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Folksonomies : indexing and retrieval in Web 2.0

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One of the defining principles of Web 2.0 when it first emerged was that the collective intelligence of users should be harnessed in order to enrich services for that user community (O'Reilly, 2005). This so-called 'network effect' principle remains as central to the Web 2.0 thesis then as it does five years on (O'Reilly and Battelle, 2009). Folksonomies, or collaborative tagging systems, have become the epitome of the network effect; using collective intelligence to organise and retrieve information on the Web. In *Folksonomies: indexing and retrieval in Web 2.0*, author Isabella Peters explores the use of folksonomies in 'collaborative information services', a catch-all term used by Peters to encompass the heterogeneous nature of the Web 2.0 services that use tagging systems. The stated purpose of *Folksonomies* is to provide a degree of insight into folksonomy applications, as well as discuss their strengths, weaknesses and how their problems can be ameliorated by applying recognised information retrieval models and formal knowledge representation methods.

The book comprises four extraordinarily detailed chapters. Chapter one ('Collaborative Information Services') provides a systematic description of collaborative information services. In it Peters explores the varied information retrieval and tagging functionality which these services offer. Such a holistic definition enables discussion of the tagging approaches adopted by social bookmarking services, e-commerce websites, music and video sharing services, photo sharing services, social networking websites, as well as digital libraries and commercial information services, to mention but a few. Peters supports this discussion admirably with numerous interface screen dumps, model diagrams and reference to the literature. In fact, where appropriate, relevant research is reviewed in detail and contextualised with information retrieval research published prior to the emergence of Web 2.0.

Since the understanding of folksonomies in information retrieval requires an awareness of formal approaches to knowledge representation, chapter two ('Basic terms in knowledge representation and information retrieval') introduces knowledge organisation systems (KOS). A variety of KOS are discussed, their purpose, their overlapping conventions and their use in indexing. This links to sub-sections pertaining to information retrieval theory (e.g. recall and precision) and models of information retrieval (e.g. vector space model, probabilistic model, etc.). Indeed, from this perspective, *Folksonomies* provides a comprehensive summary of all of the aforementioned, all bolstered by an impressive use of the literature (both old and new) such that it could rival any number of dedicated entry level texts. Notwithstanding readers' comprehension of knowledge representation and information retrieval to better understand folksonomies, this chapter is essential for the final chapter ('Information retrieval with folksonomies') which explores the use these techniques to improve the efficacy of tagging systems. These areas for improvement are essentially outlined by Peters in chapter three ('Knowledge representation in Web 2.0: Folksonomies'). It is in this chapter

that Peters describes the role of tag recommender systems, tag distributions, users' tagging behaviour, 'tag gardening', as well as the advantages and disadvantages of folksonomies generally.

Isabella Peters is a researcher and lecturer in the Department of Information Science at Heinrich-Heine-University, Düsseldorf. Her research interests include knowledge organisation, information retrieval and Web 2.0. She has worked extensively in folksonomy research, with numerous published and technical outputs available (e.g. tagCare, 2009). Peters is therefore well versed in the theoretical and technical aspects of collaborative information services, and she puts this knowledge to good use, particularly in chapter four where her 'tag gardening' research (Dittman et al., 2009) and work on 'Power Tags' (Peters and Stock, 2010) are proposed as potential solutions to common folksonomy weaknesses. It also enables her to point meaningfully to areas of future folksonomy research and development.

Folksonomies is a strong publication on many levels. It is engaging to read, detailed and avoids the dryness commonly encountered in monographs of this type. Some credit should therefore go to Paul Becker, who has assisted in the English translation. The numerous interface screen dumps, model diagrams, graphs, charts, tables and mathematical formulae cannot go unmentioned either and are well selected to support the reader. However, it is the breadth and depth of literature that is referenced which is perhaps most astounding. It is generally acknowledged that research within the areas of tagging and folksonomies has been limited; yet, Peters manages to unearth articles, conference proceedings and research papers which most active researchers will never have encountered. This is supplemented and contextualised by a large body of literature emanating from information retrieval, information seeking behaviour, KOS and so forth, all of which is continually used to assist in our understanding of folksonomies and their retrieval potential. *Folksonomies* is therefore a monograph which discusses folksonomies holistically, rather than in isolation – a common criticism of some tagging research. In addition, this vast corpus of referenced literature is given added value by the inclusion of an index of names; a useful reference source, particularly for those interested in literature chaining. As if further reasons to purchase were required, *Folksonomies* is well edited, free of errors, and is an immaculately typeset and aesthetically pleasing monograph.

Folksonomies: indexing and retrieval in Web 2.0 is essential reading for those involved in folksonomy related research, or the design or implementation of collaborative information systems. Although the book covers introductory topics pertaining to information retrieval and KOS, *Folksonomies* is perhaps too advanced for undergraduate students but is suited to postgraduates, researchers and academics within the overlapping disciplines of information and computer science, library science and Human-Computer Interaction (HCI).

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