

# Metadata for Meeting Global Challenges

2012 Proceedings of the International Conference on Dublin Core and Metadata Applications

Part of Knowledge Technology Week 2012

Proceedings Edited by: Schubert Shou Boon Foo Nanyang Technological University, Singapore Hans Overbeek Ministry of the Interior and Kingdom Relations, The Netherlands

*Published by:* Dublin Core Metadata Initiative



Host: MIMOS Berhad

Kuching, Sarawak, Malaysia 3-7 September 2012

۲

which permits use, sharing, adaptation.

ISSN: 1939-1366 (Online)





### © DCMI 2012

Copyright for individual articles is retained by the authors with first publication rights granted to DCMI for publication in these electronic proceedings. By virtue of their appearance in this open access publication, articles are free to be used with proper attribution of the author for educational and other non-commercial purposes. Other uses may require the permission of the authors.



## **DC**PAPERS





I am pleased to welcome all participants to *DC-2012*, the twelfth *International Conference on Dublin Core and Metadata Applications*. The DCMI community gathers in Kuching, Sarawak, Malaysia for its annual conference along with conferences of our colleagues working in artificial intelligence and multi-agent systems. Our DCMI annual meeting has always represented the cross-domain interests of researchers and practitioners working to enhance the world of information systems in the private and public sectors through the sharing of innovations in metadata design and best practices. The annual meeting has always offered DCMI participants the opportunity to look beyond the individual silos in which they work to discover and explore the common threads that excite, trouble and unite different discourse and practice communities. With these collocated meetings of *DC-2012*, *PRICAI-2012*, and *PRIMA-2012* here at *Knowledge Technology Week 2012*, the DCMI community has a splendid opportunity to extend its collaborative activities and to enjoy the company and intellectual traditions of new colleagues in different communities of research and practice.

The program and conversations at DC-2012 touch on all three of DCMI's current work themes—*Vocabulary Mapping* as exemplified in its work mapping the Dublin Core properties to schema.org, *Metadata Patterns* as exemplified in its work on revisions to the Dublin Core Abstract Model (DCAM), and *Vocabulary Preservation* as exemplified in the DCMI/foaf initiative to work toward scalable means of guaranteeing the long life and utility of our languages of description.

The 2012 annual meeting begins with two, full-day days pre-conference tutorials introducing participants to metadata for the Semantic Web and application profile and ontology design. The three days of conference meld plenary sessions of the three conferences punctuated by six keynote speaker sessions that provide for a coming together of all delegates. The tea breaks, lunches and conference dinner also provide venues for intermingling of delegates of DC-2012, PRICAI-2012 and PRIMA-2012.

This year's Program Committee, chaired by Schubert Shou Boon Foo and Hans Overbeek, provides us with a peer-reviewed program of full-length papers, project reports and posters that touch on a wide array of topics of interest to researchers and practitioners across the metadata ecology from cultural heritage to scientific data and from economics to Palm Leaf Manuscripts.

Given the excitement and the synergy of the collocated conferences at *Knowledge Technology Week 2012* here in Kuching, Sarawak, Malaysia, I hope that all participants experience an interesting and useful event and return to their various discourse and practice communities with new ideas and insights.

Stuart Sutton DC-2012 Conference Committee Chair Managing Director, Dublin Core Metadata Initiative







#### **ORGANIZING COMMITTEE**

Conference Committee Chair Stuart A. Sutton, Dublin Core Metadata Initiative (DCMI), United States

#### **Program Committee Chairs**

Schubert Shou Boon Foo, Nanyang Technological University, Singapore Hans Overbeek, Ministry of the Interior and Kingdom Relations, The Netherlands

> Outreach Committee Chair Eric Childress, OCLC Research, United States

Local Organizing Committee Chair Dickson Lukose, MIMOS Berhad, Malaysia

#### **DCMI Ex Officio**

Thomas Baker, Dublin Core Metadata Initiative (DCMI), United States Diane Ileana Hillmann, Dublin Core Metadata Initiative (DCMI), United States Raju Buddharaju, Consultant to the National Library of Singapore, Singapore

#### **Program Committee**

Leif Andresen, Danish Agency for Libraries and Media, Denmark Thomas Baker, Dublin Core Metadata Initiative (DCMI), United States Ana Alice Baptista, Universidade do Minho, Portugal Ceri Binding, Hypermedia Research Unit, University of Glamorgan, United Kingdom Uldis Bojars, National Library of Latvia, Latvia Michael Robert Bolam, University of Pittsburgh, United States Dan Brickley, Vrije Universiteit Amsterdam Joseph A. Busch, Taxonomy Strategies LLC, United States Allyson Carlyle, Information School, University of Washington Eric Childress, OCLC Research, United States Marie-Claude Côté, Treasury Board Secretariat of Canada, Canada Karen Coyle, Consultant, United States Michael D. Crandall, University of Washington, United States Jacques Ducloy, University of Lorraine, France Gordon Dunsire, Independent Consultant, United Kingdom Kai Eckert, Mannheim University Library, Germany Schubert Shou Boon Foo, Nanyang Technological University, Singapore Kevin Ford, Library of Congress, United States Muriel Foulonneau, Tudor Research Centre, Luxembourg S.B. Ghosh, UGC Visiting Professor of Library and Information Science, India Anne Gilliland, Department of Information Studies, UCLA, United States Carol Jean Godby, OCLC, United States Jane Greenberg, University of North Carolina, Chapel Hill, United States Corey A. Harper, New York University Bernhard Haslhofer, Cornell University Information Science, United States Diane Ileana Hillmann, Dublin Core Metadata Initiative (DCMI), United States Gail M. Hodge, Information International Assoc., United States Eero Hyvönen, Aalto University and University of Helsinki, Finland Antoine Isaac, Europeana & Vrije Universiteit Amsterdam, Netherlands Masahide Kanzaki, Keio University Xenon Limited Partners, Japan Tomi Kauppinen, University of Muenster, Germany Johannes Keizer, Food and Agriculture Organization of the United Nations (FAO), Italy Christopher S.G. Khoo, Nanyang Technological University, Singapore Dean Blackmar Krafft, Cornell University Library, United States Michael Lauruhn, Elsevier, United States Wei Liu, Shanghai Library, China



# • **DC**PAPERS



Akira Maeda, Ritsumeikan University, Japan Marcia A. Mardis, Florida State University, United States Filiberto Felipe Martinez-Arellano, Bibliotecológicas Universidad Nacional Autónoma de México. Mexico Philipp Mayr, GESIS - Leibniz Institute for the Social Sciences, Germany Alistair Miles, University of Oxford, United Kingdom Steven J. Miller, University of Wisconsin-Milwaukee, United States Akira Miyazawa, National Institute of Informatics, Japan Peter E. Murray, LYRASIS, United States Jin-Cheon Na, Nanyang Technological University Liddy Nevile, University of Tsukuba/La Trobe University Johan Oomen, Netherlands Institute for Sound and Vision, Netherlands Hans Overbeek, Ministry of the Interior and Kingdom Relations. The Netherlands Jung-ran Park, Drexel University, United States Oknam Park, Hannam University, Republic of Korea, Korea, Republic Of Cristina Pattuelli, Pratt Institute, United States Susanna Peruginelli, Freelance Library Consultant Vivien Petras, Humboldt-Universität zu Berlin, Germany Jon Phipps, Metadata Management Associates, United States Jian Qin, Syracuse University, United States KS Raghavan, DRTC, Indian Statistical Institute, India Jenn Riley, Carolina Digital Library & Archives, University of North Carolina at Chapel Hill, **United States** Stefanie Ruehle, SUB Goettingen, Germany Bernhard Schandl, Gnowsis.com, Austria Jodi Schneider, DERI, National University of Ireland, Ireland Ryan Shaw, University of North Carolina at Chapel Hill, United States Ross Singer, Talis, United Kingdom Aida Slavic, UDC Consortium, United Kingdom Shigeo Sugimoto, University of Tsukuba, Japan Stuart A. Sutton, Dublin Core Metadata Initiative (DCMI), United States Lars G. Svensson, Deutsche Nationalbibliothek, Germany Ahmed Taha, United Arab Emirates University (UAEU), United Arab Emirates Hideaki Takeda, National Institute of Informatics (NII), Japan Joseph T. Tennis, University of Washington, United States Douglas Tudhope, University of Glamorgan, United Kingdom Seth van Hooland, Université Libre de Bruxelles, Belgium Annelies van Nispen, Europeana, Netherlands Paul Walk, UKOLN, University of Bath, United Kingdom Mei-Ling Wang, Graduate Institute of Library, Information and Archival Studies Andrew C. Wilson, Queensland State Archives, Australia Mary S. Woodley, CSU Northridge, United States Jeff Young, OCLC Research, United States Marcia Lei Zeng, Kent State University, United States

### Local Organizing Committee (MIMOS Berhad, Malaysia)

Norbaitiah Ambiah Rokiah Bidin Farouq H. Hamed Aziza Mamadolimova Khalil Ben Mohamed Kow Weng Onn Arun Anand Sadanandan Benjamin Chu Min Xian Tan Sieow Yeek, Fadzly Zahari



This article is licensed under a **Creative Commons Attribution 4.9 International License** which permits use, sharing, adaptation, distribution and reproduction in any medium or forn as long as you give appropriate credit to the original author(s) and cite the source.





### PROCEEDINGS

i	Introduction
ii	Organizing Committee
	Session 1: Linked Open Data
1-11	Norbaitiah Ambiah & Dickson Lukose: Enriching Webpages with Semantic Information
12-22	Joachim Neubert: Linked Data Based Library Web Services for Economics
23-32	Lucas Francisco da Matta Vegi, Jugurta Lisboa-Filho & Joep Crompvoets: A Machine-Processable Dublin Core Application Profile for Analysis Patterns to Provide Linked Data
	Session 2: Trust
33-37	Yves Jaques, Stefano Anibaldi, Fabrizio Celli, Imma Subirats, Armando Stellato & Johannes Keizer: <i>Proof and Trust in the OpenAGRIS Implementation</i>
38-45	Joseph T. Tennis & Corinne Rogers: Authenticity Metadata and the IPAM: Progress toward the InterPARES Application Profile
	Session 3: Scientific Data
46-55	Thomas Bosch, Richard Cyganiak, Joachim Wackerow & Benjamin Zapilko: Leveraging the DDI Model for Linked Statistical Data in the Social, Behavioural, and Economic Sciences
56-61	Andias Wira-Alam, Dimitar Dimitrov & Woldgang Zenk-Möltgen: Extending Basic Dublin Core Elements for an Open Data Archive
62-71	Jian Qin, Alex Ball & Jane Greenberg: <i>Functional and Architectural Requirements</i> for Metadata: Supporting Discovery and Management of Scientific Data
	Session 4: Transformation
72-79	Maja Žumer, Marcia Lei Zeng & Marjorie MK Hlava: A Domain Model for Describing and Accessing KOS Resources—Report of the Development of a KOS Dublin Core Application Profile
80-89	Tsunagu Honma, Mitsuharu Nagamori & Shigeo Sugimoto: A Model to Support Interpretation of Embedded Metadata without Formal Schema by Linking a Metadata Instance to DCMI Description Set Profiles
90-94	Ruben Mendes, José Borbinha & Hugo Manguinhas: Extracting Output Schemas from XSLT Stylesheets and Their Possible Applications
	Session 5: Cultural Heritage
95-105	Lampang Manmart, Nisachol Chamnongsri, Vilas Wuwongse & Shigeo Sugimoto: Metadata Development for Palm Leaf Manuscripts in Thailand
106-115	Anne Gilliland & Sue McKemmish: <i>Recordkeeping Metadata, the Archival</i> Multiverse, and Societal Grand Challenges
	Posters
116-118	Witsapat Chaichuay, Lampang Manmart, Vilas Wuwongse & Nisachol Chamnongsri: Conceptual Framework of Metadata Schema Development for Digitized Inscriptions Collection Management
119-121	Renata G. Curty & Jian Qin: Bringing It to the Surface: Investigating Metadata Practices to Improve Electronic Preprints Visibility
122-123	Jin Ha Lee, Joseph T. Tennis & Rachel Ivy Clarke: Video Game Metadata: A Project Report

