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Foreword

The events of the FID Conference and Congress at Montreal, Sept.1986 with their many wonderful encounters have given again many a stimulus to our thoughts and provided in many respects a new impetus to our work. FID has also widened the scope of its name to include from now on also information: "FID, la Federation Internationale de l' Information et de la Documentation". At the occasion of FID's 90th Anniversary a special issue of the IFID journal appeared which includes also a longer contribution on FID/CR. It can be had from the FID Headquarters, P.O.Box 90402, NL-2509 LK The Hague. Our FID/CR brochure which was added to the last issue of International Classification, was distributed to all the participants of the FID Congress. Anybody else interested in distributing it in his country should please ask for copies at the FID/CR Secretariat, Woogstr. 36a, D-6000 Frankfurt 50, FR Germany.

This time, our FID/CR newsletter is composed of contributions from many sides. The addresses of the contributors are listed at the end. May all readers feel encouraged to send brief reports to the Secretariat ofFID/CR on the current developments of classification and indexing in their respective countries. Any longer reports - equally welcome - covering, for instance, the last decade, could be printed in the form of socalled "country reports" in the main part of this journal.

Classification, Indexing, and New Technology. Report on 3rd Regional FID/CR Conference

A successful Third Regional Conference of FID/CR was held on Saturday, Sept.13, 1986, at the Queen Elizabeth Hotel in Montreal, in conjunction with the Conference and Congress of FID. Attendance was good, with about sixty people participating from 16 countries. Participants were welcomed to the conference by the two co-conveners, Tim CRAVEN and Paule ROLLAND-THOMAS, and by Michael HILL, the FID president and Inge DAHLBERG, chairperson of FID/CR.

The first presentation was by Carolyn WATTERS and Michael SHEPHERD of Dalhousie University ("PROLOG and IR"). Watters introduced predicate calculus and gave simplified examples of how it would apply to document retrieval. If a computer language, such as PROLOG, that performs predicate calculus is to operate efficiently on a large database, a classification scheme is needed in order to select the parts of the database that will be processed. Watters showed the way in which her group was using a faceted scheme, based on the ideas of Ranganathan, in structuring a database for this purpose.

Two contributed papers completed the morning portion of the programme. In the first of these papers, "The three languages theory in information retrieval", Gilles DESCHATELETS of the Universite de Montreal discussed some of the problems facing online searchers and possible ways of helping searchers with them. The three languages of the theory are (1) the natural or written language of authors and readers, (2) the indexing language, and (3) the query language. In order to conduct effective and efficient searches, a searcher must learn to use all three languages. The natural language of authors and readers generally requires the least effort. To help searchers with the indexing and query languages, three alternative approaches may be adopted: (1) the search intermediary, (2) the natural retrieval language, and (3) the intelligent interface*)..

The second of the contributed papers, "Pour des representations enrichies du contenu en vue d'ameliorer le reperage en plein texte" was delivered by Suzanne BERTRAND-GASTALDY of the Universite de Montreal on behalf of her co-authors Jean-Guy MEUNIER and Hermel LEBEL. The paper suggested a typology of representations of texts for retrieval purposes. Different representations reflect different levels of structure within the text. These different structural levels should be thought of as complementary to different cognitive structures in the minds of different users at different stages of dialog with the retrieval system.

Following lunch, a panel session was held on the general topic of "Classification, indexing, and new technology". Panelists were Hal BORKO, University of California at Los Angeles, Karen MARKEY of the Online Computer Library Center (OCLC), Nancy WILLIAMSON of the University of Toronto, and Inge DAHLBERG of FID/CR. Discussion began with brief statements from the panelists. Borko noted how computerization lead to early experimentation with automatic classification. He also volunteered to coordinate a group interested in classification in relation to expert systems. Markey spoke about the Dewey Decimal Classification as an online search aid; among points noted was the value of tagging parts of compound notations. (The full statements of Prof.Borko and Dr. Markey are printed below.) Williamson indicated plans to investigate online searching using another classification scheme, that of the Library of Congress. Dahlberg noted the link between the other panelists work and her own interest in compatibility and switching languages.

The panel session continued with a general discussion involving comments from the floor. Throwing away classification data in adapting cataloging records was noted as a possible source of future problems for libraries and similar organizations. ROLLAND-THOMAS raised the difficulty of cuttering in the Library of Congress scheme for users speaking a language other than English. In answer to a comment that the Universal Decimal Classification was specifically designed for information retrieval, Borko remarked that the word "designed" should be amended to "adapted". As an informal conclusion of the session, Jim ANDERSON of Rutgers University reported briefly on his work on developing a string indexing system with many complex rules, analogous to the rules of an expert system.

Craven then gave a brief impressionistic summary of the conference. Key terms include "computerization", "complexity", "diversity", "users", "assistance", "expert systems", "online searching", "natural language", and "classification". The greater power and efficiency provided by various degrees of computerization has lead to systems which are both more diverse and more complex. Complexity and diversity may create problems for users, and the power of computerization may in turn be applied to assisting users with these problems. Diversi-

*) See also the full paper in this issue of International Classification.

ty also has a good side in that it may complement the diversity of users: computer power may be applied to customizing for particular user needs.

Expert systems and online searching are two products of computerization. How expert systems may help in online searching is one question to be explored. The relative merits of natural language and classification schemes in online searching continue to be probed. Classification ideas certainly seem likely to be important in implementing large-scale expert systems. Given the usefulness of classification, the relative value of adapting existing schemes and designing new schemes to suit new technology is also a topic for discussion.

The conference ended with a business meeting of FID/CR.

Tim C.Craven

Expert Systems Applied to Library Cataloging.
FID/CR Panel Remarks, Sept.13, 1986

Research in classification (as in other fields) is very related to, and dependent upon, technology. Work on automatic classification started when we first began to use computers for language data processing rather than numerical analysis. This classification research consisted of two related projects: (1) applying mathematical algorithms to determine classification categories, or groups, into which a large undifferentiated mass of documents could be classified, and (2) applying a different set of algorithms to automatically cluster similar documents into their proper groups. Similarity of documents is based on the vocabulary, and especially on the key words, used in the documents. Work in these areas is continuing and indeed is even more important today, as one seeks to improve the efficiency of online data base searching.

Today's computers are considerably more powerful and more accessible than they were years ago. The hardware, especially speed and storage capacity, as well as the programming languages are orders of magnitude more advanced, and consequently new applications are possible. One of the most exciting new application is in the area of expert systems (ES), and I would like to tell you about a research project, in which I and a doctoral student, Zorana ERCEGOVAC, are working, at applying expert systems technology to library cataloging.

The name of the project is MAPPER, and the goal is to design a prototype computer-based system that would serve as a cataloging aid and would assist the librarian/cataloger to catalog maps by selecting appropriate AACR2 cataloging rules and completing the MARC map format.

Although this is our stated goal, we recognize that the task is extremely complex and that we are unlikely to fully accomplish this objective. More realistically, we perceive the MAPPER system to be a research tool that would enable us to investigate ways of organizing and codifying a limited number of AACR2 rules and the knowledge of experts into a symbolic data structure that could be processed by computer programs and used as aids in cataloging. The system will be implemented on a microcomputer, the IBM PC/AT with a maximum of 640K internal storage and a 20 megabyte hard disk rather than on a larger main frame computer, for we anticipate that the system will be used by students to develop cataloging and ES design skills.

We are currently in the design and development phase. Our first step was to chose as a model an existing documented ES whose design and architecture we could emulate in MAPPER. After reviewing a number of possibilities, we had no difficulty in selecting MYCIN as our model principally because the work is in the public domain, and because the purpose of the MYCIN system - medical diagnosis - is closer to the library cataloging problem than any other ES of which we are aware. We will design MAPPER in strict accordance with the AACR2 rules, in spite of their known shortcomings, for this would enable us to study and collect data on the difficulties in applying these rules and possibly to suggest improvements.

For the expert system development package, or shell, we selected the EXSYS programs. The package consists of an editor, a runtime program for operating the system, utility programs to compress files and rearrange rules, a tutorial program with five lessons on how to create expert systems, a demonstration program, and a manual. We are still learning to use EXSYS, but so far we are pleased with the programs and believe that they will meet our needs.

It is our belief that ES research is the new frontier and the next stage of development in library information science. ES makes more effective use of automated library systems and online data bases that were designed and implemented during the past decade, and they will help the librarian be more productive and efficient in carrying out the many tasks involved in managing an information service center. Many different ES will need to be developed, and I am aware that a number of people are engaged in this research. Most are working on systems that will help the end user search online data bases, but a few are applying ES technology to aid and improve cataloging and classification performance. Within FID/CR, I would be willing to act as a focus and contact point for the exchange of information on ES activities related to classification research. If you are working in this area, or know of someone who is, please write to me at the following address: Prof.Harold Borko, UCLA/GSLIS, 405 Hilgard Ave. Los Angeles, CA 90024, USA.

Harold Borko

Overview of Dewey Decimal Classification (DDC) Online Project.
FID/CR Panel Remarks, Sept.13, 1986.

DDC Online Project Objectives

(1) Use the consensus of experts, i.e., DDC editorial staff, DDC publisher, project consultants, representatives from the four participating libraries, OCLC project team, to determine strategies for searching and displaying the DDC in an experimental online catalog.

(2) Demonstrate the DDC as a searcher's tool for subject access, browsing, and display in the experimental online catalog.

(3) Test the effectiveness of the DDC in retrieval experiments with the participating libraries' patrons and staff.

(4) Evaluate the demonstration and test results in a data analysis and disseminate the results of the research project. Data collected and analyzed in the project were: (a) recall and precision scores from and time spent per search in 320 patron and 360 staff searches, (b) failure analyses of patron and staff searches, (c) four databases containing between 8,000 and 12,000 records enhanced with the DDC.

Findings of DDC Online Project

When incorporated into an online catalog as a user's tool for subject access, browsing, and display, the DDC enhanced

(1) subject access to a bibliographic database

(2) subject searching strategies in an online catalog,

(3) display of subject information in bibliographic records.

Present Needs for Machine-readable Library Classifications

(1) MARC format for machine-readable library classifications.

(a) The Decimal Classification Division at the Library of Congress (LC/DCD) (with help from Informatics, a commercial firm commissioned by Forest Press that built the machine-readable DDC from the print tapes of the 19th edition of the DDC) defined a format for DDC which requires a separate classification record for every unique DDC number and every unique centered heading and range; DDCRI entries are combined with unique DDC number records.

(b) This format defined for DDC should be the starting point for editorial staff who are automating classifications.

(c) Why? This format has been pretested for editorial functions by the LC/DCD in its Editorial Support System which permits automated editorial functions to the entire 19th edition of the machine-readable DDC. This format has also been pretested for patron access in the DDC Online Project.

(d) The DDC Online Project is not the only instance in which a machine-readable classification has been tested. Other machine-readable classifications are: ICONCLASS in the Online Marburg Index in Marburg, FR Germany; UDC 77 "Photography and similar processes" in PHOCUS at the Public Archives of Canada's Picture Conservation Division (Ottawa, Canada); the Relative Index of the DDC in a DOBIS/LIBIS system at The State Library in Pretoria, Republic of South Africa; MEDCLASS at the National Library of Medicine (NLM) in Bethesda, Maryland, for online creation and editing of 4th edition of the NLM's classification schedules.

(2) Enhance subfield coding in class number fields to express individual components of synthesized class numbers.

(a) The DDC Online Project team was limited to enhancing bibliographic records with DDC numbers and text from the DDC schedules, and DDC numbers and text from the DDC Relative Index matching DDC numbers enumerated in Schedules.

(b) Subfield coding, such as the coding suggested by Arnold WAJENBERG (see "MARC coding of DDC for subject retrieval", Inform.Technol.& Libr. 2(Sept.1983) p.246-51) would permit identification of the individual components of DDC numbers. For example: a directory of entomologists in Columbus, OH, bears the class number $ a595.7002577157. Using Wajenberg's coding, the three components of this class number would be identified in the DDC class number field (082 or 092) of a bibliographic record: 1) Entomologists $ e595.7, 2) Directory
$ f1 $ g0025, 3) in Columbus, OH, $ f2 $g77157. DDC project only allowed access to Wajenberg's subfield e. Why is this important? If the individual components of DDC numbers were coded, class numbers and subject terms from the DDC Schedules, Relative Index, and Tables could be added to records, and library patrons and staff could browse the Schedules, Relative Index, and Tables.

(3) Enhance library classifications with captions and notes that are understandable to library patrons.

(a) There were captions and notes in the DDC that were not understandable to library patrons. Examples are: Standard subdivisions, Historical and geographical treatment, Games not characterized by action, Inflated ball thrown or hit by hand.

(b) Changing captions and notes to ones that are understandable to library patrons might mean two separate DDC's, i.e., a machine-readable DDC for library catalogers and classifiers, and a machine-readable DDC for library patrons and reference staff.

Future Uses of Machine-readable Classifications

(1) Editorial and publications uses: Editors and publishers can maintain, edit, update, produce, publish, and distribute the most current version of the classification in a variety of formats, i.e., print, micrographic, tape, compact disk.

(2) Library technical services uses:

(a) Staff can access the most current version of the classification through a bibliographic utility, e.g., OCLC, RLIN, or through a compact disk-based cataloging workstation, to perform subject cataloging and classifi cation tasks.

(b) A cataloging utility or cataloging workstation can offer these searching strategies:

1) Staff perform subject searches of bibliographic records, study retrieved records' subject headings and classification numbers, and apply (a) class number(s) and/or subject heading(s) to the item at hand based on the examination of retrieved records' class numbers and subject headings. Staff can also browse the classification' s index, schedules, and/or tables to find appropriate number(s) for class number building.

2) Staff perform subject searches of the classification to find candidate numbers. Staff then browse the classification' s index, schedules and/or tables to find appropriate number(s) for class number building.

3) Subject searches available to staff: keyword, subject outline, index (alphabetical), class number.

(3) Patron access (such as the patron access provided in the DDC Online Project). Enhance subject access and searching strategies in online catalogs, and enhance display of subject information in bibliographic records by online catalog capabilities that allow patrons to: (a) locate class number areas where books are found on a topic through subject outline, index (alphabetical), and class number searches,

(b) find items on a topic through subject outline, keyword, index (alphabetical), and class number searches, (c) browse the logical outlines of classification schedules and tables through subject outline, index (alphabetical), and class number searches.

Karen Markey

Organization of Information.
Report on Session 7 of the FID Congress, Sept.18, 1986
(Reprinted from FID News Bull.36(1986)No.10, p.77-78)

This session dealt specifically with the tools used to organize and exploit books and information - the Broad System of Ordering, the Dewey Decimal Classification (DDC), and the Universal Decimal Classification (UDC). It started appropriately with a memoire of Paul Otlet and Henri LaFontaine in a two minute description of the characteristics of FID's two founders. The historical development of classification systems was a main feature in the paper by Mr. BATTY, on the nature and development of multi-dimensional classification structures. At its close, the discussion was turning towards a wider debate on the application of a single model of a classification scheme which could be used for all subject areas at both the general and the specific level. There was also a need expressed for a concordance between classification systems.

The most recent information tool discussed was the Broad System of Ordering (BSO) which Mr.STILES considered in terms of its usefulness in the development of expert systems. The paper, given on behalf of Mr. COATES, on lexical tools for information exchange in a mechanised environment, discussed the results of a referral test using the Broad System of Ordering as a search aid in an experiment on 38 databases in the DIALOG system performed by London University Centre for Information Services (LUCIS).

Although Mr. PAULSON also made reference to the historical context by referring to conversations between Dewey and Otlet starting in 1895, the keyword for his presentation was "change". He described the methods of updating and revising the classification, the automated Editorial Support System and the use of the Dewey Decimal Classification in automated retrieval systems.

The paper given by Ms.MARKEY, on library classification as a subject searcher's tool in an online catalogue, introduced two new acronyms, "SOC" and "DOC" - SOC being the subject catalogue without Dewey and DOC being the subject catalogue plus Dewey. Four libraries had participated in the study which had led to recommendations for better coding in the classification fields in the cataloguing record; the degree of usefulness of the Dewey classification in online catalogues; the need to make classification captions clearer to library users and library staff; and the need to add information on the classification authority file. The discussion of this paper focussed on training, criteria for success, and ease of use.

Mr.BATTY's paper on the nature and development of multi-dimensional classification structures had been intended as one of a set of four papers but, in the event, his paper had been the sole survivor of the planned set. He pointed to the need for maps to guide thinking - either as an aide memoire to known territory or as an introduction to new territory. It pointed out the value of classification in the development of expert systems which need syntactical rules and also need to control vocabularies. The paper suggested that the categories of ignorance need to be defined and, although rules exist to establish parameters of question asking, rules are needed to establish parameters for response although, to quote T.S.Eliot, "If we can state the question precisely, we already know the answer".

The final paper, by Mr. STRACHAN, dealth with the Universal Decimal Classification and, again, "change" was the keyword - as managing for change was the paper' s subtitle. The debt to Ranganathan was acknowledged, and the characteristics and procedures of the UDC were described. The current work and planned activities on the mechanisation of the UDC were covered, together with a survey of major revisions and language editions published recently. The UDC Management. Study, completed in 1984, was mentioned and the next phase in the UDC development was discussed in terms of the appointment of the UDC Management Board, the two tier revision process based on Coordinating Revision Committees, and the implementation of an action plan. The future of the UDC in terms of its management, mechanisation and intellectual authority was the main focus of the discussion. The UDC will have a role both in traditional library and information systems and in the development of knowledge-based and expert systems.

Finally, the session featured the announcement of the FID Classification Research Committee (FID/CR) Ranganathan Award of Merit to Pauline Atherton COCHRANE for her contributions to classification research.

Certificate of Merit

Because of her recent book

Redesign of Catalogs and Indexes for Improved Online Subject Access: Selected Papers.
Phoenix, Ariz.: The Oryx Press 1985. XII,484 p. and because of her many contributions to the field of classification throughout the last 25 years, the FID)CR Subcommittee for the Ranganathan Award decided to present the RANGANATHAN AWARD of 1986 to

Professor PAULINE ATHERTON C O C H R A N E

at the occasion of the 43rd FID Conference in Montreal, Canada, during the Session on the Organisation and Exploitation of Information, chaired by Mrs. Stella Keenan, Sept.18, 1986.

P.A.Cochrane's book on the redesign of catalogs and indexes, which includes the contributions of many years' work in the organization of knowledge, makes evident the competent manner in which she has influenced the thinking, studies and work in the field of classification. As early as 1961 she designed a classification system for the field of documentation. In 1964/65 she edited the fine volume, known as the Elsinore Proceedings (of the 2nd FID/CR International Study Conference on Classification Research). In 1967/68 she (together with

Mr. Robert Freeman) conducted the AUDACIOUS Project and demonstrated that the UDC could be used for online subject searches. Her devotion to the work of Dr.S.R.Ranganathan is expressed in her monograph "Putting Knowledge to Work" in which she extended on Ranganathan's "Five Laws of Library Science" - presented as the Ranganathan Endowment Lectures of 1970 and published 1973. In 1978 she also pioneered in conducting the Subject Access Project (SAP) at the University of Syracuse, in which project bibliographic records were enhanced with subject terms taken from the tables of contents and indexes in books. The most recent results of her insight and foresight in her online subject access studies led to the significant research project in which her former student, now Dr.Karen Markey, investigated the use of the Dewey Decimal Classification in online access studies at the Online Computer Library Center (OCLC). This seems to be only the beginning of many further studies and promising development work, also in the field of switching between classification systems and other indexing languages. The classification community is anxiously awaiting the completion of her present investigations concerning the use of the Library of Congress Subject Headings in online catalogs.

FID/CR is proud of its former vice-chairperson and US national member of FID/CR and is very happy to congratulate Mrs.Pauline A. COCHRANE on receiving its Ranganathan Award of 1986.

On behalf of the Ranganathan Award Subcommittee
Dr.Ingetraut Dahlberg, Chair FID/CR

This citation was read at the end of the 7th Session of the FID Congress and subsequently sent to Prof.COCHRANE who - unfortunately - could not be present as she is living with her husband in Boroko, PNP. Here is her prompt reply of Oct.1, 1986: ".... What a pleasant surprise! The Award came out of the blue! It is one of the nicest things that has ever happened to me, especially professionally.... I am glad you reacted to favorably to my Selected Papers volume. It was fun to do and I have been pleasantly surprised by the reviews, but nothing equals my joy and satisfaction over the Ranganathan Award!".

IFLA Section on Classification and Indexing. Report on Meetings during the Tokyo IFLA Conference 1986

In keeping with Section tradition, the open meeting on August 26 dealt with subject access in the immediate region. Mr.Hiroshi ISHIYAMA of Japan spoke on "The Trend of Classification in Japan" while Mr.Yan LIZHONG of China gave a "Profile of Chinese Cataloguing and Subject Cataloguing". The Section also distributed a paper by Mr.E.R.SUKIASJAN of the USSR on "The New Standard of the USSR: Systematization of Documents. General Requirements". The second open meeting on 27 August heard Ms. Nancy WILLIAMSON of Canada report on the Section Project with the title "Classification in Online Systems: Research and Progress". Then, Mr.Tor HENRIKSEN of Norway reported on the "UDC: BS 1000. International Medium Edition in Book and Machine Readable Form".

The second Standing Committee meeting took place on Thursday, Aug.28. The Botswana Library Association forwarded to the Section a statement of concern on the treatment of Southern Africa in the Dewey Decimal Classification. Robert HOLLEY will send a letter to Forest Press to express Section concerns on this matter. Next, the group charged Nancy WILLIAMSON to represent the Section's interest at the 3rd Regional Conference of FID'ss Committee on Classification Research to be held on September 13, 1986 in Montreal, Canada. After lengthy discussion, the Standing Committee agreed that the two officers should look into the possible formation of a Working Group to examine the computerization of subject authority files with the goal of establishing guidelines for a machine readable file format. Robert HOLLEY and Barbara KELM will report on the feasibility of such a Working Group at the Brighton Conference in 1987 and propose possible members.

For the Brighton Conference, the Section will turn over one of its program slots to the Division for a three session seminar in recognition of the 10th anniversary of the UNESCO Paris Conference on National Bibliography. For its part, the Section suggested that the Division consider an overview of classification in national bibliographies or a history of subject access in the British National Bibliography. For its own program, the Section asked Ross BOURNE to see if he could find one speaker to discuss the Bliss Classification and another to give an historical overview of the Classification Research Group.

The Standing Committee selected Robert HOLLEY and Tor HENRIKSEN for its two nominations to the Universal Bibliographic Control/International MARC Project Advisory Committee. In its final action for the Tokyo Conference, the group charged Robert HOLLEY to mount a Standing Committee membership drive by writing to the library associations of selected countries. (Abridged from the report of the chairman)

Robert P.Holley

F.R.Germany: Call for Papers, 11th Annual Conference

The 1987 Annual Conference will be held at Aachen, June 29 - July 1 together with the 1st Conference of the International Federation of Classification Societies (IFCS). The theme acknowledges the new trends in the utilization of classification principles by: "Wissensorganisation im Wandel" (which is in translation not exactly "Knowledge organization in a Changing World"). The full call is added to this issue for the subscribers of European countries.

India

The 3rd number of the *Classification Society of India Bulletin* was issued in July 1986. It is sponsored by the Indian Association of Teachers in Library Science (IATLIS). Its editor, M.P.SATIJA, calls the members to send their biodata for a projected Classification Directory, and reports on a number of events, viz. the General Body Meeting of the Society on Dec.8, 1985 at Nagpur University, the International Conference on Ranganathan's Philosophy, the 2nd Regional Meeting of FID/CR in New Delhi, and on Doctoral Research on Classification and Indexing in India. Two obituaries conclude the 2-page newsletter, one for Dr.D.S.Krishna Rao, who had received the first PhD in library science in India (he died on Feb.20, 1985) and one for Mrs. Sarada Ranganathan, the wife of Dr.S.R. Ranganathan, who passed away on July 30, 1985.

Nigeria

The Cataloguing and Classification Section of the Nigerian Library Association was established in 1966. Since then it has been involved in the organisation of seminars and workshops on Cataloguing and Classification. Most of the programmes of the National Library of Nigeria in the area of bibliographic control have involved the support and participation of the Cataloguing and Classification Section.

The first major project of the Section is the expansion of the DT Class: African History, in the Library of Congress Classification Scheme (LCC). In expanding and modifying the DT Class, other African countries were involved, and they contributed to the expansion of the areas relating to their individual countries. The result of the efforts is a comprehensive schedule on the history of Africa, which - although using the LCC DT schedule as a basis - is completely different from the DT class. For this reason it is named "DTA". Work on the DTA was an upward task, which dragged on slowly for two decades. The work is now completed and ready for publication. Because of financial constraints, we have not been able to publish the new DTA schedule, which - when published -will make the job of classification with the Library of Congress schedule much easier.

We organise seminars and workshops every year focusing attention on the problems of classification and cataloguing. In 1981 a national seminar on the new Anglo-American cataloguing rules (AACR2) was sponsored by the National Library of Nigeria and organised jointly with our Cataloguing and Classification Section before the new code was adopted in the country. The topic of the 1983 Seminar was "Organisation of knowledge in Nigerian libraries" (held in Port-Harcourt), in 1984 it was "Indexing services: principles and practices with special focus on their relevance in Nigeria"(held in Jos). The 1985 seminar was concerned with "Authority files for Nigerian libraries" (held in Kano) and the last one 9-11 July 1986 (held at the University of Ibadan) was devoted to "Problems with the application of the major classification schemes used in Nigerian libraries".

We have been studying the areas of the different classification schemes used in Nigeria which need modification and expansion. For these purposes, sub-committees have been set up on each of the major classification schemes used in Nigeria, viz. the LCC, the DDC, the UDC and the Moys Classification schedules. Each committee will study and examine a classification scheme, and make proposals or recommendations for its improvement.

Plans for the future: We proposed to make a survey of libraries using the UDC Scheme in Africa. The libraries will be asked to mention areas in which they have problems with the application of the UDC. By this we will know where to focus attention in the use of UDC in Africa.

Beatrice S. Bankole

U.K. CRG 258

The 258th meeting of the Classification Research Group was held on June 26, 1986 at the University College London. Mr. NEILSON who had prepared a Memorandum on "Computerized systems of production for faceted classification schedules: the influence of mechanization upon schedule design and classification policy", spoke on the effect of computerized systems on the logical content of classification systems with particular reference to the layout and development of the index. He pinpointed the various problems arising, for instance the "carry-overs", differences in type faces, use of capitals not only as headings but also to denote acronyms, recognition of facets, commas, a.o. These problems were discussed by the eight members present. Mr. MILLS informed that Bliss Class A "Philosophy" would be sent to the publisher (Butterworths) in October 1986. Mr. SANDISON mentioned that the BSI Committee, at present engaged in revising the standard for Documentation Terminology, would soon be looking at the problems of Terminology of Classification.

U.S.A.: ASIS/SIG/CR

The July Newsletter (SIG/CR No.26) contained a report on the Mid-Year-Meeting in Portland, Oregon, May 13, 1986 by Richard A.V.DIENER. In the session named "Beyond Context Indexing for Knowledge Representation" which had the purpose "to begin a discussion on existing techniques in classification research which would allow the expansion of the horizons of Information Science beyond content analysis and data processing toward context analysis and information processing, two papers were presented: (1) Kathryn WEINTRAUB (University of California, Irvine Library) "discussed the role of facets as content structuring mechanisms. Her discussion focussed on the faceted structures in the new Bliss Classification System.... She also broached the idea of using general facets in structuring information for question answering systems. (2) Robert HOROWITZ (University of Southern California, School of Medicine) "discussed a technique for identifying the network of knowledge in an area. The graph and table headings from the literature are used as the raw data, with their co-occurrences establishing a network link between the concepts".

DIENER gave also a survey on a session in Database Theory and Applications, among which one paper was on authority control and another one on index construction. Concludingly he elaborated on the role of classification research in the era of intelligent machines and pointed out that a task of remembering (the once learned lessons on facets and relationships) and relearning had begun in Portland which should be continued, facing the necessity to "begin adjusting our visions, images, and theories to our new function of representing knowledge for intelligent information processing and environments", for which "we need to revitalize our knowledge of the mechanisms for structuring data into information and eventually information into knowledge, for structuring content into context and eventually context into meaning."

For ASIS 86 (the 49th Annual Meeting of the American Society of Information Science at Chicago) with the high-reaching topic "Shaping the future: The Sky's the Limit" a preview is contained in SIG/CR 26 announcing the following events:

(1) A session entitled "Artificial Intelligence in Bibliographic Control" to be held on Sept.29 morning,

organized by Linda C. SMITH (University of Illinois). Discussion was to be on the potential applications of artificial intelligence concepts and techniques to subject access, descriptive cataloging, and authority control. Panelists: B.OLANDER (University of Toronto and LIBLAB, Linköping University, Sweden) on "Artificial intelligence and cataloging", R. BURGER (University of Illinois) on "Artificial Intelligence and authority control", and R. RADA (National Library of Medicine) on "Artificial Intelligence and subject access".

(2) Another session sponsored by SIG/CR and cosponsored by SIG/ALP, entitled "Automating Knowledge Extraction from Text" was to be held on Oct.1 and organized by Irene TRAVIS (PRC Government Information Systems). It was to discuss progress in natural language understanding from the perspective of text understanding for the creation of knowledge bases and expert systems. Speakers were to be Don WALKER (Bell Communications Research) and Bruce LOATMAN (PRC Government Information Systems).

(3) Other sessions of interest were to be on "Indexing developments"; "Beyond Bibliographic Control: The Future of the Library Catalog"; "Indexing Special Formats"; "Intelligent Information Retrieval"; "Exploiting Word Processed Documents for Precedential Purposes"; and "User Interfaces for Information Systems".

U.S.A.: Further Education in Classification

A brochure on a "Classification Institute" sponsored by the Cataloging and Classification Section of the Resources and Technical Services Division of the American Library Association is being distributed with an invitation to catalogers, cataloging managers, library educators and other librarians interested in the role of classification in contemporary library service.

At four dates (Nov.6-8, 1986 in Arlington, VA; March 19-21, 1987, in St.Louis, MO; June 25-26, 1987 in San Francisco, CA and in Spring 1988 in Boston, MA) a program will be presented in four half-day sessions to some 150 registrants. It has the following objectives: (1) to gain an understanding of classification theory and practice, (2) to improve understanding of specific classification systems, (3) to learn about the current developments in classification systems, and (4) to gain an understanding of the role of classification in online access systems. The faculty includes: Melba ADAMS (Library of Congress), Liz NICHOLS (Stockton-San Joaquin County Public Library, CA), Mary K.D. PIETRIS (Library of Congress), Phyllis RICHMOND (UCLA, SLIS), Elaine SVENONIUS (UCLA, SLIS), Russell SWEENEY (Leeds Polytechnic, School of Librarianship), Arnold WAJENBERG (University of Illinois, Urbana-Champaign), Nancy WILLIAMSON (University of Toronto, SLIS), and Jennifer YOUNGER (University of Wisconsin, Madison).

For a program write to: RTSD Classification - Crystal City, American Library Association, 50 E. Huron St., Chicago, IL 60611.

Brasil: Further Education in Indexing Languages and Indexing

The yearbooks of 1984 and 1985 of IBICT (Instituto Brasilieiro de Informaçao em Ciencia e Tecnologia) show a number of courses having been given in the last two years at different places in Brasil on the following topics: Techniques of Indexing; Indexing and Information Handling; Faceted Classification Systems Applied to Indexing; Elaboration of Printed Indexes; Thesaurus for the Field of Biomedicine; Indexing Languages.

Further information: IBICT, Director: A.A.Briquet de Lemos, SCN - Quadra 2, Bl.K, 70710 Brasilia, DF.

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Classification and Indexing Research Current Bibliography of Projects

Our interested readers are kindly requested to send us information on their own research projects, if applicable, for publication in this service.
Our sources of the following project descriptions were the FID publication R & D Projects 16(1986)Nos.1-3 and Current Research in Library and Information Science, published by The Library Association (UK). For reasons of space we had to shorten the abstracts. The class numbers on the right are taken from the Classification Literature Classification.

224 CL155
Cognitive aspects of information seeking and retrieving.
Research workers: Saracevic, T., Chamis, A.Y., Trivison, D. Address: Case Western Reserve University. Department of Library Science. Duration: 1985-1986
This second phase of a larger inquiry is concerned with the integration of obtained results (from the first phase which was related to the context of requests in IR, structure and classification of requests, procedures in request analysis and search strategy a.o.) with those from other studies and lay a framework for an empirical foundation of information seeking and retrieving. Source: Curr.Res. 4(1986)No.3

225 CL155
Application of human brain research to information storage and retrieval systems.
Research worker: Heimbürger, A. Address: Valtion Teknillinen Tutkimuskeskus, Informaatiopalvelulaitos, Vuorimiehentie 5, 02150 Espoo, Finland. Duration: 1986
Objectives of this investigation are to (a) clarify the natural scientific and computer technical methods that are applied to brain research and particularly to human memory; (b) to evaluate how these methods and especially the results of the memory investigations could be exploited in the development of automatic information retrieval systems.
Source: R & D Projects 16(1986)No.2

226 CL236
Methodes de compression de thesaurus en vue d'optimiser le reperage de l'information. (Ways of condensing a thesaurus in order to improve information retrieval)
Research workers: Davidson, C.H., Crapo, H., Gastaldy, S.
Address: Universite de Montreal. Ecole de Bibliotheconomie et des Sciences de l'Information. Montreal, Canada. Duration: 1983-
Objective of this research consists in testing one or more objective methods, based on a quantitative analysis of thesaurus terms and relationships, which allow to prepare sub-units of the thesaurus which may serve either to furnish documents as an answer to all those requests other than the rare precise questions or under certain circumstances according to the indexation. Source: Curr.Res. 4(1986)No.3

227 CL233
Discovering underlying concepts in data through conceptual clustering.
Research worker: Stepp, R.E.
Address: University of Illinois. Graduate School of Library and Information Science (GSLIS). 410 David Kinley Hall, 1407 W.Gregory Drive, Urbana, IL. Duration: 1985-1987
The development of theoretical principles, algorithms, and practical methods for the discovery of underlying concepts in the description of objects or situations through the use of conceptual clustering is aimed at. A computer system is being developed that will build a conceptual classification for description of objects. It acts by generating concepts that describe object classes and then partitioning the given objects into the appropriate classes. ... The significance of the research lies in its potential to contribute to the design and development of computer-based knowledge resource systems. Source: Curr.Res. 4 (1986)No. 3

228 CL293
Etude de l'efficacite compare, pour la recherche documentaire, d'un thesaurus traditionnel et d' un thesaurus post-indexation. (Documentation research - comparative efficiency study of a traditional thesaurus and a "post-indexing" thesaurus (drawn from a bibliographic data base).
Research workers: Gastaldy, S., Rousseau, Y.
Address: Universite de Montreal. Ecole de Bibliotheconomie et des Sciences de l'Information, Montreal, Canada. Duration: 1986.
Objectives of the study are 1) the utilization of automatic methods for (a) the elaboration of a post-indexing thesaurus from a bibliographic database, (b) the constant updating of this tool for the maintenance and improvement of the system's performance; 2) the evaluation of the efficiency of the post-indexing thesaurus in information retrieval compared with a thesaurus built by traditional methods. Source: Curr.Res. 4(1986)No.3

229 CL337
A logico-linguistic study of the PRECIS indexing system as a possible model in a shift from manual indexing to automated text-analysis.
Research worker: Dykstra, M. Address: Dalhousie University. School of Library Service, Halifax, CA. Duration: 1986-
Source Curr.Res. 4(1986)No.3

230 CL43.6-376
Extension of Dewey Decimal Classification system on subjects related to "petroleum" and "gas".
Research workers: National Iranian Oil Co. Duration: 1986-1987
As the DDC seemed rather limited as far as subjects related to Petroleum are concerned, an extension was attempted in accordance with the DDC rules and regulations. Source Curr.Res. 4(1986)No.3

231 CL44.6-928
The expansion of Iranian languages and literature in the Library of Congress Classification.
Research workers: Shademan, Z., Fani, K., Sadigh-Behzadi, M.
Address: National Library of Iran. Department of Library Research.
Duration: 1982-1986
Since Iranian languages and literature are not well presented in the Library of Congress Classification, research was started to survey the literature on the subject, especially 1) Iranian languages before and after Islam, 2) Iranian dialects, their geographical division, and 3) general works about Iranian literature, Iranian authors and their works from 3rd to 14th century. Source: Curr.Res. 4(1986)No.3

232 CL646
Machine readable translation of AGROVOC to/from Swedish-English.
Research workers: Vedi, S.F. Andersson, U., Berg, B., Lindgren, N.-O., Rollison, N., Wünsche, G. Address: Sveriges Lantbruksuniversitets Bibliotek, Ultunabiblioteket, S-750 07 Uppsala 7, Sweden. Duration: 1984-1985
The object is to create a Swedish AGROVOC to be used for indexing and searching in the database known as LANTDOC. The thesaurus will be available online and in a printed version. The project is related to AGRIS which provides the input for Sweden. Source: R & D Projects 16(1986)No.3

233 CL646
Subject headings for agricultural libraries.
Research workers: Sandoval-Guerrero, M., Ojeda-Trejo, R.M.
Address: Universitdad Autonoma Chapingo. Biblioteca Central, Chapingo, Mex. 56230 Mexico. Duration: 1986
The subject headings list on agriculture of the Central Library of the University of Chapingo elaborated since 1964 has been published in order to aid all Spanish speaking agricultural libraries in assigning their subject headings. It is hoped that by this way also some standardization will help to improve the exchange of information. Source: R & D Projects 16(1986)No.1

234 CL6519
La jeunesse en tant que champ de connaissances interdisciplinaires: essai de systematisation language documentaire. (Young people as an example of a field of interdisciplinary knowledge: an attempt to systematise documentation language)
Research worker: Szpakowska, J.-K.
Address: Universite de Montreal. Ecole de Bibliotheconomie et des Sciences de l'Information. C-O.6128 Succ.A. Montreal, Que. H3C 3J7, Canada. Duration: 1984-1986.
The project is a prolongation of studies made since 1978. It consists of four parts: 1) Elaboration of a documentary language and edition of the "Thesaurus sur la condition juvenile. 2) Systematisation of the field of knowledge related to the group of the 13-25 years old ones. 3) Feasibility study to create a database for this knowledge field. 4) Review of writings on the Quebec young people (June 1983-June 1985) with the analysis and indexing done according to the language CONJUQ. Source: Curr.Res. 4(1986)No.3

235 CL65384
Automated medical information and diagnostic systems
Research worker: Schank, R.C.
Address: Yale University. Department of Computer Science and Psychology. Duration: 1985-
Investigation on the concept-based indexing and retrieval method for a major collection of lung tumour slides (histologic and radiologic images). The collection will be placed on videodisc to use its capability to manipulate data in ways that will permit the study of a hierarchical knowledge structure to encode the "semantics" of images. A first step is the development of a workable indexing and retrieval capability for the slide archive. Source: Curr.Res. 4(1986)No.3

236 CL722
Case grammar and functional relations in aboutness recognition and relevance decision-making in the bibliographic retrieval environment.
Research worker: Lewis, D.E.
Address: University of Western Ontario. School of Library and Information Science, London, Ont. N6G 1H1, Canada. Duration: 1981-1984
The study was conducted to determine to what extent a set of functional relations based on Fillmore's case grammar theory could be used to explain the correspondence between patterns of

language behaviour in aboutness recognition and language patterns in the texts of queries and abstracts. Thirty subject specialists submitted queries and performed relevance assessments on titles and abstracts retrieved from the DIALOG data system using "aboutness" or "topicality" as the operational definition for their judgements. Source R & D Projects 16(1986)No.2

237 CL726
Fuzzy model construction for analysis and representation of meaning in natural language texts.
Research worker: Rieger, B.
Address: RWTH Aachen. Germanistisches Institut. AG f.mathematisch-empirische Systemforschung, 5100 Aachen, FR Germany. Duration: 1985-1987
The study comprises the following parts: 1. Algorithmic analysis of discourse and texts on certain subject domains for stereotype representation of word meanings, 2. Separation of meaning representation entities from their latent relational structure of lexical relevance and semantic disposition, 3. Development and testing of recursively defined procedures which induce relevance relations in and generate dependency structure among stereotypically defined meaning representations, 4. Utilization in question-answering systems. Source: Curr. Res. 4(1986)No.3

238 CL753
Improving subject access in an online catalogue by using relevance feedback and classification codes.
Research workers: McLean, N., Walker, S., Jones, R.M., Johns, N.
Address: Polytechnic of Central London. Library Services. London, GB. Duration: 1986-

The project is carried out in conjunction with the project on "Online public access catalogue (OPAC) automatic word stemming, spelling, correction and synonym generation". It is proposed to investigate the use of the Dewey Classification Code together with index terms from relevant records. The project will evaluate the effectiveness of searches using the experimental system against a standard Okapi system as control. Source: Curr.Res. 4(1986)No.3

239 CL87
Designing a system for storage and retrieval of audio visual materials in the archives of IRIB.
Research workers: Moradi, N. et al.
Address: Islamic Republic of Iran Broadcasting (IRIB). Archive Department. Duration: 1981-1987
Projects have been undertaken to prepare a classification scheme and subject-headings as well as to design new rules for the audio-visual materials such as pictures, slides, videos and tapes. The system is to be computerized. Source: Curr.Res. 4(1986)No.3

240 CL984
Classification as a professional practice in librarianship.
Research worker: Hovi, I.
Address: Tamperen yliopisto Kirjastotieteen ja informatiikan laitos, PL 607, 33101 Tampere, Finland. Duration: 1985-1986
The aim of the project is to study how library classifications, especially the Finnish versions of Dewey Decimal Classification and UDC are used in different research and public libraries in order to see the quantity and quality of differences and cooperation possibilities. The classification of about 100 selected books are compared in 10-15 libraries as well as the way of classing some of the most interesting books and the way, classified catalogues are used by reference librarians. Source: R & D Projects 16(1986)No.3.

Infoterm News

(compiled from Infoterm Newsletter 42)

Meet the old and new Infoterm crew!

Since our Newsletter henceforth will be prepared and disseminated by Infoterm itself, we should like to take this opportunity to present the old and new Infoterm crew: Mr. *Christian Galinski* succeeded Prof. *Helmut Felber* who retired at the end of 1985 as Director of Infoterm. – Members of the professional staff (in alphabetical order) are:
Elmar Führing, Magdalena Krommer-Benz, M.A., Adrian Manu, M.A., Wolfgang Nedobity, M.A., Dip. Lib. – Our assistants are: Éva Hajdù, Eva Lindquist, Andrea Zauner.

Presentation of the Association for Terminology and Knowledge Transfer

This Association, founded in Trier in April 1986, is to foster development in information and knowledge transfer. For this purpose the Congress on Terminology and Knowledge Engineering will be organized jointly by this Association, the University of Trier and Infoterm under the patronage of Unesco. Sept. 29. – Okt. 1, 1987, at Trier, FRG.

The Congress will provide a forum for presentation and discussion of basic terminological tools and techniques which can be fruitfully applied to knowledge engineering.

Workshop "Concept Analysis", Darmstadt, FRG, January 17–19, 1986

This Meeting was organized by the research group on concept analysis at the Technical University of Darmstadt (Prof. Dr. R. Wille), cosponsored by the SIG/BA of the Gesellschaft für Klassifikation, and subsidized by the foundation "Volkswagenwerk". Most of the 20 papers presented outlined the different approaches various subject fields have chosen in the investigation of concepts and their applications.

The majority of presentations drew the attention of the audience upon the impact mathematical methods and theories can have upon the structuring and presentation of concept systems. The most notable development in this field has taken place at the Department of Mathematics of the Technical University of Darmstadt. The application of the lattice theory makes it possible to establish a hierarchical order within a set of related concepts, which is based, however, on the frequency of occurence of certain characteristics. In addition, the research group has developed suitable software for the presentation of these lattices by computer.

Infoterm presented a paper concerning aspects of the representation of concepts starting from the common roots both in mathematics and terminology. These roots were outlined by comparing the relevant theories of