Knowledge is power. In this era of knowledge-based economies, constantly changing business environments, severe competition, and globalization, gaining the knowledge edge will greatly empower an organization to stay on the cutting edge. This involves leveraging explicit and tacit knowledge resources in order to ensure that businesses continue to maintain a level of sustainable competitive advantage. Knowledge-based organizations (KBO) can change data into dollars; transform information into intelligence; turn tacit knowledge into tangible assets; and convert brain power into business opportunities (Wang, 2008).

There are three categories of knowledge: information (databases), explicit or codified knowledge, and tacit knowledge. Tacit knowledge is highly personal, intuitive, implicit, and context-specific, and by virtue of this, can be difficult to formalize or articulate. Since our knowledge-based economy is based on the interplay of explicit and tacit knowledge, the challenge is to address the processes of articulating, capturing, codifying, exchanging, transforming, refining, retaining, protecting, and updating tacit knowledge across different domains. This is of paramount importance to ensure that an organization leverages its intellectual capital, and streamlines its knowledge-value chain.

The main objective of the International Journal of Knowledge-Based Organizations (IJKBO) is to provide a global forum for practitioners and researchers in business and governmental organizations, as well as information technology professionals, software developers, and vendors, to exchange and present useful and innovative ideas and work. IJKBO emphasizes the dissemination of ground-breaking and original theories and concepts which can shape future directions of research. These, when applied, can enable business managers, policy makers, government officials, and other decision makers to better assess various advanced techniques and new applications of information technology. IJKBO encourages exploration, exploitation, and evaluation of diverse principles, processes, technologies, techniques, methods, and models (normative, descriptive, cognitive, and prescriptive) in sustainable knowledge ecosystems.

There are four articles in this issue. For the last several decades, seminal theories from different disciplines have broadened our outlook on innovation, knowledge and network interaction. These theories have laid the foundation for empirical research efforts which have generated evidence on particular aspects of this triad. Platonov and Bergman propose a holistic approach, to encompass
multidisciplinary aspects of social interaction, cognition and technology in a conceptual framework that regards innovation dynamics as the result of the generation of knowledge flows in innovation networks. The proposed approach is the outcome of the authors’ extensive research experience of the rise of the Finnish ICT sector, and the turbulent market-oriented transition in Russia. The key to this paper is a conceptual model that in spite of its multidisciplinary nature and complexity of underlying processes is compact, and hence applicable to advanced empirical research. With its help, Platonov and Bergman relate fundamental properties of networks and knowledge creation to strategic decision making. In this sense they open new perspectives for strategic analysis where the collaboration of knowledge-based organizations is concerned. The logical path of the paper moves through the landscape of a Finnish-Russian cross-border innovation network, a unique business network that is regional and at the same time international. The catalyst of its development was cooperation in IT, and the authors played a prominent role in development of this network. However, the authors present a generic approach that is valuable for understanding other sophisticated forms of innovation collaboration, such as cross-sector innovation networks. This may provide insight into related topics of paramount importance, such as converting intangible knowledge assets into tangible improvements of organizational performance.

The second paper, by Riss, describes a novel approach to Knowledge Management that explicitly takes the action side of knowledge into account. It is based on the insight that the failure of many previous approaches in knowledge management can be traced back to the simplifying assumption that a reduction in the management of knowledge artifacts would suffice. Based on their fundamental investigation on the nature of knowledge it has become clear that the inclusion of human action is crucial. Form this insight Riss deduced the idea of Activity-Based Knowledge Management. A decisive step in the implementation of this idea has been the Pattern-Based Task Management approach which includes task patterns as mediators between human activities and knowledge artifacts. To deeply integrate task patterns in human activities, the author had to transform the task management application into a habitat for knowledge workers, in which the use of knowledge artifacts is deeply embedded in the user’s task handling and particularly adapted to the task context, so that the way information can be used becomes clear from the setting. The provision of such a habitat can be seen as groundbreaking on the way to the integration of knowledge and action. This connection enables new ways of maturing knowledge, i.e., the coordinated development of organizational knowledge and artifacts. Thus, it can be demonstrated that by the introduction of Pattern-Based Task Management, the quality of organizational learning can be decisively improved by introduction of new kinds of artifact-supported learning loops.

In the third article, “Supporting Knowledge-Based Decision Making in the Medical Context: the GLARE Approach,” Anselma, Bottrighi, Molino, Montani, Terenziani, and Torchio highlight new directions in the computer-based support of medical knowledge-based decision making. Decision making is one of the most challenging activities of physicians, requiring specific and up-to-date knowledge. Clinical practice guidelines, encoding the indications provided by evidence-based medicine, are useful tools to represent such knowledge. GLARE (GuideLine Acquisition, Representation and Execution) is a computer-based approach built to support physicians in coping with clinical guidelines. The paper centers on a comprehensive description of the advanced decision making capabilities provided by GLARE. The paper makes a breakthrough by proposing a multi-faceted approach in which heterogeneous forms of knowledge are defined from a guideline and are elaborated, to present physicians with different views of the pros and cons of their decisions. A further contribution lies in the proposal of advanced formal Artificial Intelligence techniques to expand that
knowledge. Specifically, GLARE’s “what-if” facility allows physicians to explore the effects of choosing a given alternative, in terms of the further actions that should be executed later on, according to the guidelines, and in terms of their cumulative costs and durations. Innovative temporal reasoning techniques are used to evaluate durations. Moreover, GLARE’s ability to compute the cumulative utility of the different alternatives constitutes the first application of Decision Theory in the context of clinical guidelines.

In line with Christidis, Papailiou, Apostolou, and Mentzas, semantic technologies can play an important role in the development of tools supporting information and knowledge management for individuals within their work context. These tools can facilitate advanced organization, annotation, navigation and search capabilities. In their paper entitled “Semantic Interfaces for Personal and Social Knowledge Work”, Christidis et al. contribute to the design of such tools by outlining how a user-centred design methodology can be applied to develop usable and effective user interfaces. This paper also investigates how interfaces can provide a richer and faster way of building personal knowledge spaces than those enabled by current semantics-based desktop functions, as well as enable ad-hoc collaboration and seamless access to personal and shared resources. The paper presents SPONGE, a system that encapsulates core functionalities needed for managing personal information and for sharing information within knowledge networks. The authors present an evaluation of SPONGE which details the usability and perceived benefits of light-touch interfaces for the social semantic desktop in professional business services, as well as insight on the users’ perspective of a semantically enabled tool.

The audience for IJKBO is broad: It includes decision makers, government officials, economists, social workers, systems engineers, strategic planners, policy makers, problem solvers, educators and students, applied statisticians, consultants, accounting researchers and managers, financial researchers and managers, information systems researchers and managers, marketing researchers and managers, operational researchers and managers.

Hopefully, IJKBO, along with the Int. J. of Information Systems in the Service Sector, and the Int. J. of Information Systems and Supply Chain Management will be able to ameliorate a manager’s burdens, meet a practitioner’s challenges, explore an executive’s opportunities, and realize an entrepreneur’s dreams.

Together, let’s celebrate the birth of IJKBO, nurture its growth, contribute to its strength and protect its health.

REFERENCES


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John Wang is a professor in the Department of Management and Information Systems at Montclair State University, USA. Having received a scholarship award, he came to the USA and completed his Ph.D. in operations research from Temple University. He has published over 100 refereed papers and six books. He has also developed several computer software programs based on his research findings. He is the Editor-in-Chief of Int. J. of Information Systems in the Service Sector, Int. J. of Information Systems and Supply Chain Management. Furthermore, he is the Editor of Data Warehousing and Mining: Concepts, Methodologies, Tools, and Applications (six-volume) and the Editor of the Encyclopedia of Data Warehousing and Mining, 2e (four-volume). His long-term research goal is on the synergy of operations research, data mining and cybernetics.

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