Editorial

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Biographical notes: Dr. Piet Kommers is Associate Professor at the University of Twente and part-time Lecturer at the Fontys Academy in The Netherlands. His specialties are advanced learning tools such as concept mapping, virtual reality and mobile learning. His research and teaching stretches from teacher education via European Joint Research Projects to international projects under the auspices of UNESCO.

His recent publications are on learners' preconceptions and representations that express preintuitive ideas before actual learning may start; Cognitive Support for Learning; Imagining the Unknown. He is an editor in several research journals and organises conferences in mobile learning, e-societies and web based communities.

The nature of web-based communities is changing. The first generation WWW-based community was a 'village': local (specific interest) and momentary, based upon charismatic moderators who believed in the survival of a topic, regardless of the cost of orchestration and management.

The second generation WWW-based community can better be seen as a city, and maybe later, even as a metropolis. Characteristically, it builds upon opportunistic contacts initially. However, it tends to become reorganised into a high-profile and professional network with mechanisms such as peer reviews, finally leading to various distinct roles and responsibilities.

WWW-based communities transform themselves from isolated islands into interlinked communities. Their members intend to exploit the available distributed information. It is time to look at the user needs and how new functions, models, techniques and structures can contribute. Some WWW-based communities aim at becoming self-supportive, or become linked with other communities. They also undertake the more dynamic methods for exposing theories, ideologies and practical views. Blogging and Wiki's are the more dominant. In this journal issue you will find the more common tools and methods. It typically aims at supporting its members with a highly focused need, and also those who are orienting in the communities from scratch.

WWW-based communities update their identity quite often; websites and list servers facilitate this versatility. They accept the role of being a guide towards many existing initiatives, websites and initiatives: web portals are a practical solution. Some WWW-based communities function in a very specific way and seem to function without a central control. The underlying principle is that of a super organisation. It is interesting

to investigate the mechanism and see how this affects future community developments. New techniques like weblogs offer extra information and opportunities for web-based communities. New search and link models are discussed. In this issue we present articles with interesting research on these issues.

Breslin *et al*. discuss a Semantically-Interlinked Online Community (SIOC) and how a SIOC can enable efficient information dissemination across communities by creating an ontology which will model concepts identified in discussion methods.

Autonomous super organisations, which can operate without centralised control, such as online message boards and online auction sites, seem to have a common emergent engine. Flor *et al*. combine analyses based on the theories of distributed cognition and conceptual blending to show how the symbol engine emerges as a consequence of two stable social practices (soliciting and eavesdropping) built over a common, stable cognitive process (conceptual blending).

As an illustration of potential transformation in how users interact on the web, Kone Mamadou Tadiou proposes in this article the application of the semantic web technology to a new breed of web-based community called Weblogs, and describes a search service based on the semantic web technology that is developed.

Canessa *et al*. discuss experiences with the new website of the International Centre for Theoretical Physics, aiming to satisfy the needs of a modern and appealing image as well as to provide tailored online information and services to its scientists (in-house and around the world).

Ahmed and Blustein present an exploratory survey on the influence of spatial ability, the most incisive aspect of individual difference for navigation, when people try to accomplish their goal in the information space.

The challenges of constructing a distributed e-business architecture based on the concept of the Request-Based Virtual Organisation (RBVO), a B2B value network which is dynamically formed upon demand to meet identified business opportunities, are explored by Svirskas and Roberts. They investigate the steps involved in achieving interdomain end-to-end business collaboration using the structural concepts of the RBVO by presenting a reference architecture and framework (realisation of that architecture in a particular class of environments).

Damjanovic *et al*. focus on using the bolero.net community. Bolero.net represents a community with the ambitious initiatives to standardise world trade messaging and to create a community for more efficient international trade.

Security is an important key requirement. Squicciarini *et al*. developed protocols for secure publication of protocols addressing the integrity and confidentiality of the policy publication process.

Looking at the current trends and developments, we see an important change in the function and attitude towards web-based communities. It becomes a more natural way of living in this computer age. The technique will be developed further and will assist people to communicate more and more with each other without the feeling that the computer/internet is an obstacle. Thanks to the many research activities and platforms to communicate the results, participating in web-based communities will be taken for granted and will open new research questions and links to our daily life.