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## ISKO News 20

### 10th Meeting of ISKO Executive Board

At its 10th EB Meeting on March 4, 1995 in Frankfurt, the newly elected Board (with all members present from five countries!) discussed a.o. the planned conferences of 1995 and 1996.

The Call for Papers for the Washington '96 **4th International ISKO Conference** had been very well prepared by a group of colleagues chaired by Dr. Sarah Thomas; it was finalized and is being distributed soon (see the Call below). Also discussed was the planned conference in Warsaw on **Compatibility and Integration of Order Systems** in September 1995. It will be organized in the frame of the Annual Conference of the Society for Professional Information, Sept. 13-15, 1995. Ms. Krystyna Siwek, the Polish ISKO Coordinator will be in charge of its organization. The EB resolved to consider this meeting a *Research Seminar* as its main idea is to bring together only those who have already acquired considerable experience in the handling of the relevant problems and who would prepare themselves well enough beforehand in order that useful results (e.g. guidelines for further work) may be reached. Nevertheless there will also be a Call for Papers for this event, given below.

At the **Regional ISKO Conference in Moscow**, 16-18 May 1995 on "Knowledge Organization and Linguistic Aspects", I. Dahlberg will give a one-day seminar on *Conceptual Structures and Systematization* and it is hoped that the UDC Editor, Dr. Ia McIlwaine will also be able to participate and hold a session on the *New UDC Developments*.

The **German ISKO Chapter Conference** will be held in Trier, Oct. 17-20, 1995, chaired by Prof. Dr. Dr. H. Czap. Its main topic being "Case-based Reasoning", other topics have been outlined as well in the Announcement which calls for papers until April 30, 1995. On Oct. 16, 1995 a number of workshops are planned, among which again one of the *DGD-Committee Classification and Thesaurus Research* on its new thesaurus ideas (Chair: Prof. Dr. W. Schmitz-Esser).

Concerning the **ISKO Regional Conference in Madrid**, 6-7 Nov. 1995, organized by the Spanish ISKO Chapter, Dr. Peter Jaenecke will be invited and will deliver a Keynote on *Knowledge Organization due to Theory Formation*.

The EB agreed that further *subject-oriented conferences* of the kind held at Bratislava on the environmental sciences could be held in subject fields like medicine, agriculture, law, etc., depending on the request of representatives of such fields, the willingness of someone to organize such an event, and the possibility for support. The EB members were very happy about the excellent organization and results of the Bratislava conference chaired by Dr. Pavla Stancikova. (See also the Recommendations of this conference, below.)

Congratulations for the superbly prepared and organized conference went also to Prof. Hanne Albrechtsen, as she had made the *3rd International ISKO Conference*, Copenhagen, June 20-24, 1994 truly a most successful and memorable one.

The next **ISKO EB Meeting** is scheduled for April 13, 1996 at Amsterdam, The Netherlands.

### 4th International ISKO Conference, Washington, DC, July 15-16, 1996. Call for Papers

Knowledge organization in the coming century will differ markedly from that of this past century. Continued information and document growth, expansion and change in user needs and information-seeking behaviors, and changes in technological, political, economic, educational and social environments mandate increased development and improvement in knowledge organization tools, techniques, schemes, and systems. In light of the challenges and promises of this situation, the International Society for Knowledge Organization (ISKO) will hold its 4th International Conference (ISKO 4), co-sponsored by the Library of Congress and OCLC Forest Press, at the Library of Congress in Washington, DC, July 15-18, 1996 to address the theme:

#### Knowledge Organization and Change

Papers and panels addressing Knowledge Organization and Change from any of the following interlocking perspectives are invited:

(1) *From an Environmental Perspective*: The impact of ongoing changes in technological, political, economic, educational, and social environments on how knowledge is produced, organized and used.

(2) *From an Information/Knowledge Perspective*: The challenges created by changing views of knowledge (e.g., theories of knowledge, stores of knowledge) across time, cultures, languages, disciplines, users, and uses.

(3) *From a Document Perspective*: New methods of creating and presenting documents (e.g., collaborative documents, hypertext, multimedia); changes in text composition, genres, and discourse; dynamic documents; managing document versions, variants, and views.

(4) *From a User Perspective*: Expansion of and change in user needs and user information-seeking behaviors; the effect of user interface design on user's abilities to access and assimilate information; the effect of discourse and interpretive communities, disciplinary/interdisciplinary communication, and network communications on users' conceptions of knowledge.

(5) *From a Knowledge Organization Systems Perspective*: New developments in knowledge organization tools, techniques, schemes and systems and natural language processing and expert systems; response of knowledge organization theory and practice to change in other arenas; management of change in knowledge organization schemes and systems.

The Conference will also celebrate the 120th anniversary of the Dewey Decimal Classification and papers addressing the conference with respect to DDC are especially welcome.

Prospective speakers or panels are asked to submit extended abstracts of 500 to 1000 words by September 30, 1995 to Prof. Rebecca Green, Program Chair (see contact information below; electronic submissions welcome). An International Program Committee will review the papers, and authors will be notified of acceptance decisions by January 31, 1996. The deadline for submission of papers for the printed

conference proceedings will be March 31, 1996.  
Conference chair: Dr. Sarah Thomas, Director of Cataloging, Collections Services, Library of Congress, LM 642 (COLL/O), Washington, DC 20540-4300, Phone: +1 202707-5333; Fax: +1 202 707 6269; Internet: stho@loc.gov. Program chair: Dr. Rebecca Green, College of Library and Information Services, Hornbake Bldg. (So. Wing), Rm. 4105, University of Maryland, College Park, MD 20742-4345, Phone: +1 301 405-2050; Fax: +1 301 314-9145; Internet: rgreen@umd5.umd.edu. Local arrangements chair: Dr. Jolande Goldberg, Cataloging Policy and Support Office, Library of Congress, LM 556 (COLL/CPSO), Washington, DC 20540-4305; Phone: +1 202707-4386; Fax: +1 202707-6629; Internet: goldberg@mail.loc.gov.

### **Call for Papers: Research Seminar on Compatibility and Integration of Order Systems**

From 13-15 Sept. 1995 the 1st Polish ISKO Meeting on the above topic, with "Order Systems" specified as Thesauri, Classification Systems, Terminologies, will take place at Jachranka, a nice place 30km outside Warsaw, organized by the Polish ISKO members, the (Polish) Society for Professional Information, INFOTERM Vienna, and the General Secretariat of ISKO.

#### *Rationale of the Seminar:*

One of the most crucial problems in searching for the same concepts in different databases is the fact that concepts can be expressed in many different verbal versions unpredictably and of course not only in one but also in different natural and artificial languages.

This fact had already been recognized long ago and was made a special issue in the UNISIST Report of the UNESCO of 1971 where it was recommended to establish compatibility between different thesauri, indexing languages and classification systems. So far, however, to our knowledge, no methodology has as yet been accepted generally which could be used as a guideline to establish the necessary bridges between the concepts and their expressions in the different systems and cultures.

There had been already some attempts at finding solutions, such as a meeting at the UNESCO Headquarters 1980, the Meeting of the ECSSID WG3 at Prague in Sept. 1980, the Session during the CONTA Conference in Bielefeld (1981), and a one-day Tutorial before the ASIS Conference in Columbus, OH 1982; however, the hoped-for results could not be achieved so far.

Now, after many years have passed in which it was recognized more and more that also for the sake of saving expenses in indexing the current scientific and technical literature, centers must consider much more collaborative work which means, however, that in order to achieve systems coordination and integration more emphasis should be placed on standardization, legal questions and a better utilization of existing technology and software. In a few subject fields steps have already been taken toward a unification of indexing languages such as in medicine, agriculture, and also in the environmental sciences. Also the construction of metathesauri has been started. From the experiences made much could be

learned and adapted in other fields as well. It was therefore considered timely to propose a new approach by calling together experts in knowledge organization to participate in a research seminar where the problems could be tackled from new vistas. The Recommendations of the conference on "Environmental Knowledge Organization and Information Management" held in Bratislava, Sept. 1994, stated that such a get together of experts was deemed necessary and should be arranged very soon.

#### *Purposes of the Seminar*

The proposed seminar aims at reaching the following results:

- 1 a description and analysis of the methods for the establishment of compatibility as utilized up-to-now,
- 2 an investigation concerning the kinds of studies having been undertaken, in which special subject fields, and with what kind of results,
- 3 a study of the relationship of establishing conceptual compatibility with the problems of creating multilingual thesauri or dictionaries,
- 4 a look at the problems encountered and an attempt at clarifying the reasons for difficulties met,
- 5 the spotting of examples which show to which extent the problems encountered can be overcome,
- 6 a reassessment and evaluation of general and possibly also special guidelines for the establishment of compatibility and integration of new and existing order systems,
- 7 a study of the possible software required for the implementation of the guidelines,
- 8 the application of the guidelines in subject fields (to be accomplished later on).

Consequently this Call invites proposals for papers to relate to the topics included in the points listed above and especially also descriptions of ongoing work in the field of establishing systems towards unified languages, metathesauri, integrated thesauri and attempts at establishing compatibility between different indexing languages in all fields of knowledge.

#### *Organization of the Seminar*

The Polish Society for Professional Information in Warsaw has agreed to organize this seminar as a part of its annual meeting from 13-15 September 1995.

*Program Committee:* Dr. I. Dahlberg, Drs. G. Riesthuis, Dr. W. Schmitz-Esser, Dr. E. Scibor, Prof. W. Gogolek, Ms. K. Siwek. *Organization Committee Chair:* Ms. K. Siwek. *Dates:* Abstract of paper of 200-500 words: 15 May 1995. Notification about acceptance of paper; 30 June 1995. Submission of full paper 31 Aug. 1995.

It is intended to publish a proceedings volume with the papers accepted for publication.

The conference fee of US\$ 150.- (150 zloty for Polish and East European participants) includes meals during the conference, two nights in the Central Statistical Office hotel, conference materials, participation in conference sessions, shuttle transport from and to Warsaw Centre - Jackranka.

Address for Submission of Abstracts and Papers as well as preregistration: Ms. Krystyna Siwek, Society for Professional Information, ul. Klonowa 18, PL-00591 Warszawa, Poland. Phone: +48-22-499600, FAX: +48-22- 6213439. e-mail: gogolekw%dialogvm@mcimail.com.

# Conference on Environmental Knowledge Organization and Information Management Recommendations

## 0. Source and Addressees

- 0.1 The following recommendations are the results of discussions in a special session during the First *European ISKO Conference on Environmental Knowledge Organization and Information Management*, Bratislava, 16-18 Sept. 1994.
- 0.2 The Recommendations are addressed to the decision makers in the ministries on environmental matters in all countries of Europe and to the European Union especially to the European Environmental Agency, to all institutions on a national and international level dealing with environmental tasks, to all university institutes and chairs having an impact on environmental research and to all data centers as well as documentation and information centers handling data, documents and information on ecology and environment.

## 1. Terminology and Glossaries

- 1.1 Although terminology work in the environmental areas is underway in different countries (e.g. Austria, Sweden, Switzerland, Ukraine) many countries are still in need of general environmental mono- and bilingual dictionaries with the definitions of terms.
- 1.2 A survey of what kind of dictionaries and glossaries exist, where in different countries, and in which of the special environmental fields is just as necessary at present as is a survey on who is involved in maintaining (establishing, updating, etc.) their relevant publications or databases.
- 1.3 In designing computer-based glossaries as educational tools for wide distribution, the possibility of using or adapting low cost tools should not be neglected, especially when they are widely compatible (see also 9.4). See also 6.5, 7.2, 8.2, 9.3.

## 2. Thesauri and Classification Systems

- 2.1 For the purpose of indexing, storing and retrieving environmental data, documents and information in data centers and data catalogues, as well as in libraries and documentation centers a number of thesauri and classification systems have been elaborated. Such systems are existing already e.g. at INFOTERRA in Nairobi, at CIMI in Bilthoven/Delft/Den Haag, at CNR/ITBM in Rome, at the UBA in Berlin etc. or are further elaborated. However, a generally acceptable faceted thesaurus in English, is still missing and would be needed very urgently.
- 2.2 Such a faceted thesaurus, once elaborated could also serve as a document for translation into other languages of countries where no such tools exist.
- 2.3 It would also be helpful if a general scheme could be adopted as a reference frame for the design of variable-size computer-based thesauri for the practical requirements of users with different needs on different levels of abstraction (e.g. bookshops, small libraries, large libraries,

ies, documentation centers marginally or centrally devoted to all or a few or just one environmental area).

- 2.4 In order to be able to expand or contract classification systems on the world's existing species (organisms such as plants and animals) it is recommended that one should work towards a unified system of species allowing the provision of information on different levels of hierarchical trees.
- 2.5 There is a need for promoting language versions of environmental thesauri in specialized fields in different countries. This holds not only for the European countries; to have versions of existing thesauri and other order systems available in the different languages will facilitate access to information on a world-wide basis.
- 2.6 Concerning the translation of thesauri it must be recognized that this is a very complicated undertaking, as it is a transposition of conceptual knowledge of a certain cultural environment into another environment. Due consideration therefore should be given to any assignment of this kind.
- 2.7 It is recommended that thesaurus groups be created (1) for the European Environmental Agency and its partners, and (2) for the national ministries and their relevant partners. Such groups would be responsible for the production, harmonization and maintenance of such thesauri. See also 5.3.

## 3. Establishment of Compatibility/Harmonization of Order Systems

- 3.1 In order to provide for an exchange of information between centers on a national and international level it is considered highly important to establish compatibility between the concepts and terms used in the different thesauri, classification systems, subject heading lists, etc.
- 3.2 The methodology for the relevant procedures in establishing compatibility was worked out, tested and described already in the early eighties (following recommendations made in the UNISIST Report of 1971); its reconsideration under the new technological possibilities, and its implementation into practice are still necessary in almost all subject fields.
- 3.3 It is recommended therefore that a conference be organized in the near future (possibly in Poland) dealing once more with methodological questions of compatibility and harmonization, but now involving also the possibilities of the new PC technologies and their application in the fields of the environment, taking into consideration the progress achieved in the United States and Europe with the UMLS (Unified Medical Language System) and in the area of agriculture. (See also 4.4).

## 4. Software

- 4.1 Computer programs are existing for terminological databases, thesauri and classification systems; however, an investigation into their suitability for the different purposes in the environmental sciences is still needed.
- 4.2 Further work on software for thesaurus construction, maintenance, and thesaurus use is considered necessary.

4.3 Consideration should be given to experimenting with software techniques for complementing logical links with functional links between concepts. Such functional links should reflect to a greater degree the feedback loops which aggravate and sustain environmental conditions<sup>1</sup>.

4.4 Consideration should also be given to experimenting with software techniques for comparing thesauri and producing indicators concerning the relative merits of their specific parts. The purpose of such an exercise would be to assist the thesaurus builder in identifying portions of each which are of greater richness or weakness, especially taking into account different natural languages.

4.5 It was felt necessary to develop a hardware/software interoperability for networks to make user access transparent.

### **5. Users, End-user Comfort**

5.1 The facility of using specialized online databases should be made much more sensitive to the extreme differences in results from different hosts and using different search strategies, specially taking account of different natural languages.

5.2 More attention is required to the problem of unsophisticated end-users, especially in order to avoid complex command sequences which may be poorly understood. In consequence there is a need for more user-friendly interfaces.

5.3 It is recommended that thesauri be constructed that can meet the needs of thesaurus managers as well as the needs of thesaurus users.

5.4 It should also be realized that simple but efficient tools and methods are sometimes more appropriate than advanced and highly sophisticated ones. Users would need cooperative assistance in view of both dissemination and further development. See also 4.5.

### **6. Collaboration and Networks**

6.1 Any possibility which facilitates collaboration between experts or centers in the environmental sciences with terminologists and experts in knowledge organization for the production of dictionaries, glossaries, thesauri or other order systems should be made use of in order to also establish a network of experts and consequently also networks of their databases.

6.2 INTERNET networking facilities should be used to discuss upcoming problems of environmental knowledge organization.

6.3 It is also advisable to establish and maintain distributed databases rather than a centralized database.

6.4 As the quantity of data makes management, organization and finding of data rather difficult, comprehensive and well-organized, accurate and complete metadata directories are needed in order to provide access to data through a transparent, interoperable network.

6.5 It is also felt necessary to provide for a linkage of databases on terminology and standards.

### **7. Research**

7.1 For many of the items stated in the recommendations already mentioned, supporting research will be needed. In particular, research on the determination of "codata" and metadata are considered of crucial importance for environmental information systems. Techniques should be made available that enhance the access to meta- and codata and their decentralized use by clients.

7.2 Research is also needed in pinpointing possibilities as well as cases of erroneous data. Error analysis should be directed towards data as well as their documentation. Eco-quality of materials must also find its reflection in its terminology and documentation.

7.3 Furthermore, tools for the organization of knowledge in environment ought to be investigated, with the consideration of their differences according to purposes and overlap.

### **8. Application/Standardization**

8.1 Terminology standardization has not yet been well developed in the environmental sciences, neither on the national nor on the international level. It should be coordinated and accomplished under the guidance of one international organization.

8.2 It is recommended that subject standardization be preceded by terminology standardization.

8.3 Terminological definitions should be harmonized, first nationally, then internationally.

8.4 Minimum metadata standards for content should be developed.

8.5 A harmonization of the national and international law on intellectual property aspects of databases, with due regard for both the public and private good aspects of the data, should be achieved.

### **9. Education**

9.1 Educational initiatives should be undertaken which promote the awareness and understanding of environmental problems on all levels of education.

9.2 Chairs such as the one at the ETH Zürich for the education of environment scientists should be established at other tertiary learning institutions/universities as well.

9.3 In utilizing the case-study methodology to understand and investigate complex situations of environmental catastrophies, a documentation of the occurring terminology should also be taken care of.

9.4 The elaboration of tools such as glossaries might well be made R&D assignments at institutions of higher learning in collaboration with experts at existing environmental institutions.

Bratislava, 18 Sept.1994      Frankfurt, 7 Dec. 1994.