

# Ontologies for Knowledge Management: An Information Systems Perspective\*

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**Abstract.** Knowledge management research focuses on concepts, methods, and tools supporting the management of human knowledge. The main objective of this paper is to survey basic concepts that have been used in computer science for the representation of knowledge and summarize some of their advantages and drawbacks. A secondary objective is to relate these techniques to information science theory and practice.

The survey classifies the concepts used for knowledge representation into four broad ontological categories. *Static ontologies* describe static aspects of the world, i.e., what things exist, their attributes and relationships. A *dynamic ontology*, on the other hand, describes the changing aspects of the world in terms of states, state transitions and processes. *Intentional ontologies* encompass the world of things agents believe in, want, prove or disprove, and argue about. Finally, *social ontologies* cover social settings – agents, positions, roles, authority, permanent organizational structures or shifting networks of alliances and interdependencies.

**Keywords:** Ontologies; Knowledge management; Knowledge representation; Information science; Information systems

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## 1. Introduction

Knowledge management is concerned with the representation, organization, acquisition, creation, use and evolution of knowledge in its many forms. To build effective technologies for knowledge management, we need to further our understanding of how individuals, groups and organizations use knowledge. Given that more and more knowledge is represented in computer-readable forms, we also need to build tools

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