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Knowledge Organization and Change:

4th International ISKO Conference, Washington, DC.
The Call for Papers which went to the membership and was also made known via Internet resulted in a great number of interesting proposals for papers which are now being refereed by the members of the program committee. Authors will be notified about acceptance by Jan.31, 1996. The deadline for submission of full papers for the printed conference proceedings has been set for March 31, 1996. For further info see the back cover page of KO 95-2.

Research Seminar on Compatibility at Warsaw

A very successful meeting on the problems of *Compatibility and Integration of Order Systems* was held at Warsaw, Sept 13-15, 1995 in the beautiful conference hall of the Polish Science Foundation. It was supported by the European Community and the Foundation of German-Polish Cooperation. It attracted altogether some 60 participants from many European countries and the USA.

After a hearty welcome by Prof.W.Gogolek, President of the organizing Society for Professional Information (TIP), introductory speeches were delivered by Prof. A. Luczak, Chair of the State Committee for Scientific Research, Dr.I. Dahlberg, President of ISKO, and Prof. W. Schmitz-Esser, Chair of the Research Seminar. Dahlberg reminded that this meeting could be regarded as a silver jubilee one, as it was exactly 25 years ago, that Rasmus Mölgaard-Hansen, then the Danish Chairman of FID/CR, delivered a lecture at the Meeting of the Polish Classification Research Group, Warsaw, Oct.9, 1970 on "Compatibility and Complementarity between Indexing Languages".

The keynote address given by W. GOGOLEK surveyed the present situation of the information scene with its great capacities on the technical side and its problems on the human side.

Session 1, chaired by D. SOERGEL was to investigate the *theoretical background of the compatibility problem* in the papers by W. SCHMITZ-ESSER (DGD/KTF, Hamburg) on "Language of General Communication and Concept Compatibility", G. RIESTHUIS (Univ.of Amsterdam Library) on "Theory of Compatibility of Information Languages", and I. DAHLBERG (ISKO, Frankfurt) on "The Compatibility Guidelines, a Re-evaluation".

The afternoon session of the first day was devoted to the topic: *Thesauri Integrity - Structures and Software*. G. RIESTHUIS chaired and the following papers were presented: D. SOERGEL (Univ.of Maryland): Data Structure and Software Support for Integrated Thesauri. - M. MURASKIEWICZ, H. RYBINSKI, W. STRUK (ICIE, Warsaw): Software Problems of Merging Multilingual Thesauri. - E. CHMIELEWSKA: Compatibility of Indexing Tools in a Multi-database Environment. G. NEGRINI (CNR Roma): Towards Structural Compatibility between Concept Systems. - E. SCIBOR (INTE, WARSAW):

Some Remarks on the Establishment of Concordances between a Universal Classification System and an Inter-disciplinary Thesaurus.

The three sessions of the second day were devoted to special problems such as in *Session 3: Discipline-oriented Thesauri*, chaired by B. SOSINSKA with papers by St. HOPPE (Int.f.Medical Informatics, near Munich) on: The UMLS - a Model for Knowledge Integration in a Subject Field, S.G. DEXTRE CLARKE (CAB Int. Wallingford, UK): Integrating Thesauri in the Agricultural Sciences, C.ROULIN, (BJL Consult S.A., Brussels) Bringing Multilingual Thesauri together. A feasibility study, and D. DEGEZ-VATAIRE (Chaville, France) on Compatibility of Retrieval Languages from a Practical Viewpoint.

Session 4 was concerned with *Compatibility Issues in Library Classification*. Harald ZIMMERMANN (Univ.of Saarbrücken) talked on "Conception and Application Possibilities of Classification Concordances in an OPAC Environment", B. SOSINSKA (Inst.for Libr.and Inform.Science, Warsaw) on "The Universal Decimal Classification as an International Standard for Knowledge Organization" and J. WOZNIAK (University Library, Warsaw) on "The KABA Authority File - an Example of an Integrated Polish-French-English System of Subject Headings".

In *Session 5* on *Special Compatibility Problems,* chaired by E. SCIBOR, W. BABIK (Univ.of Krakow) spoke on "Terminology as a Level of Compatibility of Indexing Languages" and T. SAMEK (Parliament of the Czech Republic, Prague) on "Integration of the Subject Indexing Languages and Adaptation of the EUROVOC Thesaurus in the Czech Republic". As the further two authors - H. IYER (SUNY at Albany, NY) and R. UNGVARY (Natl.Library, Budapest) - could not be present, P. STANCIKOVA (CEIT, Bratislava) presented her experiences with "An International Integrated Database - Systems Linked to Multilingual Thesauri Covering the field of Environment and Agriculture".

The *6th Session* on the 3rd day was devoted to *Classification Compatibility in Databases.* Chaired by G. NEGRINI, the papers by K. SIWEK (OPI Warsaw) on "Compatibility Discrepancies between Polish and Foreign Databases" and by W. GLINSKI and M. MURASZKIEWICZ, (Inst.for Library and Inform.Sci, Warsaw Univ.) on "An Intelligent Front-end Processor for Accessing Information Systems" were discussed. Also in this session two papers were missed: I.KRAWCZAK (Warsaw) and N.V. KOLPAKOVA and N.A. SIDORENKO, (St.Petersburg) could not participate. Their time was used to discuss open problems of the seminar, leading into the final *Panel Session of Conference Chairs* on the *Recommendations for Future Tasks*.

A small group of experts had already worked during the preceding evening till late in the night and the results were discussed at this session and finalized after the closing Lunch so that they could be given to the Press soon after the event. They were sent afterwards to all ISKO members and are reprinted here at the end of ISKO News 22.

The proceedings volume with the papers accepted for

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publication is at present being prepared and should be available in December 1995. If interested, please write to Mrs. Krystana SIWEK, Polish ISKO Coordinator, Society for Professional Information, Ul. Klonowa 18, PL-00591 Warszawa, Pland. Fax: +48-22-48 88 08.   I.D.

Wissensorganisation'95
4th Annual Conference, German ISKO Chapter

The 1995 Conference took place at the University of Trier, Oct. 17-20, and was mainly devoted to the topics (1) Case Based Reasoning (CBR) and (2) Space-related Information Processing.

There are probably many in our field who so far do not know what is meant by CBR - as a good part of the participants did not know either. Thus it was welcomed that Professor H. CZAP, in his introductory paper, outlined this new concept. CBR is a collective concept for all methods and approaches aiming at computerized preparation and storage of *knowledge by experience* (case knowledge) so that it can be utilized again in later cases. In developing a CBR situation, expectations, frames, and schemes should be made visible. A case is understood as a set of properties. He showed by a number of examples, for instance in medical practice, how analoguous inferencing can be used to the advantage of patients.

In 14 Sessions the following 26 papers (all in German) were presented and discussed:

R. FUGMANN: Delinearization and structuring of texts for subject analysis and knowledge representation. - M. STOCK, K.L.KRÄMER: CD-orthopedics - multimedia knowledge representation based on a generic data model. - W.LENSKI, E.WETTE-ROCH: Terminology and knowledge representation under a pragmatic aspect. - S.CHRISTMANN: Communication and indexing in a case-based expert system. - B. LORENZ: Considering a network classification system. - O.NACKE: A simple procedure for analysis of the structure of large multidisciplinary amounts of knowledge. - B. BARTSCH-SPÖRL, S.BAKHTARI: Reuse of knowledge: Case-based reasoning from an engineering perspective. - K.-D. ALTHOFF, R. TRAPHÖNER, S. WESS: Integration of induction and case-based reasoning: The INRECA System. - I. SCHIEMANN; A. WOLTERING: Organisation of large case bases and presentation of suitable cases in the TUB-JANUS Shell. - A. VOSS: A tool system for case-based reasoning. - C.-H. COULON: Utilizing structures for CBR. - J.W. SCHAAF: Fishing and dropping.

N. MEDER: Schematisms and space as representations of structures. - S.PRIBBENOW: Spatial knowledge: on the interaction of logic and pictures. - W. BIES: Thinking in pictures: Concerning the metaphors of knowledge organization. - V. KIRCHBERG, M. STOLLE: Cognitive maps in town research - foundations and perspectives . - H. BAYER; R. BAUEREISS: The family atlas for social-spatial information. - F. HARDT, G. TASSOUKIS, H.P. OHLY: Spatial background information in bibliographic databases. - K. SALENTIN: Geodemographic approaches when sampling in a direct marketing procedure. - K. PIERAU: Development of a geographic-historical information system. - J. WÄCHTER: Data integration in open

geographic information systems. - S. KÖNIG: Development prognoses with the help of neural networks considering knowledge gained by experience. - G. BOL: Neural networks to classify errors in statistical process regulation. - H. LÖCKENHOFF: Case based teaching/learning for issue orientation and control. - P. JAENECKE: Epistemological investigations concerning CBR.

The conference was started with two tutorials: (1) *Approaches for a standardization of language-related concept systems (thesauri)*, organized by W. SCHMITZ-Esser; and (2) *Neural Networks*, organized by H. CZAP.

Conference abstracts were printed and can be had from the organizer: Prof. Dr. Dr. Hans Czap, Universität Trier, BWL-Wirtschaftsinformatik, D-54286 Trier, Germany. A proceedings volume is being prepared and should be available soon via INDEKS Verlag.

I.D.

Recommendations
of the
Research Seminar on
Compatibility and Integration of Order Systems

Organized by the
International Society for Knowledge Organization
(ISKO) and the
Society for Professional Information (TIP)
Warsaw, Poland, September 13-15, 1995

More than 60 information scientists and practicioners from 12 Western and Eastern countries gathered in a joint study conference in Warsaw from Sept.13-15, 1995 to discuss matters of key concern to facilitating access to information across national and disciplinary boundaries. The conference organizers gratefully acknowledge support from the Foundation for German-Polish Cooperation, the British Council, and the European Commission.

The experts agreed that the global information society of the 21st century will rely increasingly on an information infrastructure which must have two essential components: the global telecommunication and electronic networks epitomized by the Internet; and, underpinning it, a conceptual infrastructure reflecting the way knowledge and information are organized.

The experts further agreed on the following views and recommendations.

Statement on Needs and Policies

It was recognized that

. The development and growth of international communication and information exchange are fundamental to a well-informed Information Society.

. There is a risk of a new division of people in the world between those who are able to communicate using new systems and technologies and those who are left out.

To prevent or at least mitigate such a negative development and its implications for social and economic dispar-

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ity, and to further global understanding and European integration, the following goals and policies should be pursued:

. There is an urgent need for tools and functions that can overcome present barriers in the exchange of information between systems and that let searchers use familiar languages to access diverse information systems.

. There is a need for tools that provide insight in the structure of an information system as well as guidance and orientation. Such functions must be optional in order to preserve the user's freedom of decision in access and use of information.

. There is a need for systems that give the user a structured overview of what information is available, with descriptions that allow for the evaluation and validation of information sources.

. All people need education in understanding and using information systems. Such education should cover not only technical issues but also social and ethical issues.

Detailed Recommendations

1. Recommendations on Research, Education, and Information Exchange

1.1   Further investigations should be carried out into the principles and methodology of establishing concordances between order systems with particular attention to order systems of different structure.

1.2   Further investigations should be carried out into the benefits from and requirements for compatibility. Compatibility should not be pursued for its own sake but for specific objectives to be defined case by case. For instance, consider using existing thesauri and classification systems as a knowledge base for machine-aided interactive processing of natural language queries.

1.3   In the education of information specialists, knowledge organization (knowledge representation, classification and indexing, and terminology) must be a central concern.

1.4   International exchange on the principles of knowledge organization with particular emphasis on cross-cultural comparison of order systems should be intensified through seminars and conferences, an INTERNET news group, faculty exchange, and publications. Specifically, an international inventory of software packages and other tools for the development of maintenance of order systems and corresppondence among them should be developed.

1.5   World-wide inventories and bibliographies of order systems and integrated systems establishing correspondence among two or more order systems, including systems under development, should be continued, enhanced, and made widely accessible.

2. Recommendations on System Development and National and International Collaborative Efforts

2.1   Development of correspondence among order systems to support information exchange on national and international levels.

2.2   Long-range development of an open, multifunctional, multilingual, integrated knowledge base of concepots and terminology that preserves the integrity of the many sources on which it draws. This open system should allow many contributors and be usable by many levels of users for improved information exchange, specifically for the following purposes:

.   Tool for searching, particularly knowledge-based support for end-user searching on the Internet and other online services in multiple languages independent of the language used in each database.
.   Tool for indexing, esp. basis for collaboration for more effective use of the indexing effort.
.   Conceputal basis for knowledge-based systems.
.   Dictionary - in monolingual, bilingual, and multilingual mode - for human use.
.   Dictionary/knowledge base for automated language processing - including natural language understanding and machine translation.
.   Classification/ontology for data element standardization.
.   Source for the extraction/development of specialized order systems, dictionaries, etc., both machine-readable and printed.

Such an open knowledge base would lead to savings in development effort and a potentiation of usefulness through the assembly of rich information from many sources that complement each other, and through establishing relationships among the concepts and terms from different sources.

2.3   Development of auxiliary thesauri for general use such as thesauri for geographical names, bibliographic forms, and languages.

2.4   International cooperation in the establishment and maintenance of authority files of names of persons, organizations, etc.

2.5   Development of criteria, methodologies, tools, and software for establishing, maintaining, converting, integrating, harmonizing, restructuring and translating of monolingual and multilingual order systems such as classification systems, thesauri and other special terminologies such as dictionaries, etc., with special attention to quality control.

Warsaw - Washington, DC - Frankfurt/Main
20 September 1995

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