal IJCSA originates from a special session, organized by the guest editors, at PRO-VE'08, the 9th IFIP Conference on Virtual Enterprises that was held in Poznan in September 2008. The proceedings of this conference were available at the conference. The exact reference is: Pervasive Collaborative Networks, IFIP TC 5 WG 5.5 Ninth Working Conference on Virtual Enterprises, September 8-10, 2008, Poznan, Poland. Series: IFIP International Federation for Information Processing, Vol. 283, Luis Camarinha-Matos and Willy Picard (Eds.), Springer 2008.

Papers presented at special sessions of this IFIP conference do not appear in the regular proceedings.

The title for this special session was "Networking Mobile Virtual Knowledge". The scope of the session acknowledges the trend that virtual enterprises are learning to manage virtual knowledge, which is becoming more and more mobile with the spreading use of mobile devices in all aspects of professional and private activities. The goal of this session was to cover several facets of this trend. They range from theoretical investigation of virtual knowledge to specific applications for disabled people or advanced evacuation systems in case of deadly risks. Features such as architectures for middleware or the link to social networks belong to the scope of this workshop. This explains why the scope of the papers appearing in this issue is quite large. In fact 5 papers were presented in Poznan while 7 papers are part of this proceedings. These 7 papers were planned from the beginning but could not be all presented at the conference for very practical reasons such as a lack of funding to attend the meeting. With this special issue, we come closer to the original scope we had in mind.

The cement for this issue is a virtual approach to knowledge management. Knowledge management is very often seen as the key of the future development of information processing although this concept is more a paradigm initiated for Artificial Intelligence from its origin than a methodology to design successful commercial products. However, it is almost taken for granted that the future of e-Business will be based upon a so-called knowledge society able to efficiently and trustfully master the enormous amount of existing and available knowledge.

The first paper introduces a model for agent-based knowledge communities. It must be seen in the framework of knowledge engineering and the feasibility is demonstrated through an implemented prototype. The applicability of mobile virtual communities to telemedicine is the topic of the second paper. Here again, a prototype architecture addressing mobility issues is presented illustrating the link between theoretical modeling and very practical applications.



Communication is at the heart of the third paper devoted to a dynamic evacuation architecture using context-aware policy management. This paper outlines that communication technology must be adapted to small mobile devices and also affects strongly decision making in emergency situations. The following paper also discusses a facet of context awareness but this time in the case of social networking. It claims that context-awareness is the missing block of social networking. The following paper addresses the crucial problem of trust and privacy. E-Business requires that trust and security are enforced. There are numerous approaches to these topics ranging from very theoretical ones, such as cryptography, to those with links to humanities, such as reputation trust seen as psychological exercise. The presented approach takes into account mobile devices with wireless capabilities. They are facets still seldom investigated.

The next paper is centered again on communication. It introduces a new paradigm to design human communication tools. Such studies are flourishing for artifacts such as robots and may look irrelevant for human since human do communicate since the origin of times. But, we are at a time when information processing aims at simulating traditional human capabilities. This paper is an attempt to define a paradigm to approach this goal. Here again, mobility through small intelligent devices is part of the future framework where such communications will take place. The final paper investigates problems linked to the indices that are used to evaluate the productivity of researchers and their communities. The link to the scope of this issue is found in the last word "community". Indeed, as it was pointed out during the talk at Poznan, social networks will play a role in trying to identify patterns of the research interests of a community. This will be the topic of a forthcoming doctoral work and is thus only outlined in the paper published here.

All papers in this issue have been reviewed by at least two referees. Changes have been requested for every single paper. The guest editors are the authors of one of the accepted papers. Joern Altmann did manage the reviewing process anonymously with respect to the authors. Three referee's reports have been provided. Pierre Maret is a co-author of another paper. In this case, the second guest editor did manage alone and anonymously its processing. We expect thus to fulfill the conditions required for a fair peer review processing of the submitted papers. Computer Science is a domain where such a goal is still possible to reach giving the existing rules and regulations to enforce publication rights.

- Jacques Calmet and Pierre Maret
March 2009