

## ONTOLOGY-BASED BOOK CLASSIFICATION SYSTEM

Ranaweera V.I.J.H.<sup>1\*</sup>, Kumara B.T.G.S.<sup>1</sup> and Nawarathne I.M.<sup>2</sup>

<sup>1</sup>Department of Computing and Information Systems, Sabaragamuwa University of Sri Lanka, Sri Lanka

<sup>2</sup>Main Library, Sabaragamuwa University of Sri Lanka, Sri Lanka

\*vishwaranaweera3@gmail.com

Knowledge management using ontology for book classification in a proper manner is essential because the automatic classification of the document has become most important analysis area because of the exponential growth of digital content and the manual or semi-automatic system of categorizing is not effective for document classification. In knowledge management, it is difficult if there is not a knowledge store properly. In gain knowledge from books it should get the right book to gain the right information. So for that manual and semi-automatic categorize is extremely careful and effortful in book classification. This speedy growth of knowledge within the modern world technology leads users to arrange text materials in a simple to access ways. The rapid growth of information within the present situation leads users to arrange text materials in several ways in which. Form this research it uses DDC (Dewey Decimal Classification) book classification method to classify the book with its topic and its automated book classification by the implemented system. The system identifies synonyms and classifies book in properly by using ontology. The methodology of this research is to select the classification scheme of the book, extract a hierarchy of class for this scheme and build an ontology for the book scheme. Ontology defined classes, subclasses, individuals and object property and the relations of them. Identify synonymous from WordNet, classify the book with user input and compare with the synonyms of that and classify the book using predefined ontology. The result of this research is classified the book based on the book topic from that is can classify the book in a proper manner. From the system of this research, it can automated book classification properly. Knowledge management and knowledge sharing can be done in an efficient manner by using this system.

**Keywords:** *Ontology, Automated system, Book classification, Synonyms, DDC*