E1-16 Buddhist thought process: a new approach to knowledge modelling

Asoka S Karunananda
Open University of Sri Lanka, Nawala, Nugegoda

Knowledge-Based Systems (KBS) development has been a major application area of Artificial Intelligence. The KBS technology provides a novel way of information processing by manipulating domain knowledge and the reasoning knowledge that explore domain knowledge as two separate modules. Over the last many years the development of Knowledge Acquisition methodologies for the construction of KBS has been a major research challenge. In the past, knowledge acquisition for KBS was considered as extracting and transferring of expert knowledge into a computer system. Nowadays knowledge acquisition is considered as a modelling activity. Since the term, *knowledge* has multiple philosophical definitions, there are various approaches taken for knowledge modelling. Most of these models of knowledge, are borrowed from disciplines such as philosophy, psychology, education, etc. In our research, we have exploited Buddhist philosophical mode of human knowledge.

This model has not been exploited for knowledge modelling yet. It defines human knowledge as a process which conditionally continues. Thus a given piece of knowledge at a given moment can be modelled with regard to the previously encountered knowledge. In our research, the *thought process* mechanism proposed in Buddhism is used as the basis for a new approach to knowledge modelling. The computer implemented thought process provides a model for describing human behaviour. Thus the research has potential for evolving to the development of a knowledge acquisition tool that may address the common issue of mental model harmonisation of the domain expert and the knowledge engineer during knowledge acquisition process.