Go to Contents

Indian Statistical Institute Platinum Jubilee Conference Series

International Conference on Semantic Web & Digital Libraries

ICSD 2007

21-23 February, 2007

Edited by

A.R.D. Prasad
Devika P. Madalli

Documentation Research & Training Centre,
Indian Statistical Institute, Bangalore, INDIA

Volume Editors

A.R.D. Prasad
Documentation Research & Training Centre
Indian Statistical Institute,
8th Mile, Mysore Road, Bangalore – 560059
Karnataka, India
Email: ard@drtc.isibang.ac.in

Devika P. Madalli
Documentation Research & Training Centre
Indian Statistical Institute,
8th Mile, Mysore Road, Bangalore – 560059
Karnataka, India
Email: devika@drtc.isibang.ac.in

Editorial Board

A. Vagiswari (Indian Institute of Astrophysics, Bangalore, India)
Achim Osswald (IIS, University of Applied Sciences, Cologne, Germany)
Amba Sanjeevi (CLRI (Retd.), Chennai, India)
Christina Birdie (Indian Institute of Astrophysics, Bangalore, India)
David F. Kohl (Emeritus, University of Cincinnati, Cincinnati)
Dimple Patel (MGNIRSA, Hyderabad, India)
K.S. Raghavan (DRTC, Indian Statistical Institute, Bangalore, India)
Renu Seth (Goethe Institute, Max Mueller Bhawan, New Delhi, India)
Sneha Tripathi (Banaras Hindu University, Varanasi, India)
Sunita Barve (National Centre for Radio Astrophysics, Pune, India)
Usha Mujoo Munshi (Indian Statistical Institute, Kolkata, India)

Preface

Web technology in the past decade has seen many a development, however as it evolved too fast, it makes one wonders whether it took off on the right lines and in a coordinated fashion. The HTML language was designed more as a formatting language and meant to make the display of the content visually attractive. Unfortunately, it gives little information about the content of the web page. With the advent of XML, it is possible to incorporate information about the content in the form of metadata, which is basically a librarian's tool. The Library and Information Science field has a long history of handling voluminous information and the basic tools of information retrieval have been cataloguing and classification. Cataloguing (metadata) describes information embedded in a document whether printed or digital and classification (ontology) establishes the relations between documents. If we wish to organize information on the web for providing various web based information services, it goes without saying that we require both metadata and ontology. The semantic web has presented many tools like Resource Description Framework (RDF), Web Ontology Language (OWL). These tools can be enriched with the variable data and content which library professionals have developed in the form of cataloguing schemes like AACR2, MARCs, authority files (personal, institutional, organizational etc.) in the case of metadata; and classification schedules, thesauri in the case of ontology. However, it is not the simple transformation of librarians' tools to the web technology alone that enables the provision of web based information services. The developments in the area of Artificial Intelligence like inference engines, mining techniques like data and text mining could be well utilized to make semantic web technology more robust. Thus far, information on the web is meant for human consumption and the basic question is whether we can make the information on the web machine consumable. In other words, if computers are provided with semantic knowledge of the information, it should be possible to generate highly customized and personalized information services. However, automatic text processing of the information on the web is still a long way to go; hence the meaning has to be provided by humans in a structured format using metadata or ontology.

The Digital Libraries whether institutional repositories or discipline based repositories are seen as an outcome of Open Access to Information (OAI) movement which was instrumental in the emergence of Open Access Journals. Open Source Software has provided excellent opportunities for publishing on the Web. To ensure interoperability and long term preservation, Open Standards are evolving in various facets like format of the web documents (JPEG, MPEG etc.), metadata (Dublin Core, MARC21), harvesting protocols

(OAI-PMH) and even simple encoding standards like (UNICODE). We at Documentation Research and Training Centre, Indian Statistical Institute, term it as *Open Mantra* with the motto "use open source software with open standards to establish Open Access Repositories and Journals in order to facilitate Open Access to Information".

The natural course of digital libraries is towards semantic web. The content of digital repositories whether it be books, or articles or even e-learning modules are to be related and presented to the machine to be interpreted. Already there have been some projects like Simile, Longwell etc. which augment digital libraries with semantic web technology. We believe the ICSD-2007 is a step towards the convergence of Library and Information Science, Digital Libraries and Semantic Web. We also hope that ICSD-2007 will provide the platform for sharing of knowledge and experience among the active research groups across the globe.

February, 2007

A.R.D. Prasad
Devika P. Madalli

Table of Contents

Semantic Web and Ontology

A novel Textual Encoding paradigm based on Semantic Web tools and semantics…….. 1
G. Tummarello, C. Morbidoni, F. Kepler, F. Piazzaand P. Puliti

The Concepts of Semantic Heterogeneity and Ontology of the Semantic Web as a Background of the German Science Portals vascoda and sowiport……. 13
Jürgen Krause

A Semi-automatic Ontology Development Approach for Web Data Extraction…… 25
Bahram Amini and Hassan Abolhassani

Ontology-Driven Information Systems: Challenges and Requirements……... 35
Burcu Yildiz and Silvia Miksch

Motivating Ontology-Driven Information Extraction……. 45
Burcu Yildiz and Silvia Miksch

OILSW: A New System for Ontology Instance Learning in Semantic Web……. 54
Sima Soltani and Ahmad Abdollahzadeh Barforoush

Ontology-based navigation of bibliographic metadata: example of the Food, Nutrition and Agriculture Journal……. 64
Margherita Sini, Gauri Salokhe, Christopher Pardy, Janice Albert, Johannes Keizer and Stephen Katz

Design and Development of Geospatial Ontologies……... 77
Manoj Paul

ScienceTreks: an Autonomous Digital Library System……. 89
Alexander Ivanyukovich, Maurizio Marchese and Fausto Giunchiglia

National Libraries and the Semantic Web: Requirements and Applications…… 101
Lars G. Svensson

An SKOS Core approach to implementing an M2M terminology mapping server…… 109
George Macgregor, Anu Joseph and Dennis Nicholson

Expressing Faceted Subject Indexing in SKOS/RDF…….. 121
Nabonita Guha and ARD Prasad

Achieve Dynamic Integration and Runtime Process Optimization using Semantic SOA……..... 133
Bhavin Raichura and Shaurabh Bharti

Semantic Web service infrastructure for e-Governance……. 144
Biswanath Dutta

Image retrieval system using high-level semantics……. 154
V.P. Subramanyam Rallabandi

UML for Conceptual Web…… 167
Aparajita Suman

Pantoto: a model for managing communities in the context of Semantic Web…….. 172
Suzan Uskudarli and T.B. Dinesh

Dewey Decimal Classification Scheme For Developing Ontology of Semantic Web……... 183
N. Parvathamma

Semantic Web Domain Knowledge Representation Using Software Engineering Modeling Technique……... 188
Minal Bhise

Semantic Binding of Classical and Digital Library Systems……... 189
Thaddeus S, Jeganathan A and Leema Gracy T.

Role of Semantic Web in the Changing Context of Digital Environment…… 190
Subarna Kumar Das

Semantics, Ontologies and Information Systems in Education: Concerns and Proposals…….. 191
M. Chandrashekara and K.R. Mulla

Digital Libraries and Institutional Repositories

Supporting a nationwide Open Access Infrastructure using repository certification - The German -Experience ……. 192
Susanne Dobratz, Peter Schirmbacher and Frank Scholze

The role of scholarly publishing in digital libraries…… 205
T.D. Webb and Bin Zhang

Conceptual challenges for the evaluation of digital repositories with multiple access options: A case study…… 215
Lydia Bauer, Josef Herget and Sonja Hierl

Evaluation of Digital Libraries: a case study…….. 229
Anthony Jose

File formats in digital preservation……. 239
Sunita Barve

Development of ETD at IITK Library using DSpace: Practical Exposures and Experiences…….. 249
R. Mishra, S. K. Vijaianand, Noufal P. P. and Gaurav Shukla

Institutional Repositories for Knowledge Management in Academic and Research Institutions……. 260
M.G. Sreekumar, T. Sunitha, P. Sreejaya, R. Biju, Joshy Kuriakose and Prajeeb Kalathil

Institutional Repository at National Aerospace Laboratories: A Case Study…… 274
Poornima Narayana, Jayashree S. and Indrani V.

Scholarly communication in a digital world: The role of the digital repository at the Raman Research Institute……. 285
Girija Srinivasan, Y.M. Patil and Jacob Rajan

MuDil: Multimedia Digital Library using WinIsis and GenIsisWeb….. 295
Sainul Abideen P.

Vascoda.de and the System of the German Virtual Subject Libraries… 304
Ralf Depping

E-Science related Information Services in the Context of Digital Libraries…… 315
Achim Osswald

Digital Libraries and Science Indicators: How Digital Science Influences Scientific Evaluation……... 326
Rafael Ball

Technical Knowhow : An Essential issue in Digital Services……. 340
S. Gayathri Devi, Mallinath Kumbar and C.U. Navalgund

Long Term Digital Preservation……... 350
Syeda Majeed Muneer

Development of Classical Tamil Digital Library: CIIL experience……. 351
B.A. Sharada and Manju Naika

Towards an Institutional Knowledge Repository at IGCAR…… 352
E. Soundararajan, C. Jayakumar, JVM. Joseph and M. Somasekharan

Digital repositories: concepts and issues…….. 353
Devendra S. Gobbur

Digital Library: Processes, Services, Challenges and Opportunities…... 354
Sharad Kumar Sonker and K.L.Mahawar

Digital Collection Building: A case study…… 355
Ashalatha Laxminarsaiah and Iqbalahmad U Rajgoli

E-Repository, Information Resources and Resource Sharing : A Model for Plantation Crops Research Scientists…….. 356
Govind Joshi

Designing digital architecture with intelligent building for information access at the Tuberculosis Research Centre, Chennai…….. 357
R. Rathinasabapati

Watermarking based Content Security and Multimedia Indexing in Digital Libraries…….. 358
M. Madhavi Latha, G. Kesavan pillai and K. Anitha Sheela

Digital Information Services: A Boon for the Present and Future Generations……. 359
T.M. Moly

Principles for Designing a Digital Library……. 360
Umesh M. and Satish M.V.

Changing role of library professionals in the digital environment……. 361
Shaista Muqueem Khan

Digital Libraries: Reaching out to people with special Reference to India…… 362
Prabha Sharma

Digital World – Obstructions and Solutions…….. 363
Lata Suresh, I.P. Arora and R.K. Sharma

Changing Roles of Library Professionals in the Knowledge Society… 364
Kamani Perera

Information needs assessment in digital environment…… 365
R.V. Prasad, Digvijay Singh, V. Pavan Kumar, Shiva Praksah and K.N. Jha

Multilingual Data Representation and Retrieval

Cross-Lingual Document Alignment From A Comparable Bilingual Corpus…… 366
Prasenjit Majumder, Samaresh Maity, Mandar Mitra, Swapan Kumar Parui and Kalyankumar Datta

Digital Libraries in Indian Languages: Some Provocative Thoughts……. 372
Aditya Tripathi and Sneha Tripathi

Designing Bengali Script based Digital Library through the Application of Open Standards and Open Source Software Publication…….. 381
Parthasarathi Mukhopadhyay

Information Retrieval in Indian Languages: A Case Study of Telugu Language……. 397
Dimple Patel and Devika P. Madalli

Metadata and Retrieval in Digital Libraries

Metadata Overview: Standards and Interoperability…….. 405
Smitha Ramachandran and Gayatri Doctor

E-learning Metadata : a comparison between LOM, SCORM and DC …… 417
Renu Seth

Mapping Metadata Standards……. 429
Ashwini Vaishnav and Shashank S. Sonwane

Federation of Metadata Registries…….. 438
Giridhar Manepalli

The core concept of metadata for digital information resources with special reference to Dublin Core…… 450
Mrinal Kanti Mondal and Sibsankar Jana

Interoperability Issues and OAI-PMH

An OAI-based approach to build and maintain union catalogue of OPACs…… 451
Francis Jayakanth, Sharada B. and Filbert Minj

The use of OAI protocol and its impact in digital libraries: a case study in Spain and Latin America…….. 459
Fernanda Peset, Antonia Ferrer, Imma Subirats and Adolfo Muñoz

A Comparative Study of the Search and Retrieval Features of OAI Harvesting Services ……... 472
Indrani V. and Thulasi K.

Knowledge Organization and Information Retrieval

The Future of Libraries in the Work of S.R. Ranganathan……. 483
Frederick J. Friend

Online Bilingual Thesaurus for Subjects in the Humanities: A Case Study…… 489
A. Neelameghan and K.S. Raghavan

Online Subject Trees for organizing the digital and print information…… 506
Rajeev K. R.

From Simpler to Simplest in Knowledge Organization: An Experience with Social Bookmarking…… 510
Rupesh Kumar A. and Lalitha Aswath

Data Mining Technology in Library Education at Chicago State University: Student Assessment in LiveText Software for Tracking and Teaching Data Mining……. 519
Gabriel Gomez

Evaluation of Health Information on the Web…… 529
Sathi Marath, Michael Shepherd, Sander van Zanten, Jack Duffy and Carolyn Watters

Content Creation, Analysis and Development in Web: Guidelines, Strategies and Techniques……... 539
Samir Kumar Jalal

Fast web page categorization without the web page……... 550
M. Indra Devi and K. Selvakuberan

User Centric Web Search Using Ontology……. 551
Vinoth Govindarajan, Vinoth Chandar and S. Thamarai Selvi

Multilingual Search engine: Implementation using UNL……... 552
Jalindar Baban Karande

Data Expert System: an Expert System for the Database with Idea of New Generation Language…….. 553
Pramila Dangwal

Content Management for Digital Delivery of Agricultural Information: Redefining need of libraries in the context of digitization of theses and research reports…… 554
A. T. Francis, C.K. Sushama Devi and C. Abdul Razak

A Generalized Approach to Content Creation using Knowledge Base Systems……. 555
K. S. Chudamani and H. C. Nagarathna

SharePoint Portal 2003: An effective tool for Content Management Systems…… 556
Basavaraj M. Pujar and Sinto Antony

User interface design and development: the role of open source systems……. 557
C. Jayakumar, E. Soundararajan, J.V.M. Joseph, V. Rajendran and M. Somasekharan

Management of Digital Libraries: Challenges and Opportunities Redefining the Contemporary Information Professional's Role…….. 558
Raymond Wafula Ongus, T. D. Kemparaju, Constantine Matoke Nyamboga, and M. Veerabasavaiah

Open Access to Information

Copyright Ownership to Historical Contents in the Open Access Repository (OAR) – Case Study of Indian Institute of Astrophysics (IIA) Repository……... 559
A. Vagiswari and Christina Birdie

Open Access: What Scientists Think? A survey of researcher attitudes toward Open Access……. 568
Swapan Deoghuria and Satyabrata Roy

Towards an architecture for open archive networks in Agricultural Sciences and Technology……. 578
Imma Subirats, Irene Onyancha, Gauri Salokhe and Johannes Keizer

vascoda.de and the system of the German virtual subject libraries

Ralf Depping

University- and City-Library of Cologne, Germany
depping@ub.uni-koeln.de

Abstract. vascoda.de is a German internet portal for everyone looking for scientific and scholarly information. It offers user-friendly access to reliable information and full texts from an extremely wide range of different subject areas. vascoda.de is based on a system of virtual subject libraries like, for example, econbiz.de, the virtual library for economics and business studies. These virtual libraries deliver the content being presented in vascoda.de and they also offer additional services and content not being part of vascoda.de.

Back to Contents

Keywords: Germany, Vascoda, EconBiz, Virtual Libraries

1 The national distributed library plan in Germany

Germany is a federal country. Most academic and scholarly institutions like universities and academic libraries are in the responsibility of the German states. Of course Germany also has a national library. But the main collection of this German National Library consists of deposit copies from all publications published in Germany, which are supplied free of charge by commercial and non-commercial publishers. The German National Library collects the foreign literature only to a certain extent (German-language publications, translations into other languages of German-language works and foreign-language publications about Germany).

For this reason, the German Research Foundation (DFG / Deutsche Forschungsgemeinschaft) [1] has developed a national distributed library plan: there are 23 scientific libraries (university libraries and state libraries) and some special libraries who have the task to collect the highly specialized research literature in foreign languages and to deliver this literature via inter-library-loan and document-delivery-systems like SUBITO to the reader [2]. The aim is to collect all relevant research literature worldwide so that every researcher in Germany has access to all the literature he needs for his research. The University- and City-Library of Cologne for example has special collections in sociology and business administration and management, which

ARD Prasad & Devika P. Madalli (Eds.): ICSD-2007, pp.304-314, 2007

are funded by the German Research Foundation. The national distributed library plan was developed after World War II. Of course the scope of this system has been the printed material. Additional information about the German national distributed library plan offers WEBIS [3].

2 The system of the German virtual subject libraries

Since 1999 the German Research Foundation has begun to expand the system of the national distributed library plan to electronic information resources. Academic researchers often know the important websites for their specific subjects. But it is very hard to keep track of all the information that is available in the internet. There is a need for orientation, harmonization, and the possibility of simultaneous searches to enable researchers to find important quality-controlled information quickly.

The libraries with special collections have the task to develop virtual subject libraries. Actually there are more than 30 virtual libraries in different disciplines like business and economics, social sciences, physics, history, law and so on. All virtual subject libraries have some elements in common:

- A subject guide of Internet resources is a clearly organised, up-to-date compilation of selected and quality-controlled information sources. Short descriptions characterise contents and services of each resource.
- A meta-search-engine or search-engine technology offers a simultaneous search in different databases, library catalogues and other information resources.
- The search for information should lead directly to the desired document to speed up the process of information retrieval. So the third element which every virtual subject library should include is an availability check offering the user different options like e.g. “view directly”, document delivery, interlibrary loan and pay-per-view options, depending on the licence situation and the kind of material that is being ordered (e.g. electronic full-text or printed book etc.).

3 EconBiz, the virtual library of economics and business sciences

EconBiz [4] was developed by the German National Library of Economics in Kiel [5] (responsible for economics) and the University and City Library of Cologne [6] (responsible for management and business administration). Through the website the user finds high-quality internet-resources, library catalogues, full-text-databases and a number of services like a calendar of events, a helpdesk and also an online reference option.

The subject guide with more than 17.000 internet resources contains the description of about 4.500 web-pages of institutions, 5.500 homepages of researchers and 4.500 full-texts.

The high quality subject portal contains a lot of internet resources from the deep web. All of these internet resources were quality-checked and intellectually described. EconBiz has a link-checker to make sure that there are no inactive links. In addition to that, the content of every link is controlled every few months. It is possible to search and to browse in this database.

EconBiz also provides a meta search engine which enables users to search more than six million title records form databases, library catalogues, the EconBiz Internet resources as well as free internet databases such as SOSIG or Research Papers in Economics(Repec). The implementation of intelligent search-engine-technology is in preparation.

Providing quality information and ensuring the long-term accessibility of documents demand a lot of time and money. In order to save resources, the workloads need to be shared. EconBiz is a virtual library which was developed by the two cooperation partners in Kiel and Cologne mentioned before. But EconBiz also has a lot of additional cooperation partners in the field of cataloguing the internet resources. Some of these cooperation partners are the Hamburg Institute for international economics, the Vienna University

for Economics and Business Administration and the Thomas J. Long Business and Economics Library at the University of California, Berkeley.

EconBiz also uses a cooperative technical infrastructure to administrate the data. There are two systems in which EconBiz is involved: Academic Linkshare, a system of metadata-sharing in the field of internet resources, and Lotse, a cooperative online tutorial.

4 Metadata sharing of internet resources by Academic Linkshare

The cataloguing of internet resources needs a special technical infrastructure. And like the cataloguing of printed material it is important not to do the work twice. For example a link to a ministry of economics could be of interest for the virtual library of economics and business, for the virtual library of politics or for the virtual library of law. With Academic Linkshare [7] a technical solution was built which makes it possible to use the same data in different virtual libraries.

In Academic Linkshare there are a lot of partners: Virtual libraries in the field of humanities and social sciences as well as other internet portals like the European Documentation Centres use this technical infrastructure.

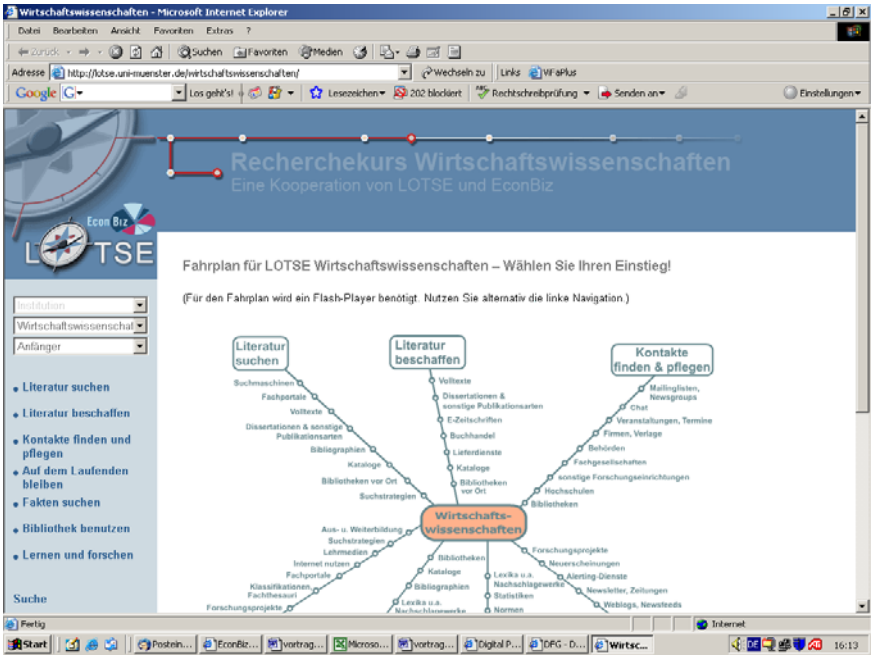
There are metadata like institutions, url, title and so on used by every partner. And there are additional metadata, for example the classification in the browsing structure or the subject headings of a special thesaurus, which are specific for every virtual library. Academic Linkshare uses an own rights management system which makes it possible that a lot of participants use the system. Not only librarians and information specialists are able to put data in the system but also the researchers themselves. Academic Linkshare uses a technical tool called VIFA Plus. This tool can be installed for example by a researcher. With this tool he could provide an internet link to the database with only two clicks. VIFA Plus has an automatic duplication-check and produces some metadata about the web site automatically by using the meta-tags. The researcher has the possibility to add some information. Later the data would completed by the librarians.

Academic Linkshare is hosted by the State and University Library of Hamburg. They do not only offer the technical infrastructure for cataloguing the internet resources but have an additional service called “ViFa Hosting”. So other Virtual libraries have the possibility to get a complete web-page with all functionalities they need including the hosting . The web-page of Academic Linkshare itself has not the task to offer the end-user a direct interdisciplinary access to the internet resources being catalogued in the system. Academic Linkshare gives only a background-infrastructure – the presentation of the internet resources can be found in the participating Virtual Libraries.

5 The cooperative online tutorial Lotse

Lotse [8] means Library Online Tour and Self-Paced Education. In Lotse different libraries and virtual libraries work together to build up a common online tutorial. The user of Lotse can choose between different disciplines and locations. Then he can get a lot of information about, for example, how to get information in his discipline, how to publish and how to communicate with other researchers.

The webpage of Lotse is designed like a plan of an underground train. The user can use Lotse step by step for learning systematically or he can go directly to one part of Lotse which is of special interest for him.

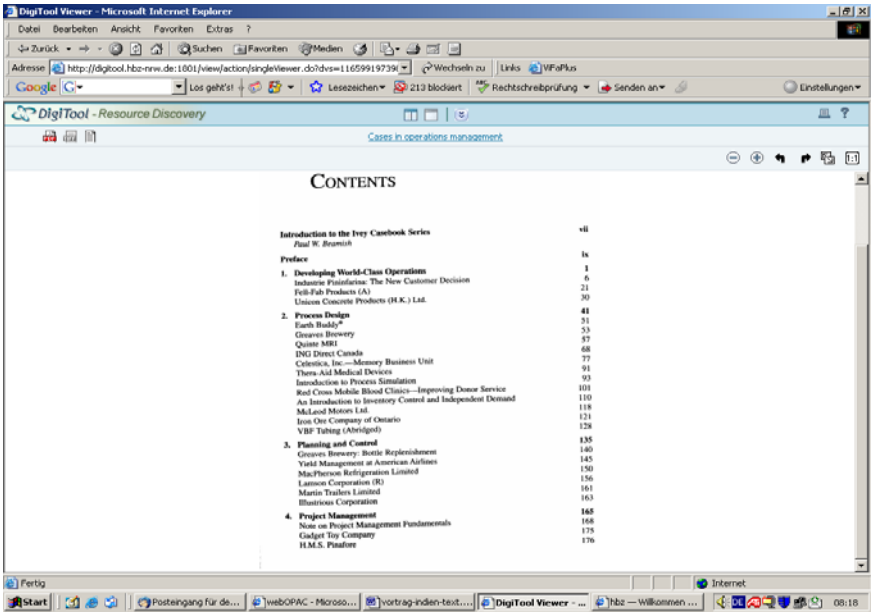


The librarians who work together in Lotse write some texts which are useful for all disciplines and all locations only once. Other parts of Lotse which are different for every discipline or for every library are written individually.

6 Catalogue enrichment by scanning tables of contents

In 2005 the project “Catalogue enrichment” has started in cooperation with the HBZ (North Rhine-Westphalian Online Utility and Library Service Center in Cologne) [9]. In the first step, 180.000 tables of contents of monographs in

the social sciences (the current titles of the special collection in sociology, management and business administration at the University- and City-Library of Cologne) and medicine (the current titles of the German National Library of Medicine in Cologne) [10] were scanned in only five months. Since 2006 there are three other university libraries also involved in this project. All these five libraries are scanning the tables of contents of every new book in these libraries since 2006.



The data are integrated in the local catalogues of the libraries (not only the libraries which are involved in this project but also other libraries which have the books in their catalogues), in the Virtual Subject Libraries and vascoda.de as well as the union catalogue of the libraries of North-Rhine-Westphalia. There is a link to the image of the table of contents, and its terms are searchable in the catalogue.

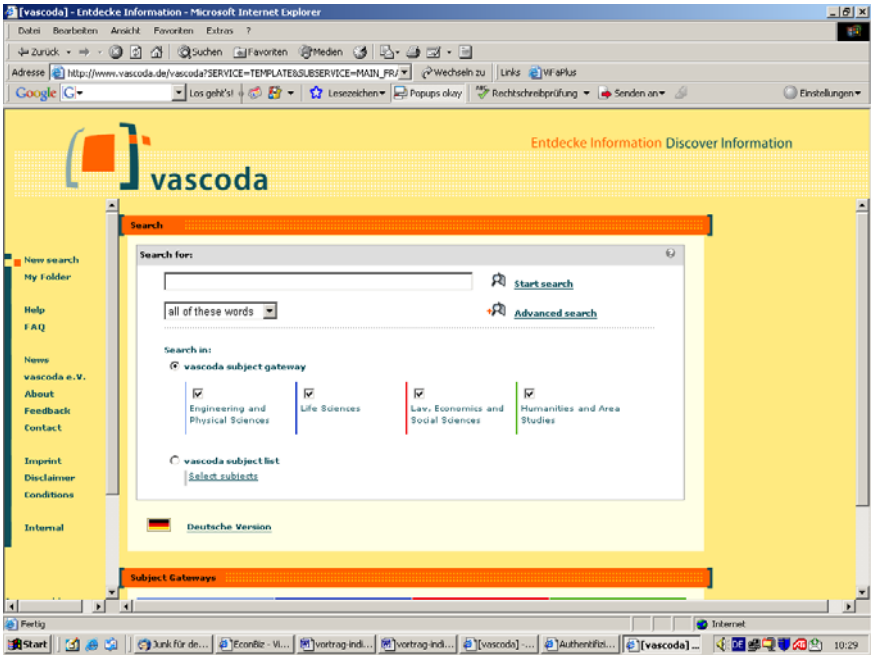
7 The German Information Alliances

Simultaneous with the development of the Virtual Subject Libraries the German Federal Ministry of Education and Research has funded the development of some Information Alliances which are quite similar to the Virtual Subject Libraries. These Information Alliances are cooperative projects between libraries who are part of the national distributed library plan and database producers.

Actually there are three Information Alliances: MedPilot for medicine [11], GetInfo [12] for technology and sciences and infoconnex [13] for sociology, psychology and education. In cooperation with publishing houses the Information Alliances try to combine the metadata from the database producers – especially from journal articles – with the direct access to the literature by a pay-per-view-option. There is also the possibility to get access to the literature via the document-delivery-services of the participating libraries.

8 vascoda.de the interdisciplinary internet portal for scientific and scholarly information

The system of the German virtual subject libraries and the German Information Alliances delivers a great range of high quality internet portals for the different disciplines. And of course in Germany there are also union catalogues and a central journal database with a huge amount of bibliographic data. All these portals and institutions are involved in vascoda.de [14] to offer a central access point for interdisciplinary and subject specific searches.

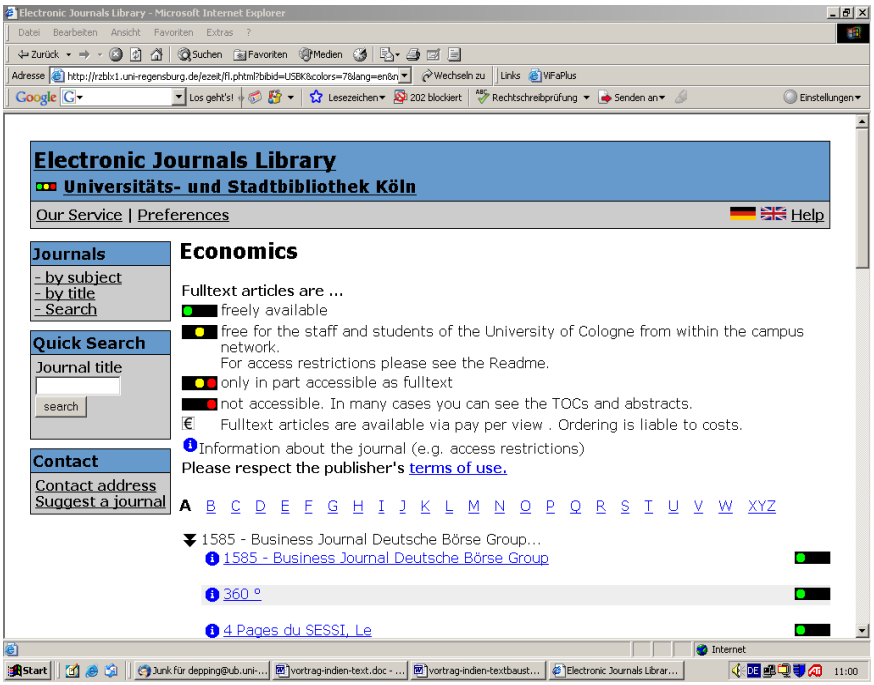


vascoda.de is a German internet portal for everyone looking for scientific and scholarly information. It offers user-friendly access to reliable information and full texts from an extremely wide range of different subject areas. Starting with one standard user interface, you can choose either a subject-specific or an interdisciplinary search. Easy to use navigation leads to high quality, specialized subject-specific portals. vascoda.de includes all types of documents, born-digital as well as digitised and print materials can be obtained either free of charge or through pay-per-view options. vascoda.de gives access to resources from the deep web which are not visible to internet search engines. vascoda.de is made possible thanks to joint funding from the Federal Ministry of Education and Research and the German Research Foundation. Vascoda.de is hosted by the HBZ (North Rhine-Westphalian Online Utility and Library Service Center in Cologne) [15].

vascoda.de uses a hybrid of meta-search and search technology. In the long run, search engine-technology will become more and more important. The implementation of intelligent search-engine-technology has improved the vascoda.de service in many ways. It makes the service faster and gives more search and service options to the user. The search-engine can provide different ranking and sorting options instantly. With dynamic drill downs it is possible to reduce the result-set of a search by a great range of different categories like subject headings, year, author and so on. Linguistic features assist users in their search. vascoda.de actually has no interdisciplinary browsing access. It will be one of the next steps of vascoda.de to implement such a browsing with DDC. For this purpose concordances between the subject –specific classification schemes and DDC are in preparation.

In many cases, direct access to electronic journal articles is possible. For articles from electronic journals, the Electronic Journals Library (EZB) [16] holds the licence information. It offers a comprehensive service for checking local licence situations. The EZB architecture is widely used in Germany, Austria, Switzerland and some other European countries and also by the Library of Congress in Washington.

The EZB works with traffic lights which indicate the accessibility of the text. Green lights mean that the article is from a open-access web-journal; yellow means that the respective journal is not generally a free journal but that the users' institution has licensed it, so that the user can access the text directly and free of charge; red means that the user does not have the license to access it. So, if the lights are green or yellow, the user can go ahead and read the full-text.



vascoda is connected to the EZB via Open URL-technology, so that a user of vascoda can get the information on licences and availability through the EZB. The EZB leads the user to the full-text, via two or three clicks, or in many cases already directly. vascoda.de is also linked with local detection systems and document delivery services so that searching for and getting literature is easy and fast.

Besides, a nationwide system of authentication, authorization and digital rights management will be developed. [17] Based on the Shibboleth technology [18] a single-sign-on-solution will make it possible that every user gets easy access to every electronic resource which is licensed by his own institution.

Most of the virtual subject libraries and information alliances which are integrated in vascoda.de have additional services and content being not part of vascoda.de. And of course they offer search and browsing strategies and thesauri which are specific for the disciplines. The interdisciplinary search of vascoda.de does not make the virtual subject libraries useless but offers an interdisciplinary search and leads the user with very specific interests to the relevant subject portal. By selecting one of the four subject gateways (Humanities and Area Studies, Economics and Social Sciences, Life Sciences,

Engineering and Physical Sciences) the user will receive an overview of all information resources offered within this subject area and which are covered by vascoda partners at present.

Detailed collection level descriptions give a good impression about every portal and every database which is searchable by vascoda.de. With these descriptions the content, size and subject scope of every single integrated information resource is transparent for the user. So the user can decide himself which information resource is relevant for him.

vascoda.de went online 2003 but is still "work in progress". Actually the functionalities of vascoda.de are not perfect. And there is a lot of content that still has to be integrated in vascoda.de. But putting such a huge amount of heterogeneous German institutions and information resources together and, last but not least, to harmonize and standardize services in one portal is a really good step to a German Digital Library for one-stop-shop-access to academic and scholarly information.

9 National Licenses for digital publications

In 2004 the German Research Foundation has started a new program to improve access to digital publications by national licenses. [19] With a grant sum of more than € 45 million during the years 2004 to 2006 the researchers, scientists and students in Germany get free online access to the databases and digital periodical archives of major international publishers.

The licenses are for usage of the licensed material without restriction of concurrent use and without any temporal limitation. Most of the licensed material still is on the servers of the providers, but the virtual subject libraries have the rights for hosting the licensed material locally on their own server. So step by step the electronic resources licensed by national licenses will migrate to the servers of the virtual subject libraries and will be indexed by the search engine of vascoda.de. This will be an important step to realize one easy and direct point of access to academic and scholarly information in Germany.

The national licenses being involved in this program include some bibliographic and mostly full-text databases. At the moment there are no subscriptions of national licenses for ongoing material. There are collections of e-books or digitalized material like "Early English books online" as well as archives of e-journals like "The Times Digital Archive 1785 – 1900" or "Elsevier Journal Backfiles on ScienceDirect 1934-1994". The libraries who are involved in this project now discuss with the providers and publishing houses new models of licensing to include also ongoing journals in the program.

References

[1] German Research Foundation. Retrieved from http://www.dfg.de
[2] Subito: Documents from Libraries Society. Retrieved from http://www.subito-doc.de
[3] WEBIS: Web and Bibliotheks Informations System. Retrieved from http://webis.sub.uni-hamburg.de
[4] EconBiz: the Virtual Library for Economics and Business Studies. Retrieved from http://www.econbiz.de
[5] sZBW - German National Library of Economics: Leibniz Information Centre for Economics. Retrieved from http://www.zbw.eu
[6] City Library of Cologne. Retrieved from http://www.ub.uni-koeln.de
[7] Academic LinkShare. Retrieved from http://www.academiclinkshare.de
[8] LOTSE: Library Online Tour and Self-paced Education. Retrieved from http://lotse.uni-muenster.de
[9] HBZ: North Rhine-Westphalian Online Utility and Library Service Center in Cologne. Retrieved from http://www.hbz-nrw.de
[10] German National Library of Medicine. Retrieved from http://www.zbmed.de/home.html?lang=en
[11] MEDPILOT.DE. Retrieved from http://www.medpilot.de
[12] GetInfo: Specialist Information on Science and Technology. Retrieved from http://www.getinfo-doc.info
[13] Infoconnex: an Interdisciplinary Service for Science and Practice. Retrieved from http://www.infoconnex.de
[14] vascoda: Discover Information. Retrieved from http://www.vascoda.de
[15] HBZ: North Rhine-Westphalian Online Utility and Library Service Center in Cologne. Retrieved from http://www.hbz-nrw.de
[16] Electronic Journals Library. Retrieved from http://rzblx1.uniregensburg.de/ezeit/
[17] Authentication, Authorization and Digital Rights Management. Retrieved from http://aar.vascoda.de
[18] Shibboleth. Retrieved from http://shibboleth.internet2.edu/
[19] Nationallizenzen für elektronische Medien. Retrieved from http://www.nationallizenzen.de

Back to Contents