

# Knowledge Management in the Context of Human Centered Computing

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During the last decade we have witnessed the impact on industry of knowledge management. There have been many steps, not always easy to date but very significant. Today we are living with facts such as E-business is widely accepted or the future of the European economy lies in a knowledge society, that span several domains of knowledge engineering. Also, there is an attempt to design a world where humans are “kept in the loop” meaning that humans and information systems will be hard to distinguish and better known as human centered computing.

First, mediator systems have provided a mean to query semantically heterogeneous knowledge sources. Then, the emergence of the multiagent methodology has lead to consider that these mediator systems are in fact intelligent agents. The fact that E-business is suitably described through an agent approach terminates this first link.

The methodologies proposed several years ago were basically static in the sense that the challenge was to query or access distributed knowledge sources which were located at well identified locations. Today, the concepts of mobility and of virtuality are providing more challenges and opportunities. Also new are the requirements to introduce security concepts into knowledge management. This looks obvious because of the widespread use of E-business and P2P exchanges but cannot be addressed properly by existing security methodologies. In particular, we need to introduce legal assessments when trying to provide trust into emerging technologies. Legal knowledge is nowadays part of the corporate knowledge of any company.

Agents are possibly mobile. This simple comment affects the way knowledge is accessed and secured. A possible approach is to design virtual knowledge communities. They lead to a generic way to describe corporate knowledge and thus to model companies. This is not identical to the present projects modeling companies as virtual organizations although not fully foreign.

Our group has experience on all of these aspects. It has also investigated the identification of structure in ontologies, decision making in case of uncertain knowledge (with application to insurances) and a fully new approach to firewall where the available knowledge is stored in logical fibers and knowledge plays a part.