Reflections on Knowledge Management

J.UKM Special Issue

Klaus Tochtermann

(Graz University of Technology & Know-Center Graz, Austria ktochter@know-center.at)

Gisela Dösinger

(Know-Center Graz, Austria gdoes@know-center.at)

Knowledge management has been called everything from innovative and crucial to new wine in old bottles and dead. Usually, different perceptions spring from different perspectives. The aim of this special issue is to bring a broad array of these perspectives together, to learn from each other and to jointly find promising ways ahead for the future. This special issue makes available extended versions of the best contributions evaluated by the international expert committee of I-KNOW '06, the 6th International Conference on Knowledge Management (http://www.i-know.at). The purpose of this issue is to provide in-depth reflections on novel ideas for knowledge management research and next-generation knowledge management solutions. To achieve this objective, the contributions of this special issue fall into two categories. The first group of contributions focuses on collaborative knowledge work in defined areas. The second group deals with knowledge management aspect on an organisational level.

The following four contributions address collaborative knowledge work in the context of decision making, roadmapping, entrepreneurial knowledge sharing, and ontology creation.

In their contribution Seeing versus Arguing: The Moderation Role of Collaborative Visualization in Team Knowledge Integration Jeanne Mengis and Martin J. Eppler discuss a number of communicative challenges with reference to team knowledge integration. They show how collaborative visualisation moderates team knowledge integration and hence can improve decision making.

Vana Kamtsiou, Ambjörn Naeve, Lampros K. Stergioulas and Tapio Koskinen in their contribution *Roadmapping as a Knowledge Creation Process: The PROLEARN Roadmap* refine and enhance existing roadmapping methodologies, create a conceptual model of the road mapping processes and apply the SECI spiral of knowledge creation.

Storytelling in the context of entrepreneurial knowledge sharing in communities is discussed in *Virtual Entrepreneurship Lab 2.0: Sharing entrepreneurial knowledge by non-linear storytelling* by Ralf Klamma, Marc Spaniol and Dominik Renzel. They

present the Virtual Entrepreneurship Lab 1.0 which is a learning environment based on the MPEG-7 metadata standard where students can consume and create non-linear stories.

In their contribution *Consensus Building in Collaborative Ontology Engineering Processes* Stelios Karapiperis and Dimitris Apostolou outline a methodology for collaborative ontology creation with an embedded mechanism which evaluates the quality and acceptance of the resultant ontology by a group of participants. They highlight the benefits but also the challenges that must be faced when collaboratively designing an ontology.

The next group of contributions go beyond certain application areas. They address issues concerning the entire organisation. The contributions range form intellectual capital management and knowledge management best practice cases to knowledge management in project based organisations.

In *Towards a Model for Creating Comparable Intellectual Capital Reports* Martin Nemetz picks up the problem of the non-comparability of intellectual capital reports due to the diversity of used conceptions. To tackle this problem he develops a meta-model framework and shows its applicability and usefulness by means of a practical example.

Mark Hefke, Knut Jäger and Andreas Abecker entitled their contribution *Best Practice Cases for Knowledge Management and Their Portability to Other Organisations* where they introduce their ontology-based reference model for the reuse and transferability of knowledge management best practice cases. Using indicators for the general description of organisations, critical knowledge management success factors and indicators for the transferability their model allows for similarity-based retrieval. The approach is based on the combination of case-based reasoning methods and ontological background knowledge.

In their contribution An integrated view of KM: Toward a Project Learning Organization Roberta Cuel and Filippo Manfredi deal with knowledge management in project based organisations. They describe the concept of project learning organisations, the model of projects life cycle and the model of knowledge coordination processes among projects, and their alignment with corporate knowledge.

The last, but not less important contribution is another bit more general than the previously described, since it deals with service oriented architectures. In *Performance Solution of SOA Infrastructure for Knowledge Computing* Miroslav Kubásek, Jan Pavloviè and Tomá Gregar present a complete solution of SOA designed for knowledge computation encapsulation. SOA represents a functional encapsulation of computations and simplifies the communication interface between application and presentation logic.

We hope that this special issue provides the reader with a comprehensive overview of contributions which represent not only sophisticated reflection on knowledge management but also a true advancement beyond the state-of-the-art.

Klaus Tochtermann and Gisela Dösinger

Graz, December 2006