Classification Research News

Is this a new column? No it is not. It was known formerly as "FID/CR News" and this is an appropriate time to change the title for at least two reasons. First of all, for some time the coverage in this column has gone considerably beyond the activities of FID/CR to cover research in knowledge organization in general. Secondly, and most importantly, FID/CR now no longer exists. The present plan is to continue to cover research activities in knowledge organization in general, as well as the contributions made by specific research organizations and conferences that relate to this topic.

FID, FID/CR, and UDC

Sadly, and with considerable regret, I must inform the readers of *Knowledge Organization* and the wider classification research community that FID itself has ceased to exist. As the original founder and developer of the *Universal Decimal Classification (UDC*), through FID/CR its Committee on Classification Research, it was an early promoter of classification research and did much to stimulate and further its cause.

FID had accomplished a great deal since its establishment in 1895, and its disappearance from the scene has particular significance for those of us with an interest in UDC and in classification research. Serious interest and exchange of research information was brought into prominence through FID/CR's sponsorship of six International Study Conferences on Classification Research– in Dorking, England (1957), Elsinore, Denmark (1964), Bombay, India (1975), Augsburg, Germany (1982) Toronto, Canada (1991) and London, England (1997). These successful conferences served to bring together members of the research community in knowledge organization in general and in classification in particular. They have resulted in significant output and in ongoing dialogue among the participants. This was a valuable contribution that will be greatly missed.

For some years, the parent body, FID, has been experiencing financial problems and membership was dwindling. By the year 2000, this situation had reached crisis proportions. By mid 2000, the FID Executive Director had left his position and he was not replaced. As well FID's biennial Congress, slated to be held in Brazil in October 2000, was cancelled and the *FID Review* was no longer being published. By March 31st 200l FID had ceased to operate.

There have been many questions about this sad event, not the least of these is the fate of the activities that FID fostered for many years Initially, IFLA, as the organization most closely associated with FID, offered to help. Clearly IFLA could not take on the financial burdens of FID but it was prepared to find a place for Special Interest Groups and specialist committees (such as FID/CR) within IFLA and to permit FID members to participate in IFLA's Boston Conference in August 2001, as well as to hold meetings, and to publish articles in the *IFLA Journal.* It was also prepared to set up special membership arrangements for the conference...

However, for reasons that are not entirely clear to members of FID and IFLA, this did not come to pass. In an effort to clarify the situation, on June 14, 2001, Ross Shimmon, Secretary General of IFLA, issued an "Open letter on IFLA and FID." While IFLA's proposal had been withdrawn, the letter invited FID members to come to the Boston conference. The letter was posted on IFLANET.

It was clear that IFLA was still willing to do what it could to enable FID members to continue their interests and contributions to improving the quality of information systems. As a result of these overtures, a meeting of the IFLA Discussion Group on Information and Documentation took place during the IFLA Boston Conference. The meeting was chaired by Kirsten Engelstad, Director General of the National Office of Research Documentation, Academic and Special Libraries in Oslo, Norway, and a number of interested people from both organizations were present. This included some FID Council members, Chairs and former Chairs of committees. As a result of the discussion, FID Councillors were urged to consult with their colleagues and a Task Force was set up to consider how FID activities might be incorporated into IFLA and to report within a year.

How might this affect Classification Research and UDC? First of all, it needs to be clearly understood that UDC is not involved in this situation. UDC has not "belonged" to FID for a number of years. It is "the intellectual property" of a UDC Consortium of

the publishers of the Czech, Dutch, English, French. Japanese, Russian and Spanish editions of UDC. It is to this body that an organization must apply for permission to publish its own edition. Originally FID was a member of the Consortium but became ineligible for membership when it could no longer afford to contribute its share of the finances. Thus, as a result of the wise move in the early 1990's to create the Consortium, UDC continues to thrive and to be developed under the competent direction of an editor and research staff and can be expected to do so in the future. As stated in a recent brochure from the Consortium, UDC has world wide use and has been published in full or abbreviated editions in 23 different languages.

What will happen to the activities of FID/CR? This remains problematic. The findings of the Task Force will have a bearing on this. Two former Chairs of FID/CR have agreed to serve on the Task Force. Without further investigation it is difficult to see how FID/CR activities might fit into the IFLA setting. IFLA has its Section on Classification and Indexing which has an interest in research but whose activities are clearly focused on practice, whereas FID/CR focuses more precisely on research. Moreover the membership of the two groups is somewhat different with very little overlap. Would there be separate sections or committees within IFLA? Is this a reasonable thing to contemplate? Only further consideration will provide answers. However, it is important to note that the International Society for Knowledge Organization (ISKO) is an organization that has goals and activities closely related to those of FID/CR. Founded by Ingetraut Dahlberg, also a former chair of FID/CR, ISKO is well established with chapters in some individual countries and a record of biennial conferences where research papers are presented. Moreover, many of ISKO's members have at one time or another participated in both groups. Whatever the outcome, it is encouraging to realize that research in knowledge organization and its dissemination is likely to continue into the future.

Universal Decimal Classification update

The year 200l has been a busy one for UDC. The work of the Editor, Ia McIlwaine, has been supported by two research assistants– one full time and one half time. The Consortium's website (http://.udcc.org/users.htm) has been completely redesigned and contains up to date information on revisions and extensions, together with the content of *Extensions and Corrections (E&C)* since 1993 and a list of UDC users. New editions of the scheme continue to be published. In 2001 a new standard edition of UDC in Spanish was published in both hard copy and CD-ROM format and a pocket edition in German was expected to be published in September. An updated Czech/English edition was published in 2000. and the Consortium was expected to publish the first installment of the Dutch edition in September 2001. One of the most significant events of the year was the launching, in June 2001, of the British Standards Institution web version of the UDC English Medium Edition, now available at http://www.udc-online.com

Among the features of the web version of UDC are the inclusion of the complete content of the internationally owned official database, the most up to date version always available online, and a number building facility that makes it possible to "cut and paste" so as to avoid transcription errors. The screens are user friendly and multiple search strategies are provided to permit, for example, string searches in natural language, boolean search, searching using the summaries and shifting to greater detail, or browsing the notation hierarchically. Context sensitive help is available. Both the full version and a demo version are available. Details of purchase can be found at the website. Of course, paper versions of UDC are still available. The 1993 paper version of the English Medium edition is still available in on demand format, and the Pocket edition, first published in 1999, is still in print. Important help for UDC users can be found in *The Universal Decimal Classification: a guide to its use.* Published in 2000, it is a completely revised and enlarged edition of the earlier work *Guide to the use of the UDC.* As described in a recent "UDC update", it contains material on the general use of the system, together with "a section on the operation of the Master Reference File (MRF), an enlarged section on the application of the classification, with emphasis on its use in automated systems, a chapter on indexing and retrieval, a chapter on revision procedures and a detailed bibliography." Also, unlike the previous edition, it has an index.

With respect to revisions, *E&C* for 2001 will be published in November 2001. Among its contents will be reports from Consortium members, revised Area Tables for Central and South America, a revised table for Ireland and expanded tables for the USA for users who need more detail than is contained in the current MRF. The Management class has been com-

pletely revised and is now in class 0 at 005. It brings together management topics previously scattered through 06, 33 and 65 and also includes records management. In class 2, expansions for the Orthodox Christian Church and for Buddhism will be provided and there will be a report on the progress on 61 Medicine. Other work in progress includes a complete revision of Chemistry and of Physics and Theatre. *E&C* can be purchased from the UDC Consortium. It will be available in paper form and probably on the website.

Area tables continue to be revised. BSI/DISC has issued a separate publication of the Area Tables for the United Kingdom and Germany and a similar separate of the revised Area Tables for the United States and Canada is expected to be published in 2001. Work is in progress on new editions of the Standard version of UDC in French and Russian.

IFLA Satellite Meeting

Prior to the 67th IFLA Council and General Conference in Boston a Satellite Meeting on

"Subject Retrieval in a Networked Environment " sponsored by the IFLA Sections on Classification and Indexing and Information Technology was held at OCLC in Dublin, Ohio, USA. Twenty-two papers on a variety of topics were presented in eight sessions. The following is a brief description of the content of presentations given at the Meeting.

At the opening session on "Retrieval in a Multilingual Environment", two papers were presented. In their paper "MACS: Subject access across languages and networks", Elisabeth Freyre and Max Naudi (France) described research on multilingualism in a new network environment. Based on the premise of equality of languages, the system sets up equivalences between subject heading languages creating a system that enables simultaneous subject searches with a single query in the language of a user's choice (English, French or German) to retrieve all pertinent documents held in catalogues of the project's partner libraries. This is a work in progress projected to be fully operational by 2002 and currently being tested on the World Wide Web at http://infolab.kub.nl/pri/macs. It uses a process different from traditional translation, freeing the search language from the language of the catalogues by creating a multilingual dictionary of subject headings. The four libraries being used are the Swiss National Library (coordinator of the project) the Bibliothèque nationale de France, the British Library and the Deutsche Bibliothek. The subject heading languages used are SWD/RSWK for German, RAMEAU for French and LCSH for English. For purposes of retrieval, the concepts from each are mapped, on the basis of "exact, partial, simple or complex equivalences." The project is intended to demonstrate two major goals: "the multilingual extension of a subject search to other catalogs using other languages, and the multilingual subject searching in each catalog." Once this part of the project is completed, a second version of the system will be created providing direct access to local authority lists of the participating libraries including the use of *see* and *see also* references. The authors see the results of this work impacting both subject searching and indexing. In the second paper in this session, Gerhard Riesthuis (Netherlands) discussed "Information languages and multilingual subject access" in which he concerned himself with multilingual thesauri in which "not all descriptors in a given language have equivalent descriptors in all languages." As well there might be variations in the hierarchical structure across languages. A small model was the basis for the author's analysis. Three methods for creating multilingual thesauri were outlined and comparative examples were given in English and Dutch using "media" as the topic. The author's conclusion is that more can be done to make multilingual searching "more intuitive for users."

The second and third sessions of the Meeting contained three papers each on the theme "Retrieval across Multiple Vocabularies." Tony Olson (USA) spoke on "Integrating LCSH and MeSH in information systems". The two systems were mapped to each other using the 7xx field in the USMARC authority records. The project is ongoing and it is planned to distribute mapping data in both MARC and non-Marc formats to libraries, vendors and other bibliographic agencies. The title "Renardus: Cross-browsing European subject gateways via a common classification system (DDC)" by Traugott Koch (Sweden), Heike Neuroth (Germany) and Michael Day (UK) clearly and succinctly describes their paper. The project, funded by the European Commission, involves a partnership among national libraries, research centres and subject gateway services from Denmark, Finland, Germany, the Netherlands, Sweden and the UK and is coordinated at the Royal Library in the Netherlands. The aim of the project is to develop a web-based service to permit searching and browsing across a range of distributed European based information

services designed for academic and research communities. In particular, they include institutions that provide subject access to Internet resources through subject gateways. The system uses a common metadata profile to map all locally used classification schemes to a common scheme, namely the Dewey Decimal Classification. DDC was chosen because of its online availability, its global use, the large number of digital resources classified by it, and the speed and frequency of updates, among other features. The authors identify five types of mapping relationships with examples. The mapping approach which results in DDC being used as a switching language is discussed. The purpose of the cross browsing is "to allow users to navigate through the subject hierarchies of the DDC classification and to 'jump' from a chosen class to related (i.e. mapped) classes and directories in local subject gateways." The system allows users to visualize the resources in the context of their local browsing structures. The mapping is expected to be completed in the fall of 2001 and the authors feel that the systems may have uses as yet untried and they may make further refinements.

Session 3 on "Retrieval Across Multiple Vocabularies" included three papers on specialized topics. "Putting the world back together: Mapping multiple vocabularies into a single thesaurus" by Patricia Kuhr (USA) described "an ongoing project in which the subject headings contained in twelve controlled vocabularies ... are being collapsed into a single vocabulary." More specifically, it is a project to provide a single thesaurus for the H.W.Wilson Company bibliographic databases. In original printed form the Wilson indexes used separate subject heading lists geared to each domain or discipline and in the initial stages of the Wilson automated system, these separate lists were retained with some linkages between them. This paper discussed a new initiative for subject access to the Wilson system. The design of the project and the problems and pitfalls of multiple vocabularies were outlined and the application of the thesaurus and the methodology of retrieval explained. Friedrich Geisselmann's (Germany) paper on "Methods of access in a database of E-Journals" describes a database (called "Elektronische Zeitschriftenbibliothek" (EZB) developed at the University Library of Regensburg. The service is web-based and is a dedicated system outside the traditional catalogue and is described along with the different methods of access. One hundred and forty nine libraries are participating in the project. The journals themselves are not stored but must be available on the Internet. The principal method of access is by browsing a broad system of classification subarranged alphabetically and titles can be displayed alphabetically or in subject lists. A journal title is linked directly to the journal home page and if it is on subscription the full text of an article can be accessed. Searches can also be made by title keyword, publisher and ISSN. As well, the database is connected to library catalogues and bibliographic databases, thus offering an integrated search service. The author indicated that it has proved to be a useful service offering access to information that cannot be provided by a library catalogue. The third paper in this group, "Mundane standards, everyday technologies, equitable access" by Hope Olson and Dennis Ward (Canada) describes a controlled vocabulary problem of a different kind– access to marginalized knowledge. The "standards" the authors are discussing are controlled vocabularies and the problem described is the bias and inadequacy of these vocabularies to meet the needs of specialized domains. In this context the authors survey four different approaches "to ameliorating bias". These are the revision of existing general standards (e.g LCSH), adaptation of general standards (e.g. regional examples of DDC), specialized standards for a particular knowledge domain (e.g. various thesauri in the area of women's studies) and specialized standards for a particular situation or institution. These methods are discussed in the context of information technology issues and institutional issues. The climate is one in which controlled vocabularies are subject to central control and not necessarily suited to local needs. In their conclusion, the authors raise the question "How can we bring control back to a local level?" They conclude that the focus needs to be on *projected reality* (i.e. the reality of the future), but that in anticipation of this, the reality of the present (i.e. the mundane reality of everyday information) needs to be looked at. At the very least there needs to be some kind of balance between the two.

Session 4 addressed "Cross Sectoral Retrieval" i.e. systems for retrieval across many diverse domains. Dennis Nicholson and Susanna Wake (Scotland) in their paper entitled "HILT: Subject retrieval in a distributed environment" described a project which investigated "the problem of cross searching and browsing by subject across a range of communities, services and service or resource types in the UK". The acronym HILT stands for High Level Thesaurus Project and a wide range of partners and stakeholders using a variety of subject systems and associated practices

were involved. Among them were libraries, archives, museums, electronic services, bibliographic databases, etc. The approach taken and the progress to date are described. Findings indicated that "in most communities there are one or two dominant schemes or combinations of schemes in use", but schemes are not necessarily used consistently across resources. In moving toward some conclusions a workshop was held to provide for in-depth discussion. As a component of the workshop a set of 5 options were identified and critiqued. It was concluded, that there was clear consensus that a pilot mapping service should be set up in which the following schemes would be mapped to each other: LCSH, *UNESCO Thesaurus*, DDC, UDC and the *Art & Architecture Thesaurus* (AAT). Similarly, William Garrison's (USA) paper on "The Colorado Digitization Project: Subject Access Issues" is "a collaborative initiative that involves Colorado's archives, historical societies, libraries and museums." Its goal is to create a virtual digital collection of resources in order to provide increased access to these materials. A union catalogue is being created and use of DDC class numbers are used to allow linkage between general subject terms and highly specialized terms is being investigated. So far the results point to DDC as a promising device for subject retrieval in a database which has subject vocabulary from multiple thesauri. The last paper in this session was Clare Beghtol's (Canada) "The Iter Bibliography: International Standard Subject Access to Medieval and Renaissance materials (400-1700) (http://iter.utoronto.ca). "Iter" ("journey" or "path" in Latin) is a project for providing subject access to all kinds of materials pertaining to the Middle Ages and the Renaissance. It is a joint initiative involving the Renaissance Society of America, the Faculty of Information Studies, University of Toronto, the Arizona Center for Mediaeval and Renaissance Studies, Arizona State University and the John P. Robarts Library, University of Toronto. The database is designed as a "reasonably priced, web-based timely research tool." As the basis for subject access it uses LCSH and the DDC. These tools were used because they are general systems with a breadth of the subject coverage. No thesaurus existed that had the breadth of coverage required for the project and these tools have numerous other features that make them suitable for the purpose. However, they are not without some problems. Both LCSH and DDC were developed for describing books and subject headings and may not be specific enough for journal articles. Another drawback is that LCSH is an English only tool. However, it was decided that the combination of the two tools would be sufficient for the project if uncontrolled keywords were added as needed for journal articles. The procedures and the training of the indexers for the project were explained and the methods used in subject analysis described. All three of the presentations in this session dealt with the problems of subject access in very large computerized systems.

At session 5 the three papers focused on "Domain-Specific Retrieval". All described vocabularies in some area of education. Michèle Hudon (Canada) discussed "Subject access to web resources in education" examining "various classificatory structures used in the Internet to organize and make collections of web-based resources more accessible to educators, educational specialists and the general public." The author's concern was with recent developments in dealing with access to resources that she describes as "*structured collections of active links to preselected electronic resources*" for which some problematic loose organizational schemes have been created. As a basis for her analysis the author defined six facets considered essential for a scheme to handle this field. Beginning with the term "Education" the author moved vertically down the categories in a number of web directories (e.g. Yahoo, Alta Vista Google, etc.) examining the structure and terminology of the organizational schemes and comparing them with each other. It was found that the structures were generally shallow and the logic of the hierarchies was generally explicit, but that there were differences across directories that would hinder browsing from one directory to another. As possible alternatives and a basis for contrast, structures of more traditional systems were examined. Specifically the *Dewey Decimal Classification,* the *Encyclopedia of Education Research* and the *Thesaurus of ERIC Descriptors* were considered. Conclusions reached were that classifying web-based resources in education for efficient retrieval is "no easy task" and that it may not be possible to find "a universally acceptable" solution. "It could be useful at this point to explore a wider variety of organizing models to try and improve the navigability of existing structures. Jain Quin and Jaingping Chen (USA) described "A Multi-layered, multi-dimensional representation of digital educational resources." This study reported preliminary results of "a semantic mapping experiment for the Gateway to Educational Materials (GEM)." Keywords were mapped with controlled vocabulary in GEM. Linguistic and technological problems that were encountered

during the mapping process were identified. As a result of the experiment the general conclusion was that "subject access to networked information resources relies on a sound representation that includes not only a well developed vocabulary but also, more importantly, a knowledge representation structure that is in synch with representation technologies." Further study is anticipated. In the final paper in this group Aida Slavic (UK) presented a paper on "General classification in learning material metadata: the "Application in IMS/LOM and DCMES metadata schemes". This paper addresses the need for subject approach to information in providing access to resources in the educational domain and "explains the reasoning behind the application of Universal Decimal Classification in EASEL (Educator's Access to Services in the Electronic Landscape – http://www.fdgroup.com/easel)." The EASEL system uses Dublin Core and applications of IMS/LOM and the author explains how these two types of metadata support the use of a classification system.

At any conference of this type it is not surprising that "tools" and new technologies are of prime interest. In session 6, three papers focused on "Tool Development for Retrieval." Mary Burke (Ireland) addressed "Personal Construct Theory as a research tool in library and information science." This was a case study on the development of a user-driven classification of photographs. The purpose of the research was two-fold: 1) to test the validity of the Personal Concept Theory (developed by George Kelly in the mid-1950's as a contribution to psychotherapy) for subject analysis of photographs and 2) to use the Personal Construct Theory and repertory grids to enhance the retrieval of photographs. The author pointed out that the subject analysis of visual images is a subjective process in which individual user-characteristics play an important role. In doing so, she identified two possible main solutions to the problem– the intellectual analysis by a human indexer and automatic content analysis using computer software. However, she assumes that neither solution will be completely satisfactory in an environment as diverse as a web-based environment with remote users. For purposes of the study digitized photographs were chosen from an Irish Folklore Archive at University College Dublin. The photographs were indexed by two groups of classifiers -library and information science students and Irish folklore students and staff. Classification was according to an in-house classification scheme and the results were used as a basis for comparison in an analysis for semantic and syntactic similarity. Great diversity in the constructs was found, but patterns emerged. The LIS students were slightly more consistent in the use of terms. Findings suggested that the theory is applicable to the problem, that further research is warranted, and that the Personal Construct Theory has the potential to enhance the retrieval of other types of media and that it provides a neutral framework for comparison of subject categories. In a second paper on tool development Carol Bean and Rebecca Green (USA) discussed "Improving subject retrieval with frame representations." In the context of frame-based retrieval systems the authors were concerned with relationships among terms– equivalence, hierarchical and associative. The organizational structure of frame representations was described, and both the indexing and search functions were addressed. Findings suggested that frame based representation improved the control of equivalence relationships at the propositional level. Frames also promote high recall through a rich hierarchical structure at the frame, slot value level. In this same group Marcia Zeng and Yu Chen (USA) examined the "Features of an integrated thesaurus management and search system for the networked environment." The authors presented an integrated thesaurus management and cross-thesaurus search system designed for an international collaborative project called CAMed, a comprehensive resources system for complementary and alternative medicine. The authors described the functions of the system and highlighted the unique design for the network environment. Features addressed were the general structure and function of the thesaurus, the browsing of various thesaurus components, cross-thesaurus searching, and online generation of other components of a thesaurus (e.g. alphabetical and rotated displays from the hierarchically structured display). The system includes links from selected terms to databases and web sites. The system can be seen at http://circe.slis.kent.edu/mzeng/macmed/tmshome.html.

Progress tends to be evolutionary rather the revolutionary. Thus it is not suprising that two full sessions of the conference constituting six papers focused on "Transformation of Traditional Tools for the Web Environment". In her paper "From library authority control to network authority metadata sources" Maria Inêz Cordeiro (Portugal) discussed the use of traditional authority control and authority control methods to improve availability and usability of information in the networked environment. By taking a new approach the author postulates that based on the

primacy of "the *linking function* of authority data and by expanding the *finding*, *relating* and *informing* functions of authority records, networked systems can be improved. They could be aids in coping with multilingual needs, and in permitting interoperability among different systems. Edward O'Neill, Lois Mai Chan and Lynn El-Hoshy (USA), in their paper "FAST: Faceted application of subject terminology" proposed a new approach to handling the complexities of the syntax involved in applying LCSH to documents. The authors described FAST, developed at OCLC, as being "derived from LCSH but redesigned as a post-coordinated faceted vocabulary for an online environment". The goal is a vocabulary system that could be applied with minimal training and experience; that would enable a variety of users to assign subject terminology to web resources; that would provide a vocabulary amenable to authority control; that would be compatible with use as embedded metadata; and that would focus on making LCSH a post-coordinate system in an online system. It is limited to four "facets"– topical, geographical, form and period, although these appear to be categories rather than facets. Each type of "facet" was described with examples. The article discusses the breaking down of the topics into facets but it is not entirely clear whether the "faceted" descriptors will remain separate when they are applied to documents or whether they will be combined into strings. Examples of the "facets" are exemplified in strings and there is reference to "topical headings strings" being established in the authority file. As well, the authors state that the system will "focus on making use of LCSH as a post-coordinate system in an online evironment." There is some confusion over whether (as is stated) the result will be a post-coordinate vocabulary, or whether LCSH headings will continue as pre-coordinate strings to be searched post-coordinately. Perhaps they are intended to be used both ways. In contrast, Francis Devadason applied the facet principle in a somewhat different context – the "Faceted indexing application for organizing and accessing Internet resources." His paper describes "an experimental system designed to organize and provide access to web documents using a faceted pre-coordinate indexing system based on the Deep Structure Indexing System (DSIS) derived from POPSI (Postulate based Permuted Subject Indexing), a system that has some of the characteristics of PRECIS.

The final session of the conference on "Transformation of Traditional Tools for the Web Environment" addressed the major classification schemes– LCC, UDC and DDC– in the networked environment. Carol Jean Godby and Jay Stuler (USA) described "The Library of Congress Classification as a knowledge base for automatic subject categorization." The authors described a set of experiments carried out to adapt a subset of the Library of Congress Classification for use as a database for automatic classification Their goals are to adapt LCC for use in automatically classifying full text, to exploit LCC subject structure for online browsing and, finally, to make the results available to the library community at large. Four schedules– *Q,, Science, R, Medicine, S, Agriculture and T, Technology* were chosen for a pilot study and modifications (in particular removal of some details not required for the experiment) were made to the schedules. Definitions of the remaining classes were enhanced using the LC Subject Authority file and OCLC's WorldCat database. An algorithm was used to assign terminology and identify the LCC class number. Results were "a database design that can be used for the automatic classification of full-text documents". A paper by Ia C. McIlwaine (UK) examined the potentialities of "The UDC and the World Wide Web." The author cites the analytico-synthetic notation as the facility to "link concepts at the input or search stage and to isolate concepts", so as " to retrieve separate parts of compound subjects individually as required." As such, its notation permits hierarchical searching and overrides the shortcomings of natural language. The author further points out that recent revisions to the UDC have been constructed with this idea in mind. Several examples of this approach are identified including the totally new classification for Management (005) to be published in UDC *Extensions and Corrections* in late 2001. Other applications discussed include the use of UDC embedded in metadata and as a basis for subject trees. UDC's application as a gazateer is another web application that is suggested. Finally the potential of DDC in the World Wide Web was discussed by Diane Vizine-Goetz and Roger Thompson (USA) in their paper "Toward DDC-classified displays of NetFirst search results." The purpose of the study was to assess the potential benefits of providing classified display of search results. The classification features of the OCLC NetFirst database were analyzed using criteria developed by the "LA Subject Analysis Commitee (SAC) Subcommittee on Metadata and Classification. NetFirst search logs were also examined. Findings demonstrated that NetFirst lacks core classification functions

of browsing and hierarchical navigation and that the search and limiting functions are there but rarely used. It was concluded that he inclusion of class numbers and high level captions in all records provide opportunities for experimentation with classified results of displays but new features are needed which "must be well integrated with the search and display functions if they are to be used."

In the overview, this conference was well focused on the challenges of the "networked environment." Emphasis was on practical research and investigation with very little in-depth theoretical consideration although theory and principles were clearly recognized and applied in the research being carried out. Most importantly, there was evidence of trends and issues that are important to the whole web-based environment and the globalization of access to information. The concern for effective use of large databases is evident. Prominent among specific concerns were multiple vocabularies and subject retrieval across multiple databases as was the improvement of methods of organization and retrieval in the web. The full text of each paper was available for conference participants and it is expected that the proceedings of the conference will be published.

IFLA Section of Classification and Indexing

Following the Satellite Meeting, the Section on Classification and Indexing participated in the 67th IFLA Council and General Conference in Boston. During that event the Section held a programme meeting and the Standing Committee held two working meetings. The theme of the programme meeting was "Education and Knowledge Organization". Speakers included Pat Oyler (USA) who gave a paper on "Teaching classification in the 21st Century" and Aida Slavic (Croatia) who discussed "Classification in a modern and sustainable LIS curriculum: the Case of Croatia". A paper on "Knowledge organization and information retrieval in times of change: Concepts for education in Germany" prepared by Winfried Gödert (Germany) was not presented because the author was unable to be present at the conference. Filiberto Felipe Martinez-Arellano (Mexico) was also unable to be present to give his paper on the "Teaching of subject access and retrieval at Mexican LIS schools". Pat Oyler called for the "teaching of classification in such a way that the librarian or information scientist will be able to apply that knowledge to the organization of information in any format." She noted that the approach of the past century was a practical one whereas "in the world of the 21st century ... the theoretical basis is becoming more important". The papers of Slavic and Gödert and Martinez-Arellano focused on the particulars of education for knowledge organization in their respective countries. The full texts of all four papers are available with the IFLA Conference Papers on IFLANET (http://www.ifla/org). In the absence of two speakers Ia McIlwaine, Chair of the Standing Committee arranged for a panel of four delegates. Vanda Broughton (UK), Lois Mai Chan (USA), Gerhard Riesthuis (Netherlands) and Nancy Williamson (Canada) gave brief presentations on "Education for Knowledge Organization" in their respective countries. Over all, the presentations and panel provided a wide and varied spectum of views of library and information science education in various countries of the world.

The Standing Committee of the Section has a number of ongoing projects. During the conference elections were held. The new officers of the standing committee are: Chair, Ia McIlwaine (UK), and Secretary, Pia Leth (Sweden).

Classification Research Group (UK)

At its 329th meeting in London, on Friday, July 6, 2001 paid tribute to Derek Austin long time member of the CRG and creator of PRECIS who died earlier in 2001. In this context the meeting had a brief discussion of PRECIS and the reasons for its failure to become a dominant system of subject retrieval. The group continues to work on the second edition of the *Bliss Bibliographic Classification (BC2*) and current discussions are focused on the "Leisure Arts", in particular "recreation and the leisure arts" and "biography and the leisure arts". At the forthcoming meeting in September the Group planned to turn its attention to the schedules for Military Science.