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# Digital Libraries: Social Media and Community Networks

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E-mail: tjcna@ntu.edu.sg

George Buchanan  
City University London  
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E-mail: george.buchanan.1@city.ac.uk

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# Preface

## Digital Libraries: A Conceptualization

Since its birth in the early 1990s, the field of digital libraries (DL) has evolved and changed its focus and contour from digital repositories to dynamic spaces for user engagement. The DL field has developed and matured significantly since the early successes of the National Science Foundation (NSF), U.S. digital library programs – Digital Library Initiative-1 (DLI-1) and Digital Library Initiative-2 (DLI-2) ([http://www.nsf.gov/news/special\\_reports/cyber/digitallibraries.jsp](http://www.nsf.gov/news/special_reports/cyber/digitallibraries.jsp)). The first six major projects funded by the NSF set in motion the popular conceptions of digital libraries. The success stories of the first decade of DL research, include the “Google” which is a spin-off of the research projects at the Stanford University database group, one of the six DLI-1 projects. Some believe that these six projects—though exciting and very successful, were essentially experiments, and did not really resemble libraries. At the end of the first decade of the domain, there were still concerns about the differing disciplinary perspectives on DL and developing a comprehensive definition that encapsulates the richness of the differing perspectives was felt and led to the DELOS manifesto (2007), which laid the framework for a more comprehensive envisioning of a Digital Library as a tool at the centre of intellectual activity having no logical, conceptual, physical, temporal, or personal borders or barriers on information (<http://www.dlib.org/dlib/march07/castelli/03castelli.html>).

Over the years, the notion of DL has moved from a content-centric system that simply organizes and provides access to particular collections of data and information, to a person-centric system that aims to provide interesting, novel, personalized experiences to users. This new vision of digital library corresponds to the notion of dynamic information spaces inhabited by connected communities and bound by best practices of user interactions and experiences.

## Social Media and Community Networks

One of the challenges that digital libraries faced since inception is the oft-asked question “if we build it, will they come?” “The big challenge is to provide a platform for engagement and conversation” says Bob Schrier and according to him the challenge is much more than at a regular brick-and-mortar library, where one is naturally engaged because you’re engaged with the space. In the digital world, it is different and more difficult, especially when compared with Google, Facebook, and other information spaces. (<http://www.dlib.org/dlib/july11/schrier/07schrier.html>).

Social media offers a platform and enormous opportunities for user engagement. Since its emergence in 2004, social media has become not just a rage but

also an integral part of our daily lives and professional activities. Organizations—academic, government, and corporates, are increasingly veering towards social media for not only reaching out to but also to engage with their customers and other stakeholders. Libraries are no exceptions and libraries across the world are using social media to promote services, highlight resources, integrate access, and to listen to the voices of their users. Libraries—the traditional agencies for building local communities of practice, are finding new ways to build virtual communities with the help of the social media and its tools.

The power of the social media—if deployed strategically and tactically, will help digital libraries to move beyond collections and information retrieval systems to be the ultimate democratic information spaces built on the principles of co-creation and crowdsourcing. Social media for building digital libraries is not just a leap of faith or a paradigm change, but essentially a broader epistemological shift.

## The ICADL Series

Following its birth in the mid-1990s, the digital library movement has spread and spawned three significant and vibrant international conferences series—the Joint Conference on Digital Libraries (JCDL, <http://www.jcdl.org>) in the US, the European Conference on Digital Libraries, now renamed the Theory and Practice of Digital Libraries (TPDL, <http://www.tpd1.eu/>), and the International Conference on Asian Digital Libraries (ICADL, <http://www.icadl.org>). The three conferences help create stimulating and collegial forums for reporting significant digital library research and development activities.

ICADL 2013 is the fifteenth in the series of conference series which began in 1998, rotating among the Asia-Pacific countries like Hong Kong, Taiwan, Korea, India, Singapore, Malaysia, China, Thailand, Japan, Vietnam, Indonesia, and Australia and has become one of the premier meetings in digital libraries.

ICADL 2013 received a good response for its call for papers on the theme of “Social Media and Community Networks” from across different countries of the world. True to its origins and characteristics, the papers were authored by a multidisciplinary group of academics and experts. The topics covered by the papers included areas such as ontologies to mining social networks to document classification. We had a total of eighty seven submissions and after the due process of refereeing, fifteen full papers, six short papers, and ten poster presentations have been accepted.

We are happy to present to you this volume comprising of the thirty-one papers, which are essentially contributions of a total of one hundred and one authors.

December 2013

Shalini R. Urs  
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## **Abstracts of Keynote**

# From Crowd-Sourcing to Concept Mining

Ian H. Witten

University of Waikato, New Zealand  
ihw@cs.waikato.ac.nz

**Abstract.** The technology of crowd-sourced collaborative editing is gradually shifting the curation of our society's knowledge treasury from academia (who, at least in Europe, seized control from the Church several hundred years ago) to the public sphere – a development that was foreshadowed by the American philosopher CS Pierce 150 years ago.

Enormous repositories of interlinked knowledge in the form of text, epitomized by Wikipedia, constitute comprehensive knowledge bases that promise to revolutionize our techniques for automatic understanding of documents. Researchers in artificial intelligence have long yearned for large, general-purpose, common sense knowledge bases, but they want them to be highly structured, typically as formal ontologies. Can a casual hyperlinking structure (as exemplified by Wikipedia) be used to support better natural language processing?

The answer is yes. This talk will explain how it is possible to automatically produce a semantic representation of any document in terms of the concepts contained in a hyperlinked textual knowledge repository. The process involves associating phrases in the document with concepts in the repository, disambiguating them with respect to the context in which they appear, and selecting a focused set of pertinent concepts that accurately represents the document's content.

Applications are legion, wherever textual documents are processed. They include text search, index term selection, keyphrase extraction, document similarity measures, document clustering and classification, and the production of back-of-the-book indexes.

# Digital Library: The National Library Board of Singapore's Experience

Ping Wah Chan <sup>1</sup> and Lek Choh Ngian <sup>2</sup>

<sup>1</sup>Assistant Chief Executive, Technology and Innovation

<sup>2</sup>Deputy Chief Executive, National Library, Archives and Collections  
National Library Board, Singapore

{Pingwah,Lekchoh@nlb.gov.sg}

**Abstract.** The National Library Board (NLB) of Singapore has been providing an online access to its digital resources for nearly 20 years now. Since it became a statutory board in 1995, efforts were intensified to increase the richness and extend the reach of its digital content and services. The first few years were focused on bringing access to internet to its users.

Starting in the early 2000, earnest efforts were made to create more digital content to bring the NLB resources to its users in a more intuitive and convenient manner. One of the first databases created was called Singapore Infopedia which comprises curated articles written by librarians, based on frequently asked questions received on Singapore. Over the years, the NLB learnt valuable lessons in curating and packaging useful content and putting them out in microsites for easier search and find through Internet search engines, itself a learning journey.

The past 5 years saw concerted efforts in digitising valuable Singapore content for digital access, 24 by 7, and using social media to reach out to users who may not come to its physical libraries. In total, some 30 newspapers in the various languages were digitised and complete runs of these were put out to users for online use, from all over the world.

Three years ago, the NLB started a national project called the Singapore Memory Project (SMP) to collect personal memories of anyone who had experience with Singapore to contribute to the library's heritage collection. To date, some one million personal memories have been collected. These complement the documentary heritage materials that the NLB has developed over the years. Social media was used in a big way to publicise the SMP and also to create a buzz, to attract more contributions.

These efforts have brought the NLB results which have been very encouraging, spurring the board to do more to use digital platforms and social media to reach communities beyond its physical libraries, and to build physical and virtual communities to create greater value for its stakeholders.

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