

Folksonomy Enrichment and Search

Sofia Angeletou, Marta Sabou, and Enrico Motta

Knowledge Media Institute (KMi)
The Open University, Milton Keynes, United Kingdom
{S.Angeletou,R.M.Sabou,E.Motta}@open.ac.uk

Abstract. The Semantic Web community has expressed its interest on how the Semantic Web technology can be applied more efficiently in a manner that supports real world applications. Additionally, the popularity of social tagging systems has demonstrated a clear need for organisation and more flexible ways of querying the user contributed content. This work presents FLOR, a folksonomy enrichment algorithm, which exploits a variety of knowledge sources to apply structure on the user tagspaces. In addition, a query mechanism is presented demonstrating how the enriched folksonomies structures can be interrogated by transforming the user keyword queries on folksonomies to formal queries on semantic structures. The first prototype of the FLOR enrichment algorithm and a first instance of the query mechanism have been implemented and a demonstration is available online¹.

1 Introduction

The interaction between Web2.0 and Semantic Web has been given special attention by pioneers of both fields [2,4,5]. On the one hand, Semantic technology is expected to solve folksonomies problems such as *lack of structure, ambiguity, synonymy, basic level variation, syntactical variation* that may impede folksonomy search either by returning few results but mainly, by not supporting meaningful or representative result presentation. On the other hand, the socially derived tagspaces and their emerging semantics are claimed to potentially provide valuable information for overcoming certain impediments of the Semantic Web such as slow evolution of ontologies. The efforts to combine folksonomies and the Semantic Web have followed two main lines of research, statistical methods based on co-occurrence and explicit application of semantics on tags.

FLOR's novelty mainly lies on its entirely automated nature. FLOR selects relevant knowledge on the fly without pre-selection and user interference and automatically enriches the tags with all the appropriate semantic information available. In addition to the FLOR enrichment algorithm, we present a first approach on interrogating the semantically enriched folksonomies to test the Semantic Web usefulness in this context.

¹ <http://flor.kmi.open.ac.uk>