

Foreword to the Special Issue on Collaborative Systems

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In the present global economy, strongly influenced by information technology and information systems evolution, modern organizations try to face the challenges by adjusting their strategies and restructuring all activities, for aligning them to the new economy requirements. It is certain, that the enterprise's performance will depend on the capacity to sustain collaborative work.

Collaborative technologies refer to a wide range of tools, systems and IT platforms that sustain all kind of collaboration models. Concepts, theory, modelling, specification, implementation and evaluation of collaborative systems, technologies and their nowadays applications together with future research directions are valuable for sustaining performance.

All collaborative environments are based on knowledge and between collaboration and knowledge management there is a strong interdependence. According to Professor Stefan I. Nițchi and Alin Mihăilă in their paper „Collaborative Knowledge Management“, virtual organizations (VO) are a conglomerate of collaborative organizations and people to achieve some common objectives. Also supporting knowledge management, these environments promote a collaborative knowledge management (CKM) strategy. Therefore, technology and information systems must support this new approach. The authors propose a general CKM architecture developed in two phases based on a collaborative framework. In the first phase, a CKM system for a VO is built and in the second phase, the realized CKM system is developed for a collaborative community organized as a social network (SN).

Nowadays, collaborative systems represent a new interdisciplinary domain at the intersection of economics, computer science, robotics, management, sociology, s.a. Intelligent robots act as a collaborative group, cooperation representing a primary necessity for task fulfillment. Adrian Korodi and Marian Corman propose in their paper „Wheeled Mobile Robot Model and Cooperative

Formation Control“ a proper control strategy for cooperative robots that have to keep a certain formation. Similar approaches are proposed for search and rescue robots, further development directions being probable and valid.

Designing collaborative systems is often challenging, agile development methodologies being recommended. Best practices developed by leading organizations and collaborative systems designer have in view „to better serve customers, to deliver business intelligence across the organization, to deploy effective knowledge management systems, to ensure the adoption by end users“.

A collaborative prototype for virtualizing an organizational workplace will be the subject of Gabriela Mircea's and Sandra Băzăvan's proposal. However, in their paper „A collaborative prototype designed for organizational workplace support“ both authors consider that, „any collaborative solution must always be perceived as an extension to an organizational culture that has already adopted collaboration as a valuable strategy“.

In the actual context of the knowledge based society, large scale distributed systems are widely used for sharing information. They have a collaborative behavior, communication, coordination and cooperation being key success factors. According to Professor Ion Ivan and his team, collaborative informatics security, introduced in „Collaborative Informatics Security in Distributed Systems“ could ground a new theoretical approach in the actual information systems' and technology state of art. In addition, a collaborative security metrics is proposed.

Concluding, the research field on collaborative systems is wide open to interdisciplinary approaches including both technical demarches and business approaches.