News and Reports

Editor: Jens-Erik Mai
Assistant Editors: Alexander Sigel and Elin Jacob

New column and new editors

This is the birth of a new column; the two "old" columns "ISKO News" and "Reports and Communications" have merged into one single column. It is the hope that this merger and the more general title will broaden the coverage, and bring in more reports from various areas, and also streamline the production of KO.

The "News and Report" section has an Editor and two Assistant Editors, Jens-Erik **Mai** of the Royal School of Library and Information Science, Copenhagen, Denmark (jem@db.dk) is the new Editor of the section. Elin **Jacob** of the School of Library and Information Science at Indiana University, Bloomington, USA (ejacob@indiana.edu) and Alexander **Sigel** of the Informationszentrum Socialwissenschften, Bonn, Germany (sigel@index.bonn.iz-soz.de) are the new Assistant Editors of News and Reports. We encourage submissions to the section.

Dr. Satija's dictionary

Dr. Mohinder Partap **Satija**, now back to India, visited Peter **Ohly** and Alexander **Sigel** of German ISKO on September 27, 1999, to discuss details of his short-term project on a dictionary of core concepts of knowledge organization. Dr Saija worked on this project at the Maastricht MacLuhan Institute's Dahlberg Library (http://www.mmi.unimaas.nl/), Holland, with Kim **Veltman**.

ISKO mailing list

There is "life" on the ISKO mailing list. There are now more than one hundred subscribers to the list. However, it would be nice to have more subscribers and more traffic. If you have a topic you want to discuss with others in knowledge organization or some information you wish to share, simply send a mail to ISKO-L@ lists.cc.utexas.edu

If you do not already subscribe to the list, please send a mail to listproc@lists.cc.utexas.edu with "subscribe ISKO-L firstname lastname" in the body of the message.

6th Biannual Conference of ISKO's German Chapter

ISKO's German branch with around 75 members held its stimulating 6th biannual conference "Globalization and Knowledge Organization: Heterogeneity of Knowledge - Knowledge Transfer - Knowledge Views" from 23 to 25 September, 1999 in Hamburg, Germany. After the joint conference with the first International ISKO 1990 in Darmstadt, meetings with published proceedings were held in1991 and 1993 in Weilburg, 1995 in Trier, and 1997 in Berlin. The venue on the 23rd was the CCH (CongressCentrum Hamburg) because of the conjoint session with the German Society for Information Science and Practice (http://www.dgd.de/) who convened to its annual conference under the nicely contrasting umbrella theme "Information and Region" (http://www.dgd.de/jahrestagung99/DGI_Tagung/information_und_region.htm). The following days took place in the former Talmud Torah School (http://www.bui.fh-hamburg.de/projekt/fb/talmud/index.html), now the location of the University of Applied Sciences of Hamburg, Library and Information Dept. (http://www.bui.fh-hamburg.de/).

The program committee, headed by **H.P. OHLY**, Social Science Information Centre (IZ) (http://www.bonn.iz-soz.de/index-e.htm), who also directed the conference, further consisted of **G. BUDIN, H. CZAP, B. ENDRES-NIGGEMEYER, W. GÖDERT, P. JAENECKE, G. RAHMSTORF, H. NOHR, S. PRIBBENOW, W. SCHMITZ-ESSER, A. SIGEL,** H. **STRÄTER,** and **W. UMSTÄTTER**. Local organization lay in the hands of **W. SCHMITZ-ESSER**, Information Systems Consultancy. In addition to the supporting institutions already named, our thanks extends to the Fritz Thyssen Stiftung, Cologne (http://www.itz-thyssen-stiftung.de/2_7.html).

Forty-eight papers by 53 authors were presented by 44 speakers. Most authors came from Germany, except 3 from Austria, 2 from the Netherlands and

one from Switzerland. Around 130 participants were attracted by the conference In addition to the 90 registered participants, approximately 40 persons took part in the joint session with DGI. As usual for truly interdisciplinary ISKO meetings, the participants came from a broad variety of backgrounds and specialties, as can be judged from their contributions and institutional affiliations. It is important that ISKO maintains this diversity in scope in all its facets! Obviously, the knowledge management track raised strong participation from industry (companies in the area of Standard Business Software, Competitive Business Intelligence, Consultancy Information Services, Search Engines, Knowledge Management, and Market and Media Monitoring - some of them even listed at the stock exchange). We recommend that ISKO position itself more pro-actively in these areas. In addition to the rather classical library, information, documentation and communication science departments, university affiliates came from areas like: Art, Aesthetics, Culture & Design; Artificial Intelligence/Knowledge-Based Systems; general Computer Science and various applied directions; Economy and Management Science; Education Sciences; Electronic Publishing & Media Research; applied Language Sciences; Mathematics & Logic; Philosophy; Psychology; Science Journalism; Science Theory; Science & Technology/Technology Assessment; Social Sciences; Telecommunications; Terminology, etc. However, student participation could have been higher, and, thus, student membership should be strengthened in the German ISKO.

In opening the conference, "Globalization and Knowledge Organization", **H.P. OHLY**, asked "What constitutes the actuality of knowledge organization today?" and "What does 'Globalization' mean today?" and introduced the choice of the main theme: The interdependence of the globalization megatrend and our field of knowledge organization (http://www2.hawaii.edu/~fredr/glotexts.htm provides a worthwhile compilation of globalization concepts in a summary of a panel at the World Congress of the International Sociological Association, 1998, by F. Riggs and H. Theune). As internetworking and the internationalization of information challenge knowledge organization even more, we have to rethink the issues of integration, interpretation and representation of knowledge for contexts in which distributed resources are created, provided and used on a global scale. Current examples include: Knowledge management in multi-national companies, the thematic ordering of content in Internet clearinghouses, the design of ontologies that are open for conceptualizations that diverge in their viewpoints by field or cultural background, the assignment of metadata to Internet sources, multilinguality, and exchange formats. While, of course, not every contribution made its link to this red thread explicit, participants interpreted the theme not only as a transcultural and transdisciplinary challenge to terminological and classificatory approaches, but were also concerned with questions around the foundations of (successful) knowledge transfer in the new media and emerging communication patterns. All contributions included more or fewer applications of new technologies, be they data processing, Internet usage, or multimedia, and most of the speakers relied on computer support for their presentations. New to the German ISKO conferences was the inclusion of topics like content analysis in the social sciences, media design, and virtual communities.

The conference mainly consisted of 19 sections: 2 opening plenary sessions, 3 invited plenary talks, 6 special presentations in parallel (12 single sessions), the first afternoon with two technical excursions, and the concluding panel. In addition, an introductory one hour tutorial on XML was given by **M. SCHULZ**, while a planned tutorial on the bibliometic software DATAVIEW (by **H.P. OHLY**) could not be given due to time restrictions.

Because preliminary versions of all contributions were made available online in advance (http://www.bonn.iz-soz.de/wiss-org/beitraege/), which extraordinarily helped the exchange and communication process, in this report we will mainly concentrate on the plenary talks and the prevailing trends. Everyone is cordially invited to contact the authors directly and discuss their papers on our mailing list wiss-org. Details on how to submit or subscribe can be found in the FAQ (http://www.isko.org/wiss-org.faq.html). The proceedings volume is currently being prepared by **OHLY, SIGEL** and **RAHMSTORF** and will be published by Ergon Verlag, Würzburg (http://www.ergon-verlag.de), as volume 6 of "Fortschritte in der Wissensorganisation" (ISSN 0942-0347).

H.F. SPINNER, Karlsruhe (http://www.uni-karlsruhe.de/~philosophie/spinner.html), reported on his earlier project on knowledge orders and his ongoing project on knowledge kinds under the title "Orders of knowledge" (Gegenständliche, prozedurale und konstitutionelle Ordnungen des Wissens: Wissensarten, Wissenssorten, Wissensregime). Many problems of knowledge organization of today are not (yet) solved. It is necessary to define more precisely which understanding of knowledge is the object of the corresponding considerations.

The talk "Cognitive ontology of spacial concepts" by **C. HABEL**, Hamburg (http://www.informatik.uni-

hamburg.de/WSV/hp/habel-english.html), was concerned with the problems and accuracy with which concepts have to be characterized axiomatically in order to be adequately processable by computers in diverse contexts (http://www.informatik.uni-hamburg.de/WSV/Axiomatik-english.html).

P.E. VAN DER VET, Enschede (http://wwwis.cs.utwente.nl:8080/~vet/), gave a "promise paper" on "Content Engineering, or: Computing beyond the upper OSI layer", sketching application scenarios in which a new generation of computer tools will facilitate information processes and illustrating the key features of these tools with examples from his (and his colleagues') earlier work, e.g. CONDORCET. Key concepts are ontologies, domain-informed NLP, virtual reality, and integration techniques. He argued that the funding problem to develop the needed resources shall be considered similar to an infrastructure investment in the natural sciences.

Due to space reasons, for the other sessions, we limit ourselves to listing only the authors with the translated titles of their papers (accompanied with more informative comments where indicated). All presentations were in German, except the one by **P.E. VAN DER VET**. Note that in contrast to the original presentation order, contributions have been intentionally reclassified here:

Foundations of knowledge organization: Information and knowledge:

- C. LEHNER: A holistic theory for the information sciences
- P. JAENECKE: Is "knowledge" a definable concept? [Comes to promising further steps by contrasting the concept structures of motion (in physics) and knowledge. Deems the search for a general definition of knowledge as unsolvable in principle]
- G. RAHMSTORF: Scientography [Science of Knowledge, Szientographie]: An attempt for clarification [Proposed neologism for an emerging field. Tries to find useful clues for the design of applications and knowledge systems by following the question: What has the person-related subjective knowledge in common with the objective knowledge in external respresentations?]
- G. BUDIN: On the current status of knowledge / science theory [Interaction between theories of knowledge and theories of science. Discusses elements of a knowledge theory as substantial part of a science theory]
- W. LENSKI: Equality concepts for high-structured data inventories [Defines equality based on informational redundancy and sketches an operational means in order to identifiy redundant information items in cross-database searches]
- C. GALINSKI and G. BUDIN: Cross-section concepts in the genesis of new specialties [Example: risk management]

Knowledge discourse:

- C. GLAUSER: "Tyson bites Holyfield - and minutes later everyone knows it". Information flow analysis of teletexts [Computer-supported content analysis of 362,000 teletext pages; examples of striking differences between 3 telestations]
- H. KLEIN: Content analysis of information from the WWW [Methodological problems, e.g. the definition of a text unit]
- U. MATZAT: Academic communication and Internet discussion groups [IDGs]: Transfer of information or creation of new contacts? [Empirical investigation of the (non-)effects of IDGs for academic communication]
- U. LEDERBOGEN and J. TREBBE: Science on the net. Use of Internet as a source for science information. Results of an online survey [Empirical knowledge applied to the development of concepts and recommendations for science communication in and with open data networks]
- C. STEGBAUER and A. RAUSCH: The role of lurkers in mailing lists [for communication. Under which conditions do lurkers become active members, and vice versa?]
- C. ORTHMANN and L. NÄCKE: Chances of virtual social communities in the Internet for intercultural scientific discourse [The role of virtual communication for discourses lies in the provision of spaces for intercultural and less-hierarchically structured discourses. This function should e.g. be realized with online institutes]
- M. ROST: Mailing lists and scientific discourse [Statistical facts on two sociological mailing lists, and consideration of measures to make mailing lists more usable for scientific discourse].

An overall summarization of this session could be that the industrialization of science and knowledge is imminent, paired with the parodoxon that many unintended consequences of the technological developements can be noticed.

End user participation:

- W. SCHMITZ-ESSER: Thought space travelling in thesaurus structures, presented via multimedia, allow stimulation, playing, learning, and finding for everyone [Builds on a project for EXPO2000. The paper is published in Procs. DGI-

Jahrestagung, Hamburg. Frankfurt/M.: DGI, 1999, pp. 347-353]

- **B. PLUTAT**: "I would not have looked it up under that heading ..." End user participation in classifications and thesauri [Application: Citizen information system of Bremen]
- **U. SCHULZ**: End user participation in the development of a children's OPAC [Experiences from the project "Bücher-Reise", a customer catalogue for children aged 8-11 in public libraries. Methodology: Test of various methods of children participation, mainly STEPS (software technology for evolutionary, participative system development)]
- **WETTE-ROCH**: Pragmatic aspects of knowledge modelling in scientific information systems [Development of a representation for research topics that also includes the pragmatic dimensions of interests by reducing the topic description (expressed as nominal phrases) to abstract, associative structures. Application: Project LIS - mathematical logic, http://wwwagr.informatik.uni-kl.de/~wette/lis_thesaurus.html]

Knowledge networking:

- **F. STEPHAN**: Theory building as a design task [Effect of today's computer systems on the production of statements and sense context. Extension of scientific methods with design aspects]
- **S. ASMUS**: "Theory Crossover" by means of an adaptive WWW interface [Tool, based on STEPHAN's theoretical assumptions. Application: Two theories: a) Bazon Brocks "Non-normative aesthetics" b) Niklas Luhmann's "Theory of Social Systems". 170 text nodes large]
- **GOPPOLD**: Balanced F-trees: The hierarchy and histio-logy of noo-logy [Provides neologisms for a meta-science (noo-logy), related to knowledge organization, which is based on interconnection, hierarchy, and categorization. Histio-logy: Systematics of interconnection. F (Phi) stands for several other concepts relevant in noo-logy, beginning with the same letter]
- **GOPPOLD**: Hypertext as a practical method for balancing the hierarchy and histio-logy of knowledge [Application, based on the preceding paper: Hypertext technology can serve the practical requirements of knowledge organization. Requirements of efficient navigation in hypertext and implementation examples]
- **G. RAHMSTORF** and **G. BUDIN**: Workshop "Vocabulary and concept structures": Software technology for the acquisition of vocabularies and structures [Techniques and methods, as realized in the Concepto software system. Discussion of experiences and suggestions]

Knowledge structuring:

- **W. UMSTÄTTER**: Knowledge organization with the semiotic thesaurus - based on SGML resp. XML [Can the function of SGML/XML as a meta language help to provide computers with concepts for thesauri, the semiotic interface between semantic object descriptions and pragmatic concept assignment?]
- **S. DOBRATZ** and **M. SCHULZ**: Dissertations in SGML/XML: Trial of a publishing concept, exemplified with digital dissertations of the Humboldt University, Berlin
- **H. SCHOTT**: Thesaurus Social Sciences online [Features of the electronic version of the German Social Science Information Centre (IZ) thesaurus and its usage]

Knowledge diagnosis and processing:

- **M. BONITZ** and **A. SCHARNHORST**: National systems of science and the Matthew effect for countries [Exploits bibliometric indicators of research activities by country and their reception]
- **H.P. OHLY**: "State of the art" - a scientometric view [Shows which information can be drawn from bibliographic information systems, how it can be interpreted and how it interrelates to other knowledge inventories. Application: Experiences from the report "Nutrition and Society"]
- **F. BEHNAM**: Net radar: Strategic detection for global networked markets [Sketch of a qualitative approach in market research to continually detect signals concerning market potentials and exploration in electronic, networked resources. http://www.bup.de/]
- **P. AHRWEILER**: An integration approach for heterogeneous knowledge systems: Network simulation in science and technology research [Strong and loose integration mechanisms, implemented in SiSiFOS, test chances and limits of conceptual cooperation possibilities between knowledge systems. Application: Empirical issues in science and technology research]
- **H. CZAP**: Theory building with artificial neuronal networks of type MLP [multi-layer perceptron. Explicit "rule extraction" is possible under certain circumstances]

Knowledge management:

- **GROESSLER** and **A. REUTHER**: Necessity of a common knowledge basis: Case study with the

help of system archetypes [Applies Huber's work on organizational learning and Senge's system archetypes to an investigation within the multi-level customer support department of a software company. Shows consequences of neglected knowledge management within workflow feedback loops on several aggregation levels of the company. Convincing management arguments for the value of knowledge organization in business]

- **R. WASSERFUHR** and **Y. SCHUBERT**: aware-net.de: Dynamic terminological spaces for personal and cooperative knowledge management accompanying biographies [Evolutionary development of high-structured individual knowledge spaces on the basis of hypertext diaries and encyclopedic features. The spaces adapt dynamically to the user behaviour and can be synchronized with spaces of other communities]
- **H.J. KRYSMANSKI, K. TEUBENER** and **N. ZURAWSKI**: Science networking, Internet, and interface design for mass media [The EPS (European Science Information Project) developed tools and strategies to present and disseminate scientific content for mass media in new forms, e.g. by application of scientific storyboarding and science interfaces. From "broadcasting the web" to "webbing the broadcast"]
- **H. HELLWEG**: The GESIS Socio-Guide: A cooperative link management system [DB-based web environment for the usage and distributed management of WWW resources. Application: Clearinghouse for the Social Sciences]

Knowledge ontology:

- **ENDRES-NIGGEMEYER**: An ontology for bone marrow transplantation [Methodology for the development of a modular domain ontology to be used in a cognitively founded summarizing system for physicians from WWW sources. Structured, empirical procedure with user-oriented design and early testing]
- **SIGEL**: On the value of multiple and adaptive frame-based indexing, exemplified with requests in the social sciences [Proposal for domain-oriented conceptual indexing and the evolutionary formal ontologic modelling of information needs of discourse communities]
- **CARRANZA**: Employment of ontologies for mediation of information [The paper was not presented]

Didactic ontology:

- **N. MEDER**: Objects in didactic ontologies [Didactic objects are descriptions that put a knowledge module in its didactic context of teaching and learning. Presents core concepts for such descriptions and their function for learning processes]
- **G. REDEKER**: Didactic ontologies - State of the international research [First approaches for a meta data-based didactic description language]
- **C. SWERTZ**: Problems of training in the use of didactic ontologies [Identifies a twofold challenge: Topological structuring of knowledge and explicit specification of knowledge according to didactic criteria]
- **T. LEIDIG**: Technological aspects of didactic ontologies [This paper was not presented]

The excellent technical excursions led the participants to two institutions of Hamburg with links to knowledge organization, namely LEM (Labor für elektronische Medienkommunikation, Medieninformatik und Medienkunst; http://www.hfbk.uni-hamburg.de/lem/, (have a look at the projects area)) and the Museum for Ethnology (Museum für Völkerkunde; http://hamburg.de/Museum-fuer-Voelkerkunde/). At LEM, the interdisciplinary laboratory between universities, art, culture, and economy, **F. FIETZEK, M. LEHNHARDT, M. MAYER, H. OBENDORF, P. SCHEFE, T. STENDEL** and **I. THOMSEN** presented current research projects, including "iWorlds" (improvement of the human-machine interface for large data collections by spatial visualizations), "BIN - the Baltic Interface Net" (Fostering of intercultural exchange between artists and cultural institutions in the 11 countries abutting against the Baltic Sea by provision of a cooperation basis which allows to develop new forms of information, communication, and collaboration across language barriers), and "HMP3D" (a 3D interface to the digitized house in which LEM resides). In the Museum for Ethnology, we gained insights into the organization of knowledge about cultures. After interviewing the librarian on her interesting work in the charming library with its historic interior, we were introduced to challenges of knowledge organization and presentation in the conception of the "Europa" exposition during a special guided tour.

The concluding panel, chaired by **I. DAHLBERG**, stood in the tradition of the late Eric de Grolier as analytico synthetic conference summarizer (cf. P.A. Cochrane, Eric de Grolier: The analytico-synthetic summarizer, in: Int.Classif. 18(1991), No.2, 78-86), as the seven panelists **G. BUDIN, H.P. OHLY, G. RAHMSTORF, W. SCHMITZ-ESSER, U. SCHULZ, A. SIGEL, and W. UMSTÄTTER** each summarized the conference from their personal per-

spective. (The statements can be found in the archive of our German mailing list). It was felt that new media and technology open challenging and interesting areas (e.g. knowledge management) to which knowledge organization has indeed important contributions to make. In addition, stronger emphasis should be put on social science and economic issues, as we do know little about the conditions of knowledge organization and its impact on cognitive structures and the division of labour in scientific communities. **I. DAHLBERG**, after providing some statistical facts on the conference, finally gave a kind of meta-summary and suggested that it was worthwile to reflect the foundations of knowledge organization in the humanities in order to gain insight into how to approach the new problems.

Main suggestions for future meetings were: To slow down, to provide more time for interaction, discussion, mutual understanding and coherent synthesis, to make the conference and the society more attractive to young people, and to expand the presentation of applied and especially user-oriented, empirical work. This time part of the rush was caused by restrictions resulting from the experimental cooperation with DGI. While we actively strive for synergetic effects in cooperation, the net effects should be critically examined in each case.

The next conference of the German ISKO Chapter is planned for 2001. The programme will be chaired by **C. LEHNER** (http://www.uni-hildesheim.de/~chlehn/). We are happy about the fruitful exchange going on and are full of hope that it will expand our understanding of knowledge organization processes even further.

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