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Fourth International ISKO Conference, Washington, July 15-18, 1996.

Mr. Charles A. Rademaker, one of the participants, wrote to ISKO after the event: *I wish to express my sincere appreciation for the organization of the 4th International Conference of the International Society of Knowledge Organization meetings held at the Library of Congress last month. My colleagues and I were very impressed by the scope and balance of the Conference presentations. We also appreciate the courtesy extended to each one of us by you and members of the society. Although our work at the Patent and Trademark Office is directed to the classification of patents and similar intellectual property, we find library classification schemes directly pertinent. Some of the software discussed at the Conference is already in use in the Scientific Library of the Patent and Trademark Office. Needless to say, the problems we face in the organization of documentation are very similar. I am hopeful that our professional organization of classifiers, the Patent Documentation Society, can make contact with the local chapter of ISKO for further discussions of mutual interest in the coming months....."*

It was indeed a most impressive conference for all of us (some 130 colleagues) who came from 26 countries and found such a beautiful site in the Madison building of the Library of Congress and experienced such a well-organized program in just every regard. It began with the Tutorials on Monday, July 15, which were opened with a welcome and introductory remarks by *Barbara Tillett*, Library of Congress, after which the online programs of the Library of Congress Classification and the Dewey Decimal Classification were explained and demonstrated in presentations by *Rebecca Guenther* and *Julianne Beall* respectively. Also guided tours through the most beautiful Jefferson Building with its numerous paintings and statutes were foreseen on that day and we could admire the wisdom having been engraved "On these Walls". This day was concluded first in the Mumford Room with the Welcome extended to the participants by the organizer of the conference: Dr. *Sarah Thomas* and the introduction into the Anniversary Lecture and Reception from the part of the OCLC Forest Press by *Peter Paulson*. The lecture was presented by *Francis L. Miksa* on "The DDC, the Universe of Knowledge, and the Post-Modern Library" - a paper originally of some 60 pages! - only a summary could be presented and also published in the proceedings volume. Thereafter - moving down from the 6th floor to the Madison Hall, the 120th Anniversary of the Dewey Decimal Classification was celebrated with a really gorgeous dinner buffet. The following "Concluding Remarks" by Dr. *Robert Fugmann* will report on the scientific program and results of the conference mostly due to the very fine preparation and brilliant organization of the Program Chair, Prof. *Rebecca Green* who also edited the proceedings volume. But the further social highlights should also find their appreciation, so well chosen and organized by the Chair, Local Arrangements, Dr. *Jolande Goldberg* and her team. And therefore I continue:

On Tuesday evening, July 16, we were invited to the Supreme Court and listened first to the vividly presented address of Dr. *Douglas C. Bennett* (New York), Vice President of the American Council of Learned Societies on "The Internationalization of Scholarship and Scholarly Societies in the Humanities and Social Sciences", also followed by a dinner buffet with piano music accompanying our encounters in the prestigious halls and patio of this left neighbour building to the Library of Congress, seen from the Capitol. The third evening reception, after the closure on Thursday, July 18, brought us with buses to the German Embassy, where Dr. *Wolfram Schött*, the Science Counselor hosted our crowd of many more than 100 visitors! (I. Dahlberg reminded at this occasion that it had been 30 years ago when the FID Congress was in Washington 1965 and she attended her first meeting of FID/CR under the chairmanship of Rasmus Mölgaard'Hansen. Then, too, the German Embassy provided a reception, however, incomparable to this one!)

On Friday, July 19, excursions to the National Library of Medicine at Bethesda, MD and the National Agricultural Library at Beltsville, MD were arranged. At the NLM the participants received a briefing on UMLS (the Unified Medical Language System) by Dr. Alexa T. McCray, Chief, Cognitive Sciences Branch, Lister Hill Center and had a general escorted tour of the NLM. - At the NAL a most interesting program had been prepared, first with a kind of a "Second Breakfast", thereafter with an introductory speech by the Head of Indexing, Ms. *Shirley Edwards* and 3 further papers: (1) by *Holly Irving* on Development of a Computer-Assisted Indexing Tutor (CAIT), (2) by *Gretchen Kaminski* on Review and Selection of Electronic Serials, and (3) by *Lori Starr* on Thesaurus Development and Maintenance. Each participant received a folder with summaries of the papers and other informative material. How grateful we were for all this kindness!

Both tours were escorted by colleagues from the Library of Congress: the NLM tour by Ms. *Geraldine Ostrove* and the NAL tour by Ms. *Harriet Harrison*.

There was someone who said that the weather would be unbearable in Washington in July and therefore he would not come. We found it just wonderful and even refreshing in the days after the conference - a very unusual weather even for Washington people! I.Dahlberg

Concluding Remarks

by Robert Fugmann

The Goals of ISKO

When in 1989 it was decided to lay the foundations for ISKO, the development of the *conceptual* tools for knowledge organization was specified as *the* goal of ISKO. This was in contrast to all kinds of probabilistic approaches and also in contrast to those approaches which are based on the application of computer linguistics. For good reasons, information technology has been included in the scope of ISKO only as

far as technology promises to provide effective assistance to human beings. Machine *assistance*, not machine *autonomy*, in subject analysis, indexing and cataloging has always been the goal of ISKO. This conference fairly well reflects the emphasis on information *philosophy* instead of information *technology* on the part of ISKO.
Quite to this point, Saracevic (1996), in his acceptance speech for the ASIS Award of Merit, stated

„...the success of the next generation of information retrieval systems...depends on better understanding of human involvement with infomation and *not on more sophisticated technology*" (my italics).

In the light of this particular view, progress in our field might have considerably been accelerated if an important borderline had been better realized in the past. The borderline concerned here should separate what can be left to the *computer* from where the *human's work* is indispensable. Then, we would no longer so frequently be asked the question: „Information science research, where is the meat?" (Goldmann 1987).
This borderline clearly separates the *determinate* processes from the *indeterminate* ones, i.e from those with unpredictable outcome. This distinction has already been suggested, to the best of the reviewer's knowledge first by Marcia Bates (1986) and Hans Wellisch (1988). Quite simply,

an indeterminate process
defies any satisfactory programming.

During its *autonomous* work, when man is excluded from reviewing and correcting what the program has produced, the program would merely follow its instructions. But the human being is unable to lay down *in advance* the infinity of instructions which would be needed to cover each and every possible case.
Markedly *indeterminate* and *unpredictable* is, for example, the *mode* in which human beings express concepts and concept relations of their interest in natural language, using a word, a phrase, implications, paraphrases, ellipses, etc. Hence, any autonomous processing of freely phrased natural language would have to manage an *infinite* number of possible situations.
In this view, any natural language translation reveals itself as an inherently indeterminate process, and it is easy to understand why autonomous natural language translation has defied any attempt at satisfactory mechanization and will continue defying it. This statement is not refuted through the fact that *some* examples can be processed satisfactorily. They always constitute only a tiny selection of the infinity of unpredictable cases that will have to be processed in the future and for which no appropriate instructions can be held in reserve in the algorithm. Hence, these examples are only treacherously convincing. To quote an appropriate paradigm presented by *Roland Hjerppe* in his paper at the conference, basing future actions exclusively on experience (as is done more or less obviously in any algorithm) equals driving forward by using exclusively the rear mirror.

Any indexing or cataloging includes the translation step as a stage, namely the translation of the essence of the documents into an indexing language or clsssification. Hence, these processes are inherently indeterminate, too. As a consequence,

mechanizing the processes of indexing or cataloging
is an *illusionary, inherently unattainable* goal
if these processes are intended to proceed
autonomously
and to man's satisfaction,
i.e. unguided by human beings

(see also Wellisch 1992). Pursuing such a goal is a waste of the resources of manpower, time, and money.
Only approximations are possible here, and they are bound to be primitive in comparison to what the human being can accomplish here, sufficient knowledge, time, and technical assistance provided. For, in *intellectual* indexing and cataloging we do not face the problem of indeterminacy. Here, we do not have to *predict* what we will process and how we *will* have to proceed. We can, instead, decide *in hindsight* what to do with a document at the very moment we face it. Decisions such as these are always possible for the knowledgeable human being. Here, *the prediction* of what might be thought and written in future is replaced by mere *perception* and *interpretation*.
The ethical side of the continuing discussion on the possibilities of mechanization in our field comes into play when necessity and future of man's knowledgable and careful literary work is drawn into doubt, although no workable alternative of adequate quality is in reach. Such an attitude has already caused tremendous harm in the information field and is continuing to do so. Most recently, *Susanne Humphrey* (1996) has again raised this issue.

The papers of the conference (for the exact titles see the bibliographis data in KO 96-2, p.125 (0413-0461).
In his keynote address, and referring to the topic of the conference, *Ronald Hjerppe* envisions dramatic changes in the information landscape of the future. To a great deal, these changes will be determined through the capabilities and deficiencies of the Internet. If we want to avoid being drowned in an inundation of non-informative messages, more use must be made of powerful traditional tools for knowledge organization, and they must be better adapted to the ever-changing needs. Several papers of the conference are devoted to this goal.
In his invited paper, *Francis Miksa* looks back on the 120 years' history of the DDC, which is characterized by a series of fundamental changes. He envisions an enormous potential of a still further developed DDC in the age of the „post-modern library", for which he states the postulate: „*Every person his or her own library*". Obviously, this goal implies the task of teaching at least the fundamentals of classification and thesaurus construction to a large community of users. On the part of the users, this requires an increased readiness for cooperation in this subject which is so alien to most of them.
A group of papers pursues the ambitious and rewarding goal

of comprising the main universal classifications and of providing access to all of them. One single supersystem or a central switching system might serve this purpose. It would have to be compatible with all universal classifications in use at present. Here, a sound epistemological basis is necessary. It could relieve us from continually changing the structure of the individual systems. Such a comprehensive and universal knowledge base of concepts is proposed by *Dagobert Soergel* in his SEMWEB idea. It is designed to comprise the great variety of classifications, terminological data bases and dictionaries. It promises to serve a multitude of functions in one single, all-inclusive design. *Ingetraut Dahlberg's Informationl Coding Classification* is another example of such a universal approach. It has been practiced for decades in *Knowledge Organization* for the arrangement of the bibliography and the annual indexes. Another practical application of this approach is presented by *Giliola Negrini* and by the paper of *Massimo Ragucci* (presented in his absence by G. Negrini) for the field of agriculture.

Hope Olson deplores the absence of such an epistemic and sufficiently broad basis. She radically questions the roots of contemporary classifications and realizes a potential for considerable improvement. DDC is a particulary rewarding object here. Likewise, in the paper presented in the proceedings of the conference, *Roberto Poli* proposes to base information systems on a well considered ontology, here meant in its original philosophical sense. In the Internet, *Thomas Walker* also misses such a basis and specifies the corresponding serious problems. The feasibility of a „common language across the disciplines" is being investigated by *Lynne Howarth*. At least a metathesaurus and a minimal indexing for the Internet is desirable.

With regard to knowledge organization in companies, *J.P.J.M. Essers* and *J.F. Schreinemakers* observe epistemological problems and a positivistic attitude on the part of the management and, as a consequence, underutilization of existing knowledge. In part, this is due to lack of externalizing tacit, subconsciously operative knowledge existing inhouse, and also due to underestimating the conflicts in which the members of the staff may find themselves here.

Another number of papers deals with the topic of the continuous adaptation of traditional classification systems. All classification systems have been involved in the progress that knowledge has taken in all subject fields, that of information technology and information philosophy included. Here, the papers by *Eduard Sukiasyan* and *Ia McIlwaine* are highly instructive for the user and for the critical voices of classification systems. They show the problems encountered here and the multitude of views and needs that must be carefully and cautiously taken into consideration. The conflicting counterparts of innovation on the one hand and of stability on the other must always be reconciled here. Too early or too late, too drastic or too shallow, too much or too little precoordination: compromises are unavoidable here and require most careful consideration. The story is a long one, and *Gregory New* describes it in detail.

Reconstruction always involves revising the representation of relations in classifications and thesauri. Associative relations are among the topics of *Pat Molholt*, *Rebecca Green*, and of *Carol Bean*. A lot of benefit can be expected of these investigations. The reconstruction of the law section of LCC into a navigation tool for better electronic access is, among other things, described by *Jolande Goldberg*, who thus undertakes an important step into a new era for the LCC.

The reliability of indexing and classifying and, hence, the quality of the searches can considerably be improved through the use of advanced techniques of vocabulary management, for example, through the lucid and interactive display of the vocabulary hierarchies on the screen. The rich resources of DDC in its hierarchical structure, captions, index entries, and notes are being used by *Pauline Atherton Cochrane* and *Eric Johnson*. Their Visual DDC display facilitates the spontaneous interaction of the user with the search file. *Diane Vizine-Goetz* uses the capabilities of UDC and DDC classification notations to improve document accessibility in the WWW. *Victoria Francu* likewise facilitates the use of UDC in making it accessible through a thesaurus derived from it and through the keywords from the captions. A hypertext variation of keyword searching and for pursuing concept relations in vocabularies is presented in the paper by *Garcia Marco* in the proceedings. *Steven Pollitt*'s graphical interface „Highbrowse" constitutes some kind of shell with which accessibility to any well structured vocabulary can be facilitated. Approaches like these pave the way for the extended employment of classification schemes and thesauri in practice.

Karen Drabenstott also observes substantial enhancement in recall and precision values through the employment of the DDC in searching online catalogs. *Gerry McKiernan* investigates the problems which users encounter in using the WWW, and he uses the LCC for improving access. Thus, a predictable location of the resources is provided, and the cognitive load and psychological burden on the part of the searcher is lessened.

Ron Davies develops an approach to the exhaustive utilization of the entire information contained in perfectly constructed thesauri, including all types of relations, scope notes, definitions, etc. The phrasing of good queries can be facilitated on the basis of such a highly customized thesaurus.

Rebecca Guenther brings the LCC schedules into a data base with machine-readable MARC classification records. Thus, maintenance is facilitated and cataloging and classifying is rendered more accurate. A similar goal is pursued by *Julianne Beall*.

The application of advanced classification theory can also help to drastically improve the effectiveness of traditional classifications. An example is the overdue introduction of facet indicators and a move-away from enumeration, as described by *Joan Mitchell* for the DDC and by *Nancy Williamson* for the UDC in the field of medicine. Several sections in DDC and UDC have been restructured by these authors. Access to these classifications can considerably be improved this way, too, much to their effectiveness in future retrieval.

Improving usability through such a type of advanced computer assistance can eliminate much of the criticism that has been raised against classifications.

Michelle Foss compiles a „target information pool" in which an instructor classifies the expertise of the attendants of an introductory course. Depending on their proficiency in the various information fields more effective education programs can be tailored for individual groups. *Mirja Iivonen* organizes discourses in a consortium of users in order to find the optimal choice of search terms from a variety of sources. This increases the effectiveness of searches in the Internet.
Another group of papers deals with terminological issues. A sound and transparent terminology constitutes the core of any effective information system. The problems of keeping scientific terminology up to date over time and of maintaining an overview of the contemporary terminologies are treated in the paper by *Faina Citkina.* Even within an individual institution a variety of different vocabularies must be reconciled and made compatible, as is demonstrated for the World Bank in paper presented by *Diane Hopkins* and for Digital Equipment in the paper by *Philip Murray.* Here, classification serves as a device for organizing knowledge for inhouse purposes. In addition, the pragmatic value of information for problem solving in business was emphasized. *Michèle Hudon* describes how the systematic arrangement and the relational structure of a thesaurus can be used to advantage in the compilation of a terminological data base. Such a terminology-based thesaurus constitutes a valuable tool not only for searching but also for high-quality indexing.
Marcia Lei Zeng investigates the variety of different approaches to knowledge organization in medicine and encounters severe compatibility problems. Even in a specific field such as HIV, a large heterogeneity of terminology is described in a paper presented by *Mary L. Gillaspy*, and considerable effort must be undertaken to achieve an adequate quality of knowledge organization here. *Widad Mustafa Elhadi* investigates the algorithmic extraction of concept names from natural language texts in order to construct a terminological data base.
For the re-use of existing knowledge, much depends on its concise and transparent presentation. *Snunith Shoham* investigates the increasing expressiveness of the titles of documents in the course of time. There is a corresponding increase in the usefulness of titles for catalogs and for those subject indexes which are limited to an analysis of titles only.
Rebecca Green investigates the need for bibliographic description, which is looked upon as an access-point-providing document surrogates. In the electronic world, particularly in the world of the Internet, there is no decrease, but even an increase in the need for full bibliographic description.
The particularly severe problems of accessing the contents of images are investigated in the paper by *Olivia Frost*, here in a combination of classification and free text. An extensive study of the appropriateness of several classifications for image documentation and a pilot project in this field is presented by *Corinne Jörgensen. Debora Shaw* investigates the effectiveness of icons to convey meaning and to assist in providing a meaningful organization of documents.
Michiaki Iwazume et al. aim at improving access to WWW through providing a better overview of the words in which a topic of interest may have been expressed.
In the task of counteracting the chaos at present prevailing in the Internet a really golden age for indexers would be dawning, if only the public and management realized that there are experts and devices in existence that could overcome the mess or could at least drastically mitigate it.
Algorithmic natural language processing is described in a paper by *A.R.D. Prasad*, in the author's absence presented by M.A. Gopinath. The automatical indexing of expressive document titles, brought into the shape of noun phrases, is investigated. *Toshiyuki Matsuo* extracts technological information from natural language texts in the metallurgical field, and *Shaoyi He* studies the mechanized translation from Chinese into English in Medicine.

Conclusion

What does the reviewer miss among the topics of the conference? At present, we are still far distant from an optimum of intellectual work in the information field and from full exploitation of the capabilities of computer assistance. Even the most ambitious ideas content themselves with the *vocabularies* of information systems and knowledge bases and hardly include grammar, expecially the *syntax* of index languages and classifications. Only Colon and PRECIS are prominent exceptions here. However, any language which dispenses with grammar lacks the capability of clearly and effectively expressing concepts and concept relations.
The example of chemical substances shows to which extent progress can be attained through an effectively expressive index language grammar in *predictable* use. Here, 100% precision and 100% recall are quite common in retrieval, in conjunction with the particularly well developed terminology of this field.
Conceptual categories constitute the hidden backbone of any expressive and well-organized indexing language and classification. Among other things, a set of agreed-upon categories is a requirement for any well-founded indexing langnage *syntax.* Vocabulary categorization could drastically improve intellectual indexing and cataloging. But too little attention has been devoted to rigorous vocabulary categorization in the past. Here is another field where the capabilities of intellectual subject analysis are still far from being fully exploited, but some papers of the conference are promising in this respect.
For attaining the ambitious goals envisioned at the conference, still another desideratum comes to mind: Change must also take place *in the minds of the users* of information services: They must realize that

retrieving relevant information
at an adequate degree of precision and recall
requires more skill and knowledge
than merely typing a few words
that come to mind for a topic of interest
and pressing the enter button.

To make such a change come true will require significant effort on our part in user education.
In conclusion, much work has still to be done in the development of effective indexing languages, including

classification systems and thesauri, and in making them reliable and useable in an incessantly changing operational environment. Much progress can be achieved in our field in pursuing this rewarding goal.

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Report on the ISKO General Assembly 1996 held at the Mumford Hall in the Madison Building of the Library of Congress, July 17, 1996

1. Opening

The meeting was opened at 5:15 pm. Dr. I. Dahlberg, ISKO President, welcomed the members of the general Assembly and expressed her satisfaction with the response to the meeting and the conference in general.

2. Agenda

The President presented the Draft agenda and invited suggestions for additions. The assembly agreed to the Agenda without additions, reflected in the headings of this report.

3. Election of Assembly Chair and Secretary

It was proposed by the President and seconded by Joan Mitchell that Dr. *Steve Pollitt* be elected to Chair and Dr. *M.A. Gopinath* to be the Secretary of the Assembly. This was accepted by all members present.

4. The President's Progress Report

the President presented the progress that had taken place during the past two years since the last Assembly in Copenhagen, held in June 1994. The membership has increased very considerably so that it has now reached almost 600 members from 53 countries. Two international ISKO conferences were held: (1) the First European Conference on Environmental Knowledge Organisation and Information Management, in Bratislava, Slovakia, in September 1994, organised by Dr. *Pavla Stancikova*, and (2) Compatibility and Integration of Order Systems in Warsaw, Poland in September 1995, organised by the Polish co-ordinator Ms. *Krystyna Siwek* of the Polish Professional Information Society in collaboration with the ISKO General Secretariat. Both conferences produced Recommendations which have been published in Knowledge Organization , and proceedings. The proceedings from Bratislava appear as Vol. I of Knowledge Organization in Subject Areas (KOSA-1) with a Supplement. The Warsaw proceedings are still in preparation in Poland and are expected to become available in September 1996, and should be available free of charge to interested members. There were regional ISKO conferences in Rome (Dec. 1994), Moscow (May 1995), Trier, Germany (Oct. 1995), and Madrid (Nov.1995). Details of these events and about other ISKO activities can be found in ISKO News over the past two years.

5. Report of the Treasurer

The ISKO Treasurer, Dr. *Hellmut Löckenhoff*, presented the accounts which had been examined at the General Secretariat on June 22, 1996 by two auditors, Dr. *Erhard Kiel*, Göttingen, and Dipl.Math. *Manfred Bundschuh*, Köln. The members present received copies of the accounts for 1994 and 1995. The Treasurer stated that, although the expenses, e.g. for the office staff, had remained relatively low, it was felt necessary to propose an increase in membership fee, as previously discussed in Copenhagen, to safeguard future developments.

6. and 7. Discussion of Poins 4 and 5 and Approval

The President's and the Treasurer's reports were adopted on a proposal by Ms. *Joan Mitchell* and seconded by Ms. *Giliola Negrini*.

Dr. *Dahlberg* then took the opportunity to state that she had received a sign last year which had persuaded her to discontinue her term as President, in light of which Prof. *Hanne Albrechtsen*, Vice President of ISKO, was willing to undertake the role of President until new elections take place in two years time. Dr. Dahlberg will remain on the Executive Board as Vice President. The General Secretariat will move to Copenhagen.

The outgoing President also informed the meeting that INDEKS Verlag was to be sold to ERGON Verlag; Dr. *H.-J. Dietrich*, owner of this publishing house, was keen to include Knowledge Organization as a new section in his publishing program and had come to the conference in Washington to meet the people representing the field with Dr. Wacker, who will be dealing with ISKO publications from Würzburg, Germany.

Last, but not least, it was also necessarey to find a new Editor for Knowledge Organization. Discussins were in progress with Mr. *Charles Gilreath.*

Dr. *Pollitt,* reflecting the concern of the membership for the good health of Dr. Dahlberg, offered gratitude for the considerable work which had seen ISKO become firmly established. He encouraged the new President to carry on the excellent work done by Dr. Dahlberg and her team, and expressed appreciation that ISKO would still benefit from this expertise and continue to grow under the leadership of Professor Albrechtsen. Dr. *Schmitz-Esser* stated that Dr. Dahlberg had been a source and means of several achievements in the world of knowledge organization and thanked her for making an invaluable contribution. He hoped Dr. Dahlberg would be able to guide the ISKO programmes without jeopardising her health.

8. Election of Auditor and Deputy

It was proposed and accepted that the new President and the Executive Board identify qualified persons in our membership to undertake these roles, taking into account probable travel expenses.

9. Treasurer's Proposal to Raise the Membership Fee

The Treasurer suggested that the current membership fee of DM 60.- be increased by DM 20.- plus postage money. Dr. Dahlberg reminded the Assembly that East European and Third World countries would pay only a small share of this amount, as had been the practise for the past seven years. It was agreed that the new General Secretariat would determine the subscription amount in Danish Kroners and the equivalent amount in other currencies. In countries with ISKO Chapters the membership are encouraged to pay the Co-ordinator who could send the collected fees in one sum to the General Secretariat in order to minimise the cost of bank fees.

10. Propsals of the membership regarding further ISKO Activities

No propsals were forthcoming

11. Proposals for Topics, Places, and dates for Regional ISKO Conferences

Dr. *Sukiasyan* from Russia made a propsal to hold a 3rd Regional ISKO Conference in Russia on the topic "The Universe of Knowledge Organization", in May or June 1997.

12. Proposals for Topics, Places and Dates for the 5th and 6th International ISKO Conferences in the Years 1998 and 2000

It was proposed to hold the 5th ISKO Conference at Twente, the Netherlands, a week before the IFLA Annual Conference, Aug.16-20, 1998. Professor Mars, from Twente, had expressed his willingness to organise this conference. Dr. Dahlberg said that the Scientific Advisory Council, at its meeting in Washington, had proposed the topic: "Structures and Relationships in Knowledge Organization". The 6th International Conference might take place in Toronto, Canada.

The Chair concluded the meeting with thanks to the organizers and participants. The Meeting closed at 6:30 pm.

Dr. A. Steven Pollitt

4th Conference of the German ISKO Chapter, Trier, 17-20 October, 1995

This 4th Conference met at the University of Trier from October 17 to 20, 1995. Principal topics dealt with in the main sessions from October 18 to 20 were „Case Based Reasoning" and „Spatial Data Processing". The first day, Oct. 17, was devoted to two tutorials. One, under the direction of Prof. Dr. *W. Schmitz-Esser* (in collaboration with the KTF-Committee for Classification and Thesaurus Research of the DGD) dealt with *Approaches to Standardizing Natural Language Conceptual Systems and Thesauri*; in the context of which the on-going conflict between complexity and standardization was repeatedly discussed. The other tutorial under the direction of Prof. Dr. *H. Czap* under the title *Neural networks* dealt principally with the use of artificial neural networks in economics as a tool of decision-making.

Case-Based Reasoning (CBR) — the first main topic of the conference — stands for a paradigm of problem-solving founded on principles of cognitive sciencc, which, in the realm of artificial intelligence, is increasingly coming to the fore. Essentially it proposes to solve new problems by recourse to the solutions of similar problems in the past, these problems and their solutions being stored and accessed in the form of a data base. The speakers addressed themselves to the full spectrum of tasks related to organizing such knowledge: content recognition, indexing, abstracting, generalizing, modeling, classing, retrieving, extracting characteristics, up-dating, facilitating communication between the system and the user. Special attention focused naturally on the definition of the similarity linking present and past cases: „analogy", „metaphor" and „transfer" proved here to be leading ideas. Against the background of an ever increasing flood of information, the diverse advantages of CBR naturally gain in importance; some of these advantages are: processual character, adaptation to the situation, similarity to life situations, natural structures of knowledge and practice, options for pattern recognition, re-usability of knowledge, ability to use specific knowledge, experience and practiced-based knowledge, knowledge of methods and rules, structures and abstract models, high capacity for integration, proximity to the ideal of methodological pluralism, orientation towards action directing problem-solving and decision-making, openness, dialog capacity, non-restrictive „holistic" point-of-view, learning-oriented capacity for innovation and creativity. Although the perspective of many of the lecturers may have been somewhat too euphoric, the high hopes and expectations awakened tend in the long run to strengthen the profile of CBR and thus serve an important didactic purpose.

The topic *Spatial Structures of Knowledge, Graphic and Iconographic Presentation in Information Systems* was developed in collaboration with the DGD Committee on „Knowledge Processing, Artificial Intelligence and Information Science" and with the „Information Center for Social Sciences" (Bonn). The specific interest of cognitive science centers on the comparison between knowledge representation using analogical spatial structures and representation using logical propositional structures. Further on the representational function of spatial structures, the relationships between physical and cognitive space, and the problem of the cultural interpretation of space. The projects presented came mostly from the fields of social science, including among others cognitive mapping in urban research, family atlases as socio-spatial information, and spatial background information in bibliographic databases.

The conference, which throughout maintained a high level of interest and results, was excellently organized by the host Prof. H Czap and was outstanding for its trans- and interdisciplinary approaches to the problems discussed. My personal overall impression was that the discussions showed how the new approaches to knowledge organization and cognitive science serve to bring together once again the two „classical" cultures so often pited against each other, on the one side, epistemology, synthesis, intuition and hermeneutics, and on the other side logic, analysis, algorithm and formalization.

The proceedings of this conference are available from INDEKS Verlag.

Werner Bies

Dr. W. Bies, Freie Universität Berlin, Universitätsbibliothek, Garystraße 39, D-14195 Berlin

Call for Papers

5th German Workshop on Case-based Reasoning - Foundations, Systems, and Applications, Bad Honnef, March 4-5, 1997

The 5th CBR workshop will be organised by the German Special Interest Group on Case-based Reasoning in the German Society for Computer Science (GI) in co-operation with the German Chapter of the International Society for Knowledge Organization (ISKO).

It aims at offering a forum for the presentation and discussion of new directions and interesting work in progress in the field of case-based reasoning and closely related areas such as knowledge organization. The workshop will try to bring together research on technical and cognitive foundations of case-based reasoning as well as practical requirements and experiences from the development of industrial applications.

The workshop is organised as part of the 4th German Conference on Knowledge-based Systems (XPS-97) and takes place from March 4 to 5, 1997, just before the conference. Workshop and Conference take place in Bad Honnef, close to Bonn. Contributions to the workshop are welcome from the whole field of CBR. Possible topics include: *CBR in distributed environments (reactive agents, World-Wide-Web) - Acquisition and maintenance of knowledge for CBR - Experiences from system development - Cognitive and computational memory models (memory (re)organization, retrieval, concept formation, abstraction) - Task specific architectures (e.g. for diagnosis, configuration, design, planning) - Similarity assessment - Adaptation techniques - Learning*

Extended abstracts (3 copies) should be sent to Dr. Ralph Bergmann, Dept. of Computer Science, University of Kaiserslautern, P.O. Box 3049, D-67653 Kaiserslautern, Germany. Papers can also be submitted via email to: gwcbr97@informatik.uni-kl.de. Only UNIX-printable postscript files (not compressed) can be accepted. They may be written either in German or English, and may have a size of 2-6 pages. The program committee decides about acception and length of presentation at the workshop. 29.11.96: deadline for abstracts, 16.12.96: notification of acceptance, 10.1.97: deadline for camera-ready copies. Program and Organization Committee: *Ralph Bergmann*, University of Kaiserslautern; *Brigitte Bartsch-Spoerl*, BSR Consulting GmbH, Munich; *Hans-Dieter Burkhard*, Humboldt University Berlin; *Peter Jaenecke*, Alcatel SEL AG, Stuttgart; *Dietmar Janetzko*, University of Freiburg; *Stefan Wess*, Inference GmbH, Unterschleißheim.

Last Minute ISKO News

From the German ISKO Chapter

An Announcement and Call for Papers for Wissensorganisation '97, the 5th German ISKO Conference from 7-10 Oct. 1997 at the Humboldt-University of Berlin is reprinted on p.190 of this issue.

The Proceedings of 4th German ISKO Chapter Conference, Trier, Oct. 1995 on *Analogy in Knowledge Representation* has just been published and further information may be found on the last inside cover page of this issue.

Knowledge Organization and Change

Although already referred to in our report on this conference on a previous page we would like to point out that the past two proceedings volumes of our series *Advances in Knowledge Organization* are of an exceptional quality and every ISKO member should have access to them. Please, have a look at the outside cover page of this issue for our last proceedings volume on ISKO's 4th International Conference in Washington DC, July 15-18, 1996.

Crimea 97 to Host 3rd Russian ISKO Conference

It was decided to hold the third Russian ISKO Conference within the framework of the Fourth International Conference 'Crimea 97' at Foros, Yalta, Ukraine, 7-15 June 1997 and not in May as already announced in KO 96-2, p.112. The topic of Crimea 97: *Libraries and Associations in a Transient World: New Technologies and New Forms of Cooperation.*

The Crimea conferences had attracted ever more participants since they were started in 1994. It numbered 1996 an attencance of 665 from 30 countries with 304 papers presented in 39 sections and workshops. Chair of the Organizing Committee is Dr.Yakov Shraiberg, an ISKO member. Permanent organizers of the conference are: The Russian National Public Library for Science and Technology, the Ministry of Culture of Russia, the Ministry of Culture of Crimea, the M.I.Rudomino Russian State Library for Foreign Literature, and the International Association of CDS/ISIS and NIT Developers and Users (ISI-NIT).

The Call for Participation in Crimea 97 lists the following topics for presentations and discussions: *Worldwide information infrastructure and interlibrary cooperation - Acquisition and preservation of library collections - Automated technologies, databases and CD-ROM - Interlending and document delivery (co-organized by the IFLA UAP Core Program) - Business information and information management - IMARC, UNIMARC format in library developments and practice - Dissemination and utilization of medical, pharmaceutical and environmental protection information - Electronic publications - New CDS/ISIS developments and applications - Internet resources and services - Linguistic support of information retrieval systems - Regional and children's libraries - Classification systems: application in manual and automated modes - User education in libraries - Library education.*

Conference Languages will be English and Russian.

The address of the Organizing Committee: 12, Kuznetsky Most, RU-103919 Moskva, Russia. Fax: 007-095-921 98 62 Email: CREMIA97@gpntb.msk.su

The topic of the **3rd Russian ISKO Conference** will be *The Universe of Knowledge Organization.* Please send proposals for papers to Dr. E. Sukiasyan, Russian State Library, Vozdvizhenka 3, RU-101000 Moskva. Fax: +7 095 200 2255.