

## On Concepts as Objects of Control

In the process of learning, concepts are not equally subjected to control. It is neither rational nor necessary to do that, since not all of them need to be learned at a superior level. The opposite approach leads to mixing the important concepts with the less important ones, to overworking the students, thus lowering the results of their studies.

Three methods are used to determine the concepts subjected to control in the process of chemistry teaching at the secondary school:

- theoretical analysis
- the method of expert values, and
- the matrix method.

As a result of the investigations the following conclusions are made:

1. The variative theoretical analysis turns out to be extremely suited for determining the consistency of each concept. The development-oriented function of control can be fulfilled through the generalized construction of concepts obtained.

2. The method of expert evaluation facilitates the process of concept selection while the matrix method helps to choose those concepts which are richest in information. A scheme is made on the basis of the matrix. This scheme is used for making diagnostic problems.

3. The application of the three methods has resulted in obtaining data (concepts and their relations) on the basis of which systems of problems for control and self-control can be generated with the help of a computer.

## Reports and Communications

### Call for Participation: Third ASIS/SIG/CR Classification Research Workshop

The American Society for Information Science Special Interest Group on Classification Research (ASIS(SIG/CR)) invites submissions for the 3rd ASIS Classification Research Workshop, to be held at the 55th Annual Meeting of ASIS in Pittsburgh, PA. The Workshop will take place Sunday, Oct. 25th, 1992, 8:30 AM - 5:00 PM. ASIS'92 continues through Thursday, Oct. 29th.

The CR Workshop is designed to be an exchange of ideas among active researchers with interests in the creation, development, management, representation, display, comparison, compatibility, theory, and application of classification schemes. Emphasis will be on semantic classification, in contrast to statistically based schemes. Topics include, but are not limited to:

Warrant for concepts in classification schemes - Concept acquisition - Basis for semantic classes - Automated techniques to assist in creating classification schemes - Statistical techniques used for developing explicit semantic classes - Relations and their properties - Inheritance and subsumption - Knowledge representation schemes - Classification algorithms - Procedural knowledge in classification schemes - Reasoning with classification schemes - Software for management of classification schemes - Interfaces for displaying classification schemes - Data structures and programming languages for classification schemes - Image classification - Comparison and compatibility between classification schemes - Applications such as subject analysis, natural language understanding, information retrieval, expert systems.

The CR Workshop welcomes submissions from various disciplines. Those interested in participating are invited to submit a short (1-2 page single-spaced) position paper summarizing substantive work that has been conducted in the above areas or other areas related to semantic classification schemes, and a statement briefly outlining the reason for wanting to participate in the workshop. Submissions may include background papers as attachments. Participation will be of two kinds: presenter and regular participant. Those selected as presenters will be invited to submit expanded versions of their position papers and to speak to those papers in brief presentations during the workshop. All position papers (both expanded and short papers) will be published in proceedings to be distributed prior to the workshop. The workshop registration fee is \$35.00, which includes lunch and refreshments.

Submissions should be made by email, or diskette accompanied by paper copy, or paper copy only (fax or

postal to arrive by May 15, 1992) to:

Raya Fidel, Graduate School of Library and Information Science, University of Washington, FM-30, Seattle, WA 98195; Phone: 206-543-1888; Fax: 206-685-8049.

### U.K.: CRG 285

On February 27, 1992 the 285th Meeting of the Classification Research Group was held at University College London. The minutes of the meeting report that 11 members were present and that the discussions centered around an outline which Mr. LANGRIDGE had devised for the Avalon Library at Glastonbury (appended to the minutes). The original plan had been for a library of British mythology, but the emphasis had now shifted to the literature of the New Age. He put forward for consideration the use of class P in the Bliss Classification for an experimental class on the lines of his Avalon scheme. This would provide an option for those sharing the New Age philosophy and might possibly be the seed of a revised version to be included in the third Bliss edition.

The following major areas of interest were to be considered as the subject matter of the library's collection: *New paradigms in science*: new physics and mysticism, The Earth (as a single organism), evolution, social ecology, earth mysteries, etc.; *Human affairs and Social concerns*: such as human constitution, transcendental psychology, holistic medicine, green politics, conservation, feminine aspects of life. *Mind and Spirit*: e.g., esoteric knowledge, ancient wisdom, mythology and spiritual experience, magic, prophecy, oriental religions and philosophy.

The members present discussed the possible location of the subjects of the New Age as a whole in a universal scheme such as the Bliss Classification whether it was to be included in the area of Society, Philosophy, Universe of Knowledge, or elsewhere. No decision seemed to have been made.

Mr. Langridge also drew attention to two questions of general interest arising from his project. One was the classification of phenomena when there are opposed views as to their objective or subjective nature (e.g. UFOs, certain paranormal phenomena); the other was the classification of unorthodox views, e.g. books on extra-terrestrial sources of civilization would not normally be classified with orthodox works on the subject. - At the next CRG Meeting scheduled for April 30, 92, Class V - Fine Arts in BC2 was to be discussed.

### PREDICASTS announces new series of free training seminars

Three new seminars designed to improve online research productivity for searchers using Predicasts and Information Access Company (IAC) online databases have been announced by Predicasts. The free educational seminars are scheduled for major cities throughout North America and Europe beginning in February and running through 1992.

The two-day seminar series presents strategies and solutions for searching the comprehensive collection of 24 online files offered by Predicasts and IAC. A unique approach teaches users how to quickly answer business questions regarding industries, companies, markets, technologies, consumer products, news, law, and general interest subjects using file grouping techniques.

The first-day "Basic Training" session covers Predicasts and IAC database fundamentals including online file features and techniques for searching using Predicasts' widely-used PROMT (Predicasts Overview of Markets and Technology).

For more advanced searchers, Predicasts offers a second-day seminar comprising two half-day sessions. The morning session provides creative methods for using the 24 databases in concert to effectively address queries concerning companies, industries, markets, consumers, and other business topics. The "Advanced Search Clinic" in the afternoon covers new features and enhancements, source additions, search strategies for difficult and unusual applications, and reporting formats for Predicasts and IAC databases.

Predicasts, a Ziff Communications Company headquartered in Cleveland, Ohio, provides a family of 10 online databases to corporations and libraries and is acknowledged throughout the information industry as one of the world's leading sources of online business and technology information. An innovator in customer service, Predicasts supports Information Access Company and Predicasts database users with free training seminars, customized field service, and a call-in Help Desk staffed by information professionals who are themselves experienced online searchers.

Predicasts and IAC files are accessible through online information services worldwide including Dialog, Data-Star, LEXIS/NEXIS, and FT Profile. To register, call Predicasts' toll-free customer service number in the USA: 800-321-6388, or write Predicasts at 11001 Cedar Avenue, Cleveland, Ohio, 44106. In Europe, call England +4471-494-3817 or write Predicasts Europe, 8-10 Denman Street, London W1V 7RF, U.K.

### OIS Document Management'92 Conference and Exhibition

The provisional programme of the conference which was held from June 2-4, 1992 at Wembley Conference and Exhibition Centre, London, included 20 sessions mainly devoted to topics of image processing and digital document management with one session also concerned with document indexing and retrieval. Over 200 exhibitors were expected from the leading computer vendors, conversion bureaux, CAD and publishing suppliers, text retrieval companies and management consultancies with a strong presence in document management. The 1991 exhibition had been attended by 7000 visitors. For further information turn to Meckler Ltd., 247-249 Vauxhall Bridge Road, London SW1V 1HQ, England.

## ACM-SIGIR'92

The 15th International Conference on Research and Development in Information Retrieval of ACM was to be held at the Royal School of Librarianship in Copenhagen, Denmark, June 21-24, 1992 with Prof. Peter Ingwersen as the Conference Chair, Prof. Nicholas J. Belkin and Anne-lise Mark Pejtersen as Program Chairs and Prof. Irene Wormell responsible for the tutorials. The Program Committee had 34 members coming from 12 countries. In the preliminary program the following 4 tutorials (A) and 12 sessions (B) were announced with altogether 33 papers:

(A) An introduction to information retrieval techniques - Knowledge-based information retrieval - Introduction to hypertext and hypermedia - Natural language processing and information retrieval.

(B) Interaction in information retrieval - Text categorization - Text manipulation - Database structures - Experience with large document collections (Panel) - Information retrieval theory - Language processing - Corpus linguistics (Panel) - Probabilistic information retrieval - IR applications - Data Structures - Interface design and display.

For further information please turn to: SIGIR'92 Conference Secretariat, Royal School of Librarianship, Bir-kinget 6, DK-2300 Copenhagen S, Denmark.

## 16th International Online Information Meeting

A preliminary announcement and Call for papers has been released by the ONLINE'92 organizers, Learned Information (Europe) Ltd. The Meeting will be held from 8-10 Dec. 1992 at Olympia 2, London, UK.

An additional announcement said that the name of the conference had been changed to "ONLINE/CD-ROM Information 92"

The Conference Chair will be taken David Raitt from the Netherlands, Professional Interest Chairmen are: Charles Oppenheim, John Gale, Chris Batt and Ben Goedegebuure. The Advisory Committee comprises 7 colleagues from 6 countries.

An abstract of a proposed paper was due by April 24, 1992, complete paper (hardcopy and diskette) by 10 July. For further information turn to Learned Information Ltd., Woodside, Hinksey Hill, Oxford OX1 5AU, U.K.

## Terminology News

### Workshop on Terminology Teaching and Training

More than 20 experienced university teachers participated in this workshop which took place prior to the Third Infoterm Symposium, Vienna, 9-11 Nov. 1991.

Working groups dealt with the following topics:

- State of the art of teaching and training in terminology, evaluating existing curricula;

- Evaluating existing textbooks, formulating criteria for new teaching material and designing an outline for such a textbook;

- Describing various professional profiles of terminologists and requirements to be met by adequate curricula;

- Describing the "ideal" terminology teacher.

The results of the working groups and the discussions will be published in one of the forthcoming issues of the journal "Terminology Science and Research" and will be implemented in various teaching and training strategies.

(From *Infoterm Newsletter No. 63*)

## UN/ECE/WP.4 Meeting

### Multilingual Terminology Standardization for EDIFACT, United Nations, Geneva, 17-20 March 1992

More than 200 delegates from about 30 countries and 20 international and non-governmental organizations participated in the 45th session of the Expert Meeting on Data Elements and Trade Data Interchange of the Working Party on Facilitation of International Trade Procedures (WP.4). This group is working within the framework of the United Nations' Economic Commission for Europe and is responsible for the maintenance and further development of EDIFACT, a format for electronic data interchange in industry and trade.

Among the many items under discussion the standardization of de facto regulated EDIFACT messages by ISO committees was one of the most important topics. Closer cooperation with several technical committees of ISO (such as those dealing with terminology, information and documentation, documents and data elements in administration, commerce and industry, etc.), Technical Advisory Group (TAG) 7 of ISO and with ISO/IEC/JTC 1 will ensure that more EDIFACT standards can be developed in a shorter period of time.

The creation of data element directories should be carried out in coordination with all groups concerned in order to avoid incompatibilities and duplication of efforts.

A presentation by an Infoterm representative focussed on multilingual terminology data bases and their application in EDIFACT. A document on UN/EDIFACT multilingual terminology by a member of the Austrian Federal Economic Chamber was widely supported. The need for EDIFACT terminologies in the language of each user community (and not just in English) was expressed by various delegations. It was decided to continue this initiative which will probably result in a project for establishing a multilingual terminology data base on EDIFACT. Such a database will provide an additional management instrument for the future development of EDIFACT message directories and will be used as an information tool in order to promote the use of EDIFACT in individual language communities.

(From *Infoterm Newsletter 63*)

### **International Workshop on LSP Text Linguistics in the Classroom, Aug.17-22, 1992, Leipzig, Germany**

The Workshop, devoted to Teaching Properties of LSP Texts in Foreign Language Classes for Different Target Groups will focus on the topics how to develop skills of information retrieval from specialized literature and skills of professional writing, how to develop proficiency in oral performance, and how to assess student performance in such skills. For further information please contact: Prof.Dr.Rosemarie Gläser, Sektion Fremdsprachen/ Fachsprachenzentrum, Universität Leipzig, Augustusplatz 9, D-0-7100 Leipzig, Germany.

### **9th Terminology Summer School**

Infoterm, IITF and TermNet will be organizing its 9th Terminology Summer School on the topic "Application of Terminological Principles and Methods in Practical Terminology Work" from 24-28 Aug.1992 in Vienna, Austria. The following topics will be covered: *Introduction to terminology and its applications - Basic elements of terminology (including concepts, concept systems, definitions, terms, synonyms, etc.), Terminography, Terminology and Documentation, Activities in terminology standardization, Terminology and knowledge engineering, The institutional framework of terminology work, etc.*

For further information please contact: TermNet Secretariat, P.O.Box 130, A-1021 Vienna, Austria. Tel.: +43/1/267535-711.

### **3rd International Conference on Database and Expert Systems Applications - DEXA'92**

The conference will take place at Valencia, Spain, Sept.2-4, 1992 with the aim to present a large spectrum of already implemented database and expert systems or ones that are just being developed and to discuss requirements, problems and solutions in the field. For further information please contact: Prof.Dr.I.Ramos, Universidad Politecnica Valencia, Dept.Sistemas Informaticos y Computacion, Apartado 22012, E-46020 Valencia, Spain.

### **8th Congress of the Spanish Association for Natural Language Processing (SEPLN)**

This Congress is to be held in Granada, Sept.16-18, 1992. Its main topics cover: Language processing and information science - Morphological, syntactic, semantic and/or pragmatical analysis - Computational lexicography - Man-machine communication environments in natural language - Automatic translation - Speech recognition and synthesis.

For further information please contact: Secretaria del VIII Congreso de la SEPLN, E.U. de Biblioteconomia y Documentacion, Campus Universitario Caruja, E-18071 Granada, Spain.

### **Deutscher Terminologie-Tag e.V.**

The invitation to participate in a Symposium on "Geistiges Eigentum an Terminologien" (Copyrighting terminologies) to be held in Köln on 11-12 Sept.1992 has been received in May (the conference language is German). Speakers will be: Gerhard Budin, Jürgen Goebel, John Douglas Graham, Josef Mehrings, Yvan P.C.Mossmann, Jörg Reinbothe, and Hans-Jürgen Stellbrink. The Symposium will take place at the Tagungszentrum Maternushaus, Kardinal-Frings-Strasse 1-3 in D-5000 Köln. For further information please contact: Ursula Reisen, An der alten Post 18, D-5000 Köln 40.

### **TKE'93**

The 3rd International Congress on Terminology and Knowledge Engineering, of which we gave already a preliminary information in the last issue of IC (p.26) will take place in Avignon, France, May 26-28, 1993 in conjunction with the 13th International Conference on Expert Systems. It will be organized by Infoterm, the Association for Terminology and Knowledge Transfer GTW and the Edition Colloques & Conseil EC2. For further information please contact Dr.Gerhard Budin, Infoterm, P.O.B. 130, A-1020 Wien, Austria.

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### **Call for Papers ISI'92**

The 3rd International Symposium for Information Science will take place from 5-7 Nov.1992 at Saarbrücken. The FR Informationswissenschaft of the University of Saarbrücken has taken the responsibility of its organization together with the Hochschulverband für Informationswissenschaft, Konstanz; its topic: "Man and Machine: Informational Interfaces of Communication".

The following 7 sections are foreseen:

*Man and machine: theoretical basis - Man-machine interfaces - Authoring systems - Indexing, retrieval, machine translation - Hypermedia and multimedia applications - Application of speech recognition and generation in information systems - Man and machine: from the point of view of other areas of science.*

Dates: 30 June: Submission of (4 copies of) qualified substantive abstracts or drafts of papers (stating also name, address and section). The abstract may be in German, English, or French. 31 July: Notification of acceptance and mailing of instructions for the preparation of manuscripts. 15 Sept.: Mailing of the camera-ready manuscript for the proceedings.

Four half-day tutorials will be held on 3rd and 4th November offering the opportunity for indepth work on some central topics of the conference, some basic knowledge is expected from the participants.

For further information please turn to: Universität des Saarlandes, FR 5.5 Informationswissenschaft. ISI'92, D-6600 Saarbrücken 11, Tel.: +49-681-302 3537, Fax: +49-681-302 3557.

## Activities of IFCS Member Societies

### 16th Annual Meeting, Gesellschaft für Klassifikation e.V.

From April 1-3, 1992 the German Society for Classification held its annual conference at the University of Dortmund on the topic: "Information and Classification. Concepts, Methods, Applications". Among the 153 papers presented there were only some 29 with a bearing in the area of conceptual classification. The majority of the papers, however, dealt with problems in the areas of numerical taxonomy/automatic classification, cluster analysis, correspondence analysis, scaling methods, discrimination and projection methods, phylogenetic analysis, etc. The following papers relevant to information science and conceptual classification were listed in the Preliminary Program:

N.FUHR: Repräsentationen und Modelle im Information Retrieval.

B. GANTER, R.WILLE: Knowledge spaces and formal concept analysis.

K.WITULSKI: Content sensitive knowledge processing.

R.WILLE: Concept lattices - a cognitive tool.

C.STECKNER: The concept of Virtual Solid Object Models (VSOM) in classification.

M.SKORSKY, P.SCHEICH, F.VOGT, C.WACHTER,

R.WILLE: A model for conceptual data systems.

P.REISS, R.WILLE: A shell for conceptual knowledge systems.

W.BIES: Inhaltsschließung: Versuch einer bibliothekswissenschaftlichen Didaktik.

C.WACHTER, R.WILLE: Ein begriffliches Retrievalsystem für Literaturdaten.

G.GREINER: Ordnung und "Unordnung" im Bereich des Lebendigen.

W.BURCZYK: Das Softwareprodukt LARS.

S.NAUMAN: Neuere Grammatikformalismen.

W.GIERE: Thesaurusbasierte Auswertungen von

medizinischen Befunden; Methoden, Erfahrungen, Defizite.

J.INGENERF: SMART: Sprachverarbeitungssysteme in

der Medizin, begriffliche Analyse und Repräsentation auf

der Basis formaler Terminologien.

C.HABEL: Kognitive Aspekte der Wissensrepräsentation.

J.INGENERF: Die Bedingungen der Möglichkeit

semantischer Sprachanalyse in Verbindung mit begrifflichen

Ordnungssystemen: die 'Intension/Extension'-Dichotomie.

B.ENDRES-NIGGEMEYER: Eine empirisch-fundierte

Modellierung der Dokumentrepräsentation: Abstrahieren,

Indexieren und Klassifizieren.

E.WEIH: Ein Ansatz eines raumbezogenen Thesaurus.

W.GÖDERT: Klassifikationstheorie I u. II.

H.-J.HERMES: Dewey Decimal Classification, Universale

Dezimalklassifikation.

B.W.J.LORENZ: Library of Congress Classification.,

Allgemeines System für öffentliche Bibliotheken,

Regensburger Aufstellungssystematik.

W.TRAISER: Systematik der Deutschen Bibliothek,

Conspectus.

G.GREINER: Facettensysteme.

G.SALTON: Automatic text linking and text grouping

methods.

P.SCHÄUBLE, D.KNAUS: The various roles of

information structures.

B.TEUFEL: Beschreibungsverfahren für Bürodokumente

zur Vorgangs- und Retrieval-Unterstützung.

J.PANYR: Objektzentrierte Wissensrepräsentation

(Frames) und automatische (hierarchische) Klassifikation

(Clusteranalyse).

A.FENK: Zur Klassifikation von Symbolen.

Information concerning the full programme, abstracts and the proceedings may be requested from Dr.B.Lausen, Faculty of Statistics, University of Dortmund, P.O.500 500, D-4600 Dortmund 50.

### VOC - Vereniging voor Ordinatie en Classificatie. Dutch/Belgian Classification Society

The 1991 fall meeting of the VOC took place at Erasmus University, Rotterdam, where the Institute for Research of Social Health Care hosted the meeting. About 60 members attended. Seven papers, all in the field of numerical taxonomy, were presented. - The spring meeting, 1992, was to be held at the University of Leiden, on April 6. One of the themes to be presented was bibliometric research.

### Japan Classification Society

The annual research meeting of JCS was held on 16 Nov.1991 at the Institute of Statistical Mathematics. There were 12 submitted papers and 52 people attending the meeting. Prof.OHSUMI demonstrated CRESS (Classification References Electronic Search Service) using a Macintosh. References had been collected from sixty journals issued in 1991. Society members can use this service on request. For further information turn to: Prof.Keiji Jajima, Science University of Tokyo.

### Spring Meeting of British Classification Society

The meeting was a joint one with the Royal Statistical Society Multivariate Study Group. It took place on March 17, 1992 at the Open University, Milton Keynes. Roger PAYNE spoke on "Keys and tables for identifying yeasts" and Andrew CAROTHERS on "Automatic classification of human chromosomes". A further meeting took place on June 16, 1992 at the Institute of Astronomy, Madingley Road, Cambridge. Talks and demonstrations of the work in applied (star and galaxy) classification there was to be expected. For further information please turn to Ms.Shirley Hitchcock, Secretary, BCS, The Open University, Faculty of Mathematics, Walton Hall, Milton Keynes MK7 6AA, England.

### 1992 Annual Meeting, CSNA

The Classification Society of North America held its annual conference on June 12-13 at the Kellogg Center, Michigan State University. For further information please turn to: Herman P. Friedman, President CSNA, 45 East End Ave #4F, New York City, N.Y. 10028.

### 4th Conference of the International Federation of Classification Societies (IFCS)

The deadline for abstracts for this conference to be held from Aug.31-Sept.3, 1993 at the Ecole Nationale Supérieure des Télécommunications, Paris, has been set for Nov.30,1992. The theme is "Classification and Related Methods of Data Analysis". Abstracts are to be sent to: INRIA-Rocquencourt, Bureau des Colloques, Domaine de Voluceau, BP 105, F-78153 Le Chesnay Cedex, France.