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Devoted to Concept Theory,
Classification, Indexing,
and Knowledge Representation

Order in Chaos: The Prime Numbers

Parameters for the Design of an Intermediate Language for Multilingual Thesauri

Towards Designing an Expert System to Map Mathematics Classificatory Structures

Sociology Schedule in the DDC: Filiatory Structure, Terminology, Categorization and Concept Representation

The Regensburg Classification Scheme: Users and Partners

A Frame-based Knowledge Representation Paradigm for Automating POPSI

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KNOWLEDGE ORGANIZATION Vol.22(1995)No.3/4

Contents

Editorial

Knowledge Organization and Numbers 127

Articles

Plichta, P.: Order in chaos: the prime numbers 129

Schubert, K.: Parameters for the design of an intermediate language for multilingual thesauri 136

Iyer, H., Giguere, M.: Towards designing an expert system to map mathematics classificatory structures 141

Pathak, L.P.: Sociology schedule in the DDC: Filiatory structure, terminology, categorization and concept representation 148

Lorenz, B.: The Regensburg Classification Scheme: Users and partners 158

Aptagiri, D.V., Gopinath, M.A., Prasad, A.R.D.: A frame-based knowledge representation paradigm for automating POPSI 162

Reports and Communications

Infoterm in Danger (168) – Infoterm - The International Information Centre for Terminology (168) – International Cooperation in the Field of Terminology (169) – Building Linguistic Pluralism: What Initiatives for Europe? (170) – IUFRO to Establish Sylvaterm (171) – The Cataloging & Classification Quarterly (CCQ) to Establish a Home Page on the World Wide Web (171) – TEI, The ACH/ACL/ALLC Text Encoding Initiative (172) – Lexicographical Symbols and Typographical Conventions for Use in Terminography (172) – Conceptual Knowledge Processing (172) – IFCS-96: Data Science, Classification and Related Methods (172) – The Society of Indexers' Conference 1996 (172) – Complex Problem Solving (C.P.S.) (172) – Call for Papers, TKE '96 (128)

ISKO News 22

Knowledge Organization and Change, 4th International ISKO Conference, Washington, DC (173) – Research Seminar on Compatibility at Warsaw (174) – Wissensorganisation '95, 4th Annual Conference, German ISKO Chapter (174) Recommendations of the Research Seminar on Compatibility and Integration of Order Systems – (174)

FID/CR News 39

Ranganathan Award in Classification Research (176) – FID/CR Programme, Graz, Austria, 1996 (176) – CoLIS 2: Call for Papers (176) – IFLA Section on Classification and Indexing in Istanbul (176) – DDC on the INTERNET (177)

Book Reviews

Müller-Dreier, A.: Unified Classification (Einheitsklassifikation) (B.Lorenz) 178

Marcella, R., Newton, R.: A New Manual of Classification (M.P.Satija) 178

NISO: Guidelines for the Construction, Format, and Management of Monolingual Thesauri: ANSI/NISO Z39.19-1993 (M. Hudon) 180

Arnopoulos, P.: Sociophysics: Chaos and Cosmos in Nature and Culture (N.P.Smith) 181

Ruge, G.: Word Meaning and Term Association (Wortbedeutung und Termassoziation) (in German) (M.Th.Rolland) 182

Union of International Associations: Actions – Strategies – Solutions. Encyclopedia of World Problems and Human Potential, Vol.3 (I.Dahlberg) 184

Knowledge Organization Literature 22(1995)No.3/4 186

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Dipl.Ing. Rudolf UNGVARY, Nyul u. 14, H-1026 Budapest, Hungary

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Contents page

Vol.22(1995)No.3/4

Plichta, P.: **Order in chaos: The prime numbers**.
Knowl.Org. 22(1995)No.3/4, p.129-135, 5 refs
Explanation of how prime numbers can be derived from the numbers 1, 2 and 3 and how they can be visualized on eight rays by introducing a cyclic way of presentation according to the model of an atom and its shells for the prime numbers of the form 6n+1. Also it is shown how prime numbers are coded in the Pascal Triangle. From its implications it is concluded that prime numbers form the background of the material world and that four-dimensional space around a point is a decimal prime-number space. (KO)

Schubert, K.: **Parameters for the design of an intermediate language for multilingual thesauri**.
Knowl.Org. 22(1995)No.3/4, p. 136-140, 9 refs
The architecture of multilingual software systems is sometimes centred around an intermediate language. The question is analyzed to what extent this approach can be useful for multilingual thesauri, in particular regarding the functionality the thesaurus is designed to fulfil. Both the runtime use, and the construction and maintenance of the system is taken into consideration. Using the perspective of general language technology enables to draw on experience from a broader range of fields beyond thesaurus design itself as well as to consider the possibility of using a thesaurus as a knowledge module in various systems which process natural language. Therefore the features which thesauri and other natural-language processing systems have in common are emphasized, especially at the level of systems design and their core functionality. (Author)

Lorenz, B.: **The Regensburg Classification Scheme: Users and partners**
Knowl.Org. 22(1995)No.3/4, p. 158-161, 5 refs.
Description of the history and development of the home-made Regensburg Classification Scheme since 1964 and its notation which has been built according to the one of the Library of Congress. Although not intended in the beginning, the Scheme has become the common tool for a number of Bavarian libraries since 1970 and also of libraries in Switzerland (since 1986) and the socalled new German states (after 1990). The individual schedules are listed and also the classification aids published with the Scheme's progressing. Concludingly future plans are outlined. (KO)

Iyer, H., Giguere, M.: **Towards designing an expert system to map mathematics classsificatory structures.**
Knowl.Org. 22(1995)No.3/4, p.141-147, 9 refs
The convertibility of ordering systems such as thesauri and classification schemes have been investigated for many years. The focus has so far been more on thesauri than on classification schemes. Classification schemes too could differ from one another in several ways. These incompatibilities make multiple catalog search difficult for the users. An interface that enables mathematicians to access library collections organized with the Dewey Decimal Classification, using the AMS scheme as an interface will certainly be useful. This paper suggests a prototype expert system interface to map the AMS scheme on to the mathematics (510 schedule of DDC20) and presents the work done so far towards this end. (Authors)

Pathak, L.P.: **Sociology Schedule in the DDC: Filiatory Structure, Terminology, Categorization and Concept Representation**
Knowl.Org.22(1995)No.3/4, p. 148-158, 16 refs
Attention is drawn to the inadequacies of the existing classification schemes as pointed out by individuals and groups concerned with classification research. The article is based on an earlier study by the author, which identified and arranged in a filiatory way the main concepts of sociology and determined their relative significance as headings in a classification scheme The sociology schedule in the Dewey Decimal Classification was examined on the basis of nine evaluation criteria. It was found that a large number of the main concepts of sociology are either not represented in the schedule or mentioned in the scope note only along with the main headings. The study suggests that the DDC needs serious reconsideration with regard to the main headings/categories provided as class headings, terminology used for the concepts, the filiatory structure adopted, and the representation of the main concepts of sociology. (Author)

Aptagiri, D.V., Gopinath, M.A., Prasad, A.R.D.: **A frame-based knowledge representation paradigm for automating POPSI**
Knowl.Org. 22(1995)No.3/4, p.162-167, 11 refs.
This paper is based on the project work carried out by the authors at Documentation Research and Training Centre. Knowledge representation models are used in building intelligent systems for problem solving. The paper discusses, a frame based knowledge representation model built for automatic indexing. The system assigns POPSI indicators and produces subject strings for titles. The results are given in appendices.
(Authors)

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Scope

The more scientific data are generated in the impetuous present times, the more ordering energy needs to be expended to contol these data in a retrievable fashion. With the abundance of knowledge now available the questions of new solutions to the ordering problem and thus of improved classification systems, methods and procedures have acquired unforeseen significance. For many years now they have been in the focus of interest of information scientists the world over.
Until recently, the special literature relevant to classification was published in piecemeal fashion, scattered over the numerous technical journals serving the experts of the various fields, such as

philosophy and science of science
science policy and science organization
mathematics, statistics, and computer science
library and information science
archivistics and museology
journalism and communication science
industrial products and commodity science
terminology, lexicography and linguistics

Beginning 1974, KNOWLEDGE ORGANIZATION (formerly INTERNATIONAL CLASSIFICATION) has been serving as a common platform for the discussion of both theoretical background questions and practical application problems in many areas of concern. In each issue experts from many countries comment on questions of an adequate structuring and construction of ordering systems and on the problems of their use in opening the information contents of new literature, of data collections and survey, of tabular works and of other objects of scientific interest.
Their contributions have been concerned with

(1) clarifying the theoretical foundations (general ordering theory, science theoretical bases of classification, data analysis and reduction)
(2) describing practical operations connected with numerical taxonomy/ classification, as well as applications of classification systems and thesauri, manual and machine indexing
(3) tracing the history of classification knowledge and methodology
(4) discussing questions of education and training in classification
(5) concerning themselves with the problems of terminology in general and with respect to special fields.

Aims

Thus, KNOWLEDGE ORGANIZATION is meant to be a programme for the improvement of classification methods and processes, a forum for discussion for all those interested in the organization of knowledge on a universal or a subject-field scale, using concept analytical and/or concept-synthetical approaches as well as numerical procedures and comprising also the intellectual and automatic compilation and use of classification systems and thesauri in all fields of knowledge, with special attention being given to the problems of terminology.

KNOWLEDGE ORGANIZATION publishes original articles, reports on conferences and similar communications, the Newsletters of the International Society for Knowledge Organization (ISKO News) and the Committee on Classification Research of the International Federation for Information and Documentation (FID/CR News) as well as book reviews, letters to the editor, and an extensive annotated bibliography of recent classification and indexing literature, covering now some 500 items in each issue.

KNOWLEDGE ORGANIZATION should therefore be available at every university and research library of every country, at every information center, at colleges and schools of library and information science, in the hands of everybody interested in the fields mentioned above and thus also at every office for updating information on any topic related to the problems of order in our information-flooded times.

KNOWLEDGE ORGANIZATION was founded in 1973 by an international group of scholars with a consulting board of editors representing the world's regions, the special classification fields, and the subject areas involved. From 1974-1980 IC was published by K.G.Saur Verlag, München. Back issues of 1978-1990 are available from INDEKS Verlag, too. (The 14 volumes of 1978-1991 are offered now at the highly reduced price of DM 400.-).

As of 1989, KNOWLEDGE ORGANIZATION has become the official organ of the INTERNATIONAL SOCIETY FOR KNOWLEDGE ORGANIZATION (ISKO) and is included for every ISKO-member, personal or institutional in the membership fee (DM 60.-/DM120.-).

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Hunter, E.J.: Classification made simple. Aldershot, GB: Gower 1988. 115p.
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