

Knowledge Engineering Suite: A Tool to Create Ontologies for an Automatic Knowledge Representation in Intelligent Systems

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Abstract. The present work is focused on the systematization of a process of knowledge acquisition for its use in intelligent management systems. The result was the construction of a computational structure for use inside the institutions (Intranet) as well as outside them (Internet). This structure was called Knowledge Engineering Suite, an ontological engineering tool to support the construction of ontologies in a collaborative environment and was based on observations made at Semantic Web, UNL (Universal Networking Language) and WordNet. We use both a knowledge representation technique called DCKR to organize knowledge, and psychoanalytic studies, focused mainly on Lacan and his language theory to develop a methodology called Engineering of Mind to improve the synchronicity between knowledge engineers and specialists in a particular knowledge domain.

1. Introduction

The importance of the Knowledge Based Systems is in the fact that they provide the computer with some peculiar characteristics of human intelligence, such as the capacity to understand natural language and simulate reasoning in uncertainty conditions. Defining the relevant information to be inserted into a Knowledge Based Systems is the great problem in the development of intelligent systems, mainly because the process is basically experimental and depends greatly on the ability of the knowledge engineer. In particular, a great difficulty is related to the definition of the terminology used to nominate the concepts and the relations. [1] Besides the great number of methods to do the knowledge acquisition, we can't find one that deals with the understanding and learning of the people involved, both specialists and knowledge engineers.

More recently, the notion of an ontology is being so popular in fields such intelligent information integration, information retrieval on the Internet, and knowledge management. The reason is in part due to what they promise: a shared and common understanding of some domain that can be communicated across people and computers [2]. Different developments of a worldwide range have a reference in cooperative work as a WordNet, Semantic Web and UNL (Universal Networking