

ABSTRACT: Collaborative tagging systems have recently emerged as one of the rapidly growing web 2.0 applications. The informal social classification structure in these systems, also known as folksonomy, provides a convenient way to annotate resources by allowing users to use any keyword or tag that they find relevant. In turn, the flat and non-hierarchical structure with unsupervised vocabularies leads to low search precision and poor resource navigation and retrieval. This drawback has created the need for ontological structures, which provide shared vocabularies and semantic relations for translating and integrating the different sources. In this paper, we propose an integrated approach for extracting ontological structure from folksonomies that exploits the power of low support association rule mining supplemented by an upper ontology such as WordNet.