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NISSAT

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Editorial Committee

Dr A. Lahiri

Jt. Adviser (NISSAT)

Department of Scientific & Industrial Research
New Delhi-110016.

(Smt) S. Ravindran

Dept. of Scientific & Industrial Research
New Delhi-110016.

Shri B.G. Sunder Singh

Dept. of Scientific & Industrial Research
New Delhi-110016.

Prof. R.G. Gupta

Dean, School of Computer and Systems Sciences
JNU, President Society for Information Science
New Delhi-110067.

Dr S. Mallick, Secretary

Society for Information Science
EMR Division, HRD Group CSIR, CSIR Complex
New Delhi-110012.

Shri H.C. Jain, Treasurer

Society for Information Science
Head, Technical Information Services
PID, New Delhi-110012.

Editor: Ram D. Taneja

Editorial Office: S-371, Greater Kailash-I
New Delhi-110048.

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NISSAT Newsletter, published quarterly, is the official organ of NISSAT, and is aimed at disseminating information concerning programmes, activities and achievements of NISSAT as also of the various centres functioning under it. Additionally, it attempts to project major developments in the field of information science at national and international levels.

Communications concerning the Newsletter may be addressed to Dr A. Lahiri, Jt. Adviser (NISSAT), Department of Scientific & Industrial Research, Government of India, Technology Bhawan, New Mehrauli Road, New Delhi-110016. Material published in the Newsletter can be reproduced with due acknowledgement to the source.

Why Can't We Hit the International Market?

Sometimes we invite clouds for their silver lining just the way we promote polluting industries to earn foreign exchange through exports. Proliferation of industries on leather and ibuprofen in India will drive home the point.

In the sense of this concept, the information industry is less fortunate. Apart from canned life, the information scientists live (divorced from environment, in unpleasant coolness and dehumidified atmosphere of computer rooms) and the paper they consume, information industries do not precipitate any environmental problem. No wonder that information industries in the West do not invite themselves to India.

We boast, and perhaps justifiably so, that skills in information science and information technology applications are overflowing in this country. Ultimately however, we only sell our brains cheap outside, or participate in generation of western brand products and services. As yet we do not have a software/hardware product that has marked a presence in the international market.

Generation of databases is labour intensive. We often suggest that the labour costs are low in India and therefore the West should parcel out the jobs for information collection and collation to us. This may be partly right but not wholly true. We do not take cognizance of the fact that our labour productivity is low, and the work culture vitally necessary for success in database ventures, does not exist here. Whereas, our success stories of participation in global activities like AGRIS & INIS indicate that, given a responsibility, our information scientists could rise to the occasion.

If so, why do we not put a product or service in the international market?

Today only a few databases like the NASA files cannot be accessed by the Indian users. Restrictive practices are now creeping into S&T. The day may not be far off when the terminology "information in public domain" will make no sense. Or else, the prices might be pegged at astronomically high levels making it virtually impossible for the developing countries to use the databases. The situation all the more calls for development of endogenous capabilities, and commercially tradeable products and services.

The common feeling is that the products and services already in the international market cover the entire breadth and depth of human knowledge and there is no scope left for developing countries like India to enter the field now. Though infinite scope for production of value-added items in niche areas and for internationalizing Indian information exist, we have only been looking for sub-contractor roles as in the case of *FSTA* or *Current Contents*.

While collaborative arrangements may continue, we should strive for establishing unadulterated and solely Indian brand of information products or services in the international market place, not necessarily with a commercial motive, but to instil prestige and confidence in the information scientist community in India.

— A. Lahiri

NISSAT NEWSLETTER NO. 3, 1993

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Design and Creation of Factual Databases Using CCF (F): UNESCO-NISSAT Experts Meet on Factual Databases

The National Information System for Science & Technology (NISSAT) organized a two week Experts Meet on Design & Creation of Factual Databases using CCF (F) during April 19-30, 1993 at Technology Bhawan, New Delhi.

Objective

On the basis of the CCF (F): Common Communication Format (Factual) (Part 2 of CCF Edn.3) developed by the PGI/UNESCO, the effort was mainly to:

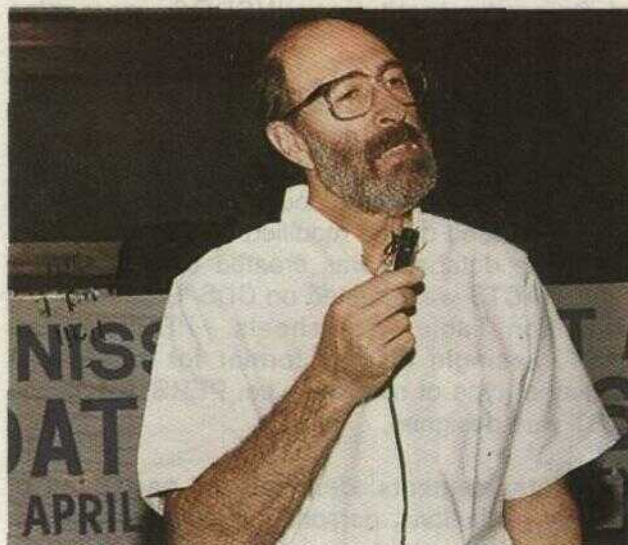
- i. identify mandatory and optional data elements in the design and creation of factual databases
- ii. formulate data collection procedures and forms and
- iii. create sample factual databases on CDS/ISIS and help NISSAT testing CCF(F) as an Indian Implementation.

Resource Person

Professor Peter Simmons of Columbia University acted the UNESCO/PGI resource person.

Proceedings

The first week commencing 19 April 1993 was devoted to institutions involved in database activities/generating various kinds of directories — persons, institutions and projects to elicit their opinion on the data elements provided by CCF(F). The following institutions attended the deliberations:



Prof. Peter Simmons (Columbia University), UNESCO Resource Person Conducting the Programme

Databases on INSTITUTIONS

ILA	—	Nalanda: a directory of Indian Libraries
DSIR	—	In-House R&D Institutions
CDC	—	National Directory of Consultants
TIFAC	—	Standardsbase, Expertsbase

Databases on INDIVIDUALS

TIFAC	—	Expertsbase
ISTA	—	Panel of Translators
CSIR/DSTP	—	CSIR Directory of CSIR Scientists
IAMR	—	Manpower Resources Information
INSA	—	Directory of Members, Fellows

Databases on PROJECTS

Teledirect	—	Kompass databases
BTIS	—	Research Profile of Biotechnology Activities in India—Directory

Apart from these, National Union Catalogue of Scientific Serials in India/INSDOC and Directory of Scientific Institutions/INSDOC, were also consulted.

Based on the discussions with the participants, Professor Peter Simmons and the NISSAT professionals (Mr. B.G. Sunder Singh and Mrs. Kamini Sharma) worked out the modifications to CCF(F). Based on the modified version of CCF(F), a sample database was created by the NISSAT Staff. **FACTS** was created on CDS/ISIS. The Field Definition Table, Worksheets —PERS, PROJ, INST, a single display format for conditional display of type of records — i.e. PERS. PROJ and INST was designed.

The data elements identified for each type of record—institutions, persons, projects are given in Table-1.



Participants' Group

Table-1 Consolidated Listing of Mandatory/Optional Data Elements for CC(F) for Use in India

		Project	Institution	Person
001	Record identifier	M	M	M
020	Source of Record	M	M	M
	A Agency in coded form			
	B Name of Agency			
	C Code System			
	D Rules for description			
	L Language of the Name			
022	Date Entered on File	M	M	M
	A Date			
040	Language of Entity	O	O	O
	A Primary Language			
	B Secondary Language			
062	Type of factual information	M	M	M
	A Type (R)			
086	Field to field linking (R)	M	M	M
	A Field linked from			
	B Relationship code			
	C Field Linked to			
088	Record to record linking (R)	M	M	M
	A Linked Record Identifier			
	B Relationship code			
125	Project number (R)	M	—	—
	A Project Number			
	B Type of Number			

(Contd.)

130	Contract number (R) A Contract Number (R)	O	—	—
200	Title A Title (R) L Language of title S Script of title	M	—	—
210	Title in other language (R) A Title L Language of title S Script of title	O	—	—
300	Name of person (R) A Entry element B Other elements C Additional elements (R) D Date of birth and/or death E Role coded (R) F Role non-coded (R) G Sex Z Authority	M	O	M
310	Name of Institution (R) A Entry element B Other parts of name (R) C Qualifier (R) E Country of Institution F Role coded (R) G Role non-coded (R) L Language of Entry element S Script of Entry element X Variant form of the Name (R) Y Former name (R) Z Authority Record Number	M	M	M
330	Affiliation (R) A Entry element B Other parts of name C Qualifier (R) D Address (R) E Country of Affiliation (R) F Relationship Language of Affiliation	—	O	O
430	Address (R) A Building/Institution (R) B Street address (R) C Town or city (R) D State or Region (R) E CountryF Postal Code G Post Box Number H Telephone Number (R) I Telegraphic Address (R) J Telex number (R) K Fax number (R) L Electronic mail Address (R) N Note (R)	O	O	O
448	Dates of entity (R) A Date formalized B Date not formalized C Duration	O	O	—

500	Note (R) A Note	○	○	○
600	Abstract/Description (R) A Abstract/Description L Language of Abstract/Description	○	○	○
610	Classification scheme notation (R) A Notation (R) B Name of scheme C Code of Classification scheme	○	○	○
620	Subject Descriptor (R) A Subject descriptor (R) B Name of Subject system C Type of Subject Descriptor	○	○	○
700	Human Resources (R) A Level of responsibility B Number of persons C Area of responsibility	○	○	--
705	Equipment and other resources (R) A Equipment (R) B Other resources (R)	○	○	—
710	Financial Resources (R) A Financial Resources (R)	○	○	—
715	Income components (R) A Source of funding B Amount of Funding C Time period or phase D Additional information (R)	○	○	—
716	Expenditure components (R) A Type of component B Amount C Time period D Additional information (R)	○	○	—
800	Nationality A nationality (R)	—	—	○
810	Educational Qualifications (R) A Educational Qualifications	—	—	○
820	Experience of Person (R) A Dates B Institution C Responsibilities D Additional Information	—	—	○
860	Project Status A Status	○	—	—
920	Membership (R) A Name of the organization B Additional Information	○	○	—
6 925	Award (R) A Name of the Award B Additional Information	○	○	○
960	Products/Services A Products or Services (R)	○	○	○

During the Second Week i.e., from 26 to 30th April, 93 the participants tested the FACTS database (using CDS/ISIS) by entering actual data. The objective of this exercise was to create a sample database and to see whether the data elements were enough for developing a factual database on Projects, Persons and Institutions using CCF(F). The following comments were given by the participants:

General Comments

The time given was too short to define all the data elements required for each entity and therefore, the minimum fields were selected for each entity.

Some of the data elements have too many sub-fields which will make data entry process difficult. Create three separate worksheets for people, project and institutions so as to facilitate the data entry process easy and fast.

CDS/ISIS is used for the creation of People, Institution and Project database with CCF(F) format. Other software packages should also be used to test this format.

The existing software may not process the data elements, as desired

- i) if subfields are repeated when fields are non-repeatable.
- ii) to link the fields and also the records.
- iii) if there are more than one field indicators.

Major changes may have to be made especially in the context of CDS/ISIS.

Recommendations

1. An Indian version of CCF(F) — sample database may be created for distribution.
2. An Indian CCF(F) Implementation document to go with 1.
3. Selection of data elements for the description of books, periodicals, reports, theses, cartographic materials, patents and standards made during these deliberations may form the basis for CCF(B) for Indian CDS/ISIS users.
4. An implementation document for CCF(B) may be prepared as an alternative to INDIMARC effort keeping in view the requirements of small and medium sized S&T library and information centres in India. Following discussion on the subject with the resource person, it was suggested that NISSAT should request Mr. Asoke Mukhopadhyay [Librarian, Indian Institute of Management and Member — CALIBNET Task Force and Standards Committee] to undertake this task.

Another document for implementation of UNIMARC may also be prepared subsequently.

5. The CCF Teaching aid (Unesco project) tested during this session, may now be distributed.
6. Sample database definitions of CCF(B), CCF(F) and UNIMARC may also be put on CDS/ISIS distribution disk at NISSAT.

— Kamini Sharma & Sunder Singh BG
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Status of CDS/ISIS Training and Use in Asia and the Pacific: A Regional Report

Patricia B. Carino, Institute of Library Science,
University of the Philippines, Diliman

(Continued from Vol. 8, No. 2, 1993)

4.1.3 *Special Courses*

A majority of the training courses now offered fall under this category and these may be classified into three types: training on a specific aspect of library or information work; courses for information networks or resource-sharing systems; and as part of a bigger and longer-term course.

Training on specific library operations. Only one such course is noted among the country reports, that of Thailand, on the construction of keywords for information storage and retrieval. It will be offered in November 1992 and will concentrate on keyword construction only. The course will last for four days. There was no indication of trainee entry prerequisite (e.g., prior CDS/ISIS experience), although the report indicates that the course is already fully subscribed to and a second run is planned immediately after the first.

Training for network participants or a particular institution. This is the most common type of special training reported. Its coverage is similar to the beginner's course mentioned earlier, except that it concentrates on the specific format used by the network. Examples are Chulalinet in Thailand, APINMAP and INNERTAP in the Philippines, BISA in Australia, and the various national networks in China, India, Vietnam, and Sri Lanka. In the case of Thailand, there are two types of courses, depending on the type of record handled by the applications: monographs or serials. In India, NISSAT provides training of this type for the ISIS packages which the institution is providing to users. In these courses, users manuals written for the network are used during the course.

Institutions which have decided to adopt CDS/ISIS for their operations generally request training institutions for courses especially tailored to their needs. The coverage is similar to the "beginner" level, except that examples and operations are directly related to the institution's areas of interest. Preparation for these courses may entail longer course design time, taking into consideration interviews with the requesting institution and the development of a sample application that the institution may already use.

CDS/ISIS training as part of another program. In several cases, CDS/ISIS is used as a sample software, along with other softwares, in training programs on library and information management. In this case, CDS/ISIS is only a module within the bigger program and may not be covered in as great detail as in other types of CDS/ISIS training courses. In India, CDS/ISIS PASCAL is also covered. Example of this type of course are BISA in Australia, the post-graduate level information program in India and systems design courses at UPILS.

4.2 *CDS/ISIS Training Institutions*

The national distribution centers are relied upon to conduct CDS/ISIS training courses. Due to logistical limitations, however, other institutions or associations are now taking charge of providing training to both new and old CDS/ISIS users. Most notable of these are the national users groups. Trainers usually are personnel of the training institute, although external training personnel may sometimes be called upon to assist.

4.3 Course Information and Admission

Information on forthcoming courses in some countries is announced through special course brochures or advertisements (e.g., UNSW in Australia, Chulalongkorn in Thailand, NISSAT in India). Others send invitations directly to prospective participants on an individual or institutional basis. In most cases, however, courses are conducted as the need arises, that is, when a sufficient number of requests have been received to enable the training institution to schedule a course.

These announcements usually include entry prerequisite for participants. A problem commonly encountered by training institutions, most especially by the trainers, is disparity in actual knowledge and experience of the applicants on the use of computers and DOS.

4.4 Methodology and Training Materials

CDS/ISIS trainers in various part of the region use a variety of methods. The most common are lecture, demonstration and hands-on, case study, and practicum/exercises. For bigger groups, the trainer, would normally require technical assistants or facilitators, who would assist the trainer in guiding the trainees during demonstration, hands-on and workshop sessions.

Trainers use self-developed workbooks, lecture notes, and visual aids. The English and local language versions of the CDS/ISIS Reference Manual (China, Korea, and Thailand) are also used. Pre-developed databases, including the CDS sample database, are used extensively. Computers are allocated at a ration of 2-3 participants to a machine.

Course evaluation is commonly done, covering such aspects as achievement of objectives, quality of training, competence of lecturers, training materials, and facilities, and overall assessment of the manner in which the course was conducted.

While the overall evaluation is usually favourable, trainees always comment on the lack of time to fully explore CDS/ISIS capabilities during the courses. Training institutes, therefore, are pressured to provide longer and more training courses in spite of limitations in the availability of training staff.

4.5 Training Problems

Respondents are asked to indicate problems encountered during training courses. Results can be divided into two areas: trainee-related, and training opportunities and facilities-related.

4.5.1 Trainee-Related Problems

Technology has advanced at a very fast rate, yet many information professionals have not been able to ride the tide, so to speak. In a single course, trainers are confronted with participants with varying levels of knowledge and expertise on using computers and basic disk operating systems commands. It is difficult to determine how much introductory material should be included for a single batch of trainees. It may be possible to screen participants through application forms but certain situations, mainly due to large demands for training, cannot be avoided, such as:

- when a course is offered for a single institution or information network and the decision to include/exclude trainees is made by the requesting or participating institution;
- when a course for big groups is on a fixed schedule and the slots are filled on a first-served basis by trainees with varying levels of computer knowledge (e.g., those with word processing skills only vs those with programming experience); or
- when a course is scheduled as requests come in and the training institution decides it has enough trainees or participants to offer a course cost-effectively.

It also happens that some trainees attended more than one course of the same kind. One factor that leads to this is their inability to immediately apply what they learned in the course when they go back to their offices. Another is that the course duration (especially beginner-level courses) is insufficient to make trainees good ISIS application designers. As with CDS/ISIS as a software package, trainees expect to get a lot more than what the training course is intended to offer!

4.5.2 Training Opportunities and Facilities-Related Problems

This area covers the following: large demand for training, hardware, software (training materials), course duration, and trainer availability.

Large demand. Training institutions are unable to cope with user need for training. They acknowledge that many of the difficulties faced by users in using CDS/ISIS can be solved by proper training, yet they are usually not in a position to conduct courses as often and in as many different places in the country as possible. The typical group size is between 20 to 30 trainees, although some courses had as many as 70 in a single group. There are efforts to offer courses on a fixed schedule and these are always over-subscribed, with a lot of applicants turned down or put in the waiting list. There seems to be no problem with paying the course fee, as long as applicants are accepted into a course.

National distributors attempt to train new users as soon as they acquire the software. Even this, however, has been inadequate, considering that the distributors generally have limitations on manpower and facilities available to them.

Hardware. Hardware facilities are often inadequate or simply unavailable to enable the training institution to conduct courses for bigger groups. The typical ration is 2-3 participants for every machine, while for tutorial groups (4-6 trainees), computers can be assigned on 1:1 basis. One country reported that as many as five trainees had to share a computer! This inadequacy greatly diminishes the quality of learning acquired during the training.

Software. There is also a lack of training materials, such as especially designed workbooks and user manuals. Trainers have had to use the CDS/ISIS Reference Manual (English and local language versions), which is too technical for beginning ISIS users. There have been attempts to prepare simplified versions of the manual, as well as lecture notes, workbooks and visual aids. However, these need continued revisions to adapt them to trainee requirements. Trainers do not have the time to do this. Availability of training materials elsewhere is generally unknown to trainers; if they do manage to locate these, the materials are

either unsuitable or in a language (and script!) they cannot read.

Course duration. A common complaint of trainees is that the course duration is too short. Training courses usually run for five days. Unless there is provision for evening hands-on sessions, the usual work-day schedule (6-7 hours) is insufficient for practicum and exercises, in addition to the lectures. Many training institutions are considering extending their courses; however, they are faced by other problems already mentioned. It may be worth noting at this point that at the UPILS, trainees in advanced courses are given time between the "beginner-level" and "advanced-level" parts of the course (usually one week) to go back to their offices, practice and come back for problem-solving sessions and to learn the more complicated feature of CDS/ISIS. The out-of-classroom practicum enables the participants to work on their own, given a second case study specification for a design of practical use to them, and explore CDS/ISIS in a more natural work environment.

A solution to this problem is the provision of "hotlines" which allows new and just-trained users to phone in their questions and problems. This solution, on the other hand, has resulted in another problem: more pressure on the national distributors and trainers. Whenever users are unsuccessful with the hotlines, it is very easy for them to make a trip to the distributor to have their problems solved immediately. This problem has been eased somewhat through the users' groups and informal networks of users within a particular vicinity.

Trainer-related. The basic problem is the lack of trainers. Those who are involved in CDS/ISIS training activities are also employed full-time and have to fit CDS/ISIS courses in their schedules.

Two qualifications are needed to teach CDS/ISIS: experience as an ISIS user and experience as a trainer. Oftentimes, it is only the first requirement that is fulfilled. Trainees have complained that some trainers tend to use technical terms only or too early into the course, thereby making the understanding of the software even more difficult. CDS/ISIS trainers have to be trained themselves on teaching methodologies, such as how to write training materials, produce

visual aids, deliver lectures, etc. While course evaluation is done in many cases, only a general statement on the competence of the resource person is taken without delving deeper into the quality of the instruction.

4.6 Shareware Information

There is willingness to share training materials (brochures and course design) with others. Some training manuals, such as those used by Chulalongkorn, are available for a fee. There are efforts to compile bibliographies on CDS/ISIS training materials available in the region. One is being done in Malaysia by the user group. A problem, of course, is that only a few of these are in English, the only language commonly understood in the region.

5.0 Conclusion

In spite of the problems currently faced by users, there is a general optimism in the region that the demand for and use of CDS/ISIS will continue to grow. Several factors, some leading to the others, account for this assessment:

1. CDS/ISIS is increasingly becoming the *de facto* software for information networking activities, both at the national and regional levels. These networks adopt common formats which lead to the development of "standard" formats for the exchange of databases. The import/export functions of CDS/ISIS enable users to convert ISIS databases into their own without problems.
2. With the positive experiences of current users and the popularity it enjoys, CDS/ISIS has become the logical choice when a library considers automating its operations. Therefore, CDS/ISIS is seen to play a dominant role in the computerization of library and information functions.
3. Users' groups are foreseen to play a greater role in the promotion of CDS/ISIS use. These groups have proven to be effective partners of the national distribution centers in providing technical support to members, conducting training courses, and keeping members informed

of developments in the applications available within the country.

4. Some countries enjoy the advantage of a national information policy which enables national distributors to perform their tasks with minimal problems regarding manpower and financial support.
5. In countries where non-Roman scripts are used, the availability of local language versions of the software has increased interest in learning more about CDS/ISIS and how it can help organizations in their work. This is true to Thailand, Korea, China, India and Vietnam..
6. Experiments in the use of CDS/ISIS with CD-ROM technology are also a positive development. With increased automation, databases are getting much larger and faster, necessitating the use of bigger capacity storage devices, an advantage CDs have .

All concerned parties—national distributors, trainers, users—can fully benefit from the fruits of these developments only if they exert efforts to cooperate with each other. To this end, the following courses of action are proposed.

1. *On the use and distribution of CDS/ISIS*
 - 1.1 National distributors, in collaboration with their user groups, should compile up-to-date directories of users, applications, training programs, and other information of interest to users. These directories will facilitate greater interaction among users in relation to solving problems and sharing experiences in the use of CDS/ISIS. As a first step, the preliminary national conducted for the meeting of trainers and distributors can be completed and regularly updated.
 - 1.2 National distributors should encourage data base designers to prepare user manuals for each application, program and utility they develop. The reports show that a lot of CDS/ISIS databases are already in existence and yet very few are

documented. Designers should be made conscious of the important part a user manual plays in the effective use of these databases.

1.3 More user groups should be established, *involving the national distributors, professional library associations and other agencies concerned with libraries and information centers.* In certain countries where geography is a factor, the formation of regional or provincial user groups might be worth considering.

2. *On the training of users*

2.1 More CDS/ISIS trainers have to be developed to augment the current number of trainers. They should be provided opportunities to acquire or hone their skills in teaching and developing training materials.

2.2 Institutions offering training courses should coordinate with each other in order that they achieve a level of commonality in terms of course design and coverage. In this way, a user who has been trained by one institution wishing to acquire further training has the option to attend a course offered by another without being concerned that the second course is only a duplication of the first or is too advanced.

2.3 A wide range of training materials should be developed, using varied media that allow for group and individual study.

Existing training materials should be improved and regularly updated as the software itself is continuously being improved. If possible, preparation of these materials should be a cooperative effort between trainers and users to ensure suitability of content and presentation to various types of trainees.

3. *On the overall coordination of CDS/ISIS operations*

3.1 Communication between UNESCO as the developer of CDS/ISIS and the national distributors should be improved. Likewise, communication between the national distributors and users in their countries should be improved.

3.2 A network of national distributors and users' groups in the region can be developed, formally or informally, to further disseminate information on CDS/ISIS activities beyond national boundaries.

3.3 Finally, CDS/ISIS national distributors and training institutions should attempt to acquire more support from various sectors (such as their host institutions, professional associations and national information agencies) to augment their manpower and other resources and enable them to successfully implement their plans and projects.

— **Reproduced from *ASTINFO Newsletter*
Vol. 8, No. 2, 1993**

Contact **NISSAT**

if you are

producing databases

(bibliographic, numeric & factual)

or

you have plans to do so



Are you enterprising ?

Prove it by arranging

advertisements

for the NISSAT Newsletter

Collect 10%

of advertisement value
as an incentive

For Thesis

446 Dates related to thesis

Subfields:

- A Date
- B Type date

For Maps

470 Mathematical data for cartographic material

Subfields:

- A Statement of scale
- B Statement of projection
- C Statement of co-ordinates
- D Statement of equinox

Other Types

125 Project number < for reports, theses >

Subfields:

- A Project number
- B Type of number

Other Types

130 Contract number < for reports >

Subfield:

- A Contract number

465 Price and Binding

Subfields:

- A Price
- B Binding
- C Date of price

3. Field 088 record to record linking has been added to permit links to other records from the primary segment.

4. Minor changes

In field 022: First indicator shows whether field contains date of record creation or of entry on file.

In field 060: Codes have been added for other types of material.

Codes:

- 100 = Textual
- 105 = Report/technical report
- 110 = Thesis, dissertation
- 115 = Meeting document
- 120 = Periodical.

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- 125 = Newspaper
- 130 = Annual
- 135 = Patent document
- 140 = Standard
- 145 = Irregular serial
- 150 = Monographic series
- 199 = Other textual materials
- 900 = Non-textual material
- 905 = Projected and video material
- 910 = Sound recordings
- 915 = Music scores
- 920 = Computer media
- 925 = Graphics
- 930 = Multimedia
- 935 = Artifacts and realia

In field 440: Indicator is replaced by subfield C. i.e. C Type of date

Codes:

- 0 = not specified
- 1 = date of publication
- 2 = date of coverage
- 3 = date of copyright
- 4 = approximate date of publication

In field 610: Subfield C added for Classification Scheme Code i.e.

Subfield:

- C Classification Scheme Code.

Codes:

- U = UDC
- D = DDC
- L = LC

In field 620: Subfield added for subject descriptor code. i.e.

Subfield:

- C Type of Subject Descriptor Code.

Codes:

- 0 — Topical Subject
- 1 — Geographic Subject
- 2 — Chronological Subject
- 9 — Unknown Type

A detailed version of the changes as provided in CCF (B) can be had from NISSAT/DSIR. Subsequent to the Unesco—NISSAT Experts Meet on CCF (F), the document CCF (F)/I — an Indian version is under preparation.

— Sunder Singh & Kamini Sharma
NISSAT/DSIR, New Delhi.

CD-ROM Online Users: Second National Meet

As a follow up of the first national meet of CD-ROM online users held in July 1992, NISSAT in collaboration with the Society for Information Science organized the above Group Meeting at DST New Delhi during 15-16 July 1993. The objective was to pick up the thread and examine the present national scenario, experiences and problems in the area. About 60 participants attended the conference. At four sessions 25 presentation were made. These were capped by a Panel Discussion which was devoted to issues like acquisitions; customs clearance, etc. Dr Laxman Prasad, Joint Adviser, DST guided the discussion.

Inauguration

Dr A Lahiri, Jt Adviser (NISSAT) set the ball rolling by extending a warm welcome to the participants. In the inaugural address, DR S.S. Murthy, Director, DESIDOC highlighted the problems faced by the Institution in the procurement, use and updating of CD-ROM databases. Dr Murthy urged NISSAT to take follow-up actions on the recommendation emanating from the conference.

Dr S. Mallick, Secretary Society for Information Science proposed a vote of thanks at the conclusion of the inaugural session.

The proceedings of the various sessions are summarised below:

Session I: CD-ROM — Scenario and Experiences

Chairman: Shri P.C. Shah, Coordinator,
NICTAS /ATIRA, Ahmedabad

Eight papers were presented at this Session

Ms. Naina Pandit, NIC gave presentation on CD-ROM databases in Health and Medical Science, Online Services offered by ICMR/NIC and other facilities like E-mail and Networking.



Ms Veena Mishra, Manager (I&D) RDCIS Ranchi (second front Left) Chairing the concluding session to present a round-up of the deliberations. Also seen in the picture are (l or r) Shri V.K. Varun (NISSAT) Ms T.A. Pandalai and Ms Savita Dhani

Shri I.R.N. Goudar, NICDROM, NAL made a comprehensive presentation covering almost all aspects of CD-ROM databases and technology. He gave some valuable statistics relating to the CD-ROM products, software, their producers, hardware and other requirements for establishing a CD-ROM Work Station etc. He pointed out that there are about 100 such work stations in the country. About 75 MEDLINE, 40 COMPENDEX and other databases are available in different institutions. A breakup of those available in the CSIR labs was given.

Shri V.G. Deodhar, NICHEM/NCL in his presentation briefed about the CD-ROM databases—bibliographic as well as full text available in the market in chemistry and allied field.

Shri A.K. Chattopadhyay GIST made a presentation on business databases. He explained in detail the features of Predicast.

Dr T.B. Rajasekher, NCSI presented his paper on Image Reference and Numeric Databases. He explained in detail the features of each type giving examples. 15

Mr. I.R.N. Goudar's second presentation highlighted CD-ROM databases in engineering and technology.

Shri C.K. Hayatnagar, CWPRS also made a presentation on CD-ROM databases in engineering and technology, with special reference to his experiences in CWPRS mentioning the databases available inhouse and on CD-ROM.

Shri Madan Mohan, DBT, combining his two presentations gave a picture of the inhouse and CD-ROM databases available at DBT. He also gave a list of Software in Bio-technology, available in the market

Session II: CD-ROM Services

Chairman : Shri I.R.N. Goudar, Coordinator,
NICDROM/NAL, Bangalore

Five papers were presented in this session.

Shri Asoke Mukhopadhyay, IIMC covered one of the most important aspects of CD-ROM databases, its use in retrospective data conversion. He gave examples of various sources, cost-benefit, etc. The paper generated lively discussion.

Prof. M.T. Lagare of Gulbarga University presenting his paper on CD-ROM databases available at his university produced some interesting comparative figures in terms of the expenditures involved in the procurement of copy as well as CD-ROM versions of the databases.

Shri A.K. Tyagi of DESIDQC described the CD-ROM databases being procured and the problems being faced.

Ms. T.A. Pandalai, INSDOC briefed the use of the CD-ROM version of the Science Citation Index in the Bibliometric activities undertaken by INSDOC.

Dr T.B. Rajashekar, in his second paper, gave an informative presentation on the services offered by NCSI.

Session III: Online Services

Chairman : Shri M.S. Srikantiah,
NICMAP/CMTI, Bangalore

In this session five papers were presented.



Participants' Group

Shri V.G. Deodhar, NICHEM/NCL giving an overview of the NACID centres. He gave an account of the Online Services rendered at the Poona Centre.

Shri I.R.N. Goudar spoke on whether more NACID centres are required. He pointed out that the present centre is a concentration of NACID centres in CSIR and that other institutions should come forward to support more centres.

Shri V.G. Deodhar's last paper covered in detail CA File on Online giving examples of searches.

Shri S. Ramakrishna, DOE explained the features of ERNET and its role in the Online Services.

Shri S.K. Arora of INSDOC gave an account of the INSDOC Online Services highlighting some of the searches done and the revenue earned.

Session IV : Vendor Presentation

Chairman : Shri Asoke Mukhopadhyay
IIM, Calcutta

There were five presentations in this session.

The Chairman in his opening remark, said that it is high time, the vendors and producers of the CD-ROM services come closer in order to help the librarians and other users to procure the products in this new area.

Shri. N. Kumar of ABI Books (P) Ltd

highlighted the services and products offered by them. He mentioned that they have plans to go for CD-ROM publishing as well. He also referred to the discount offers on CD-ROM databases like *Medline and ADONIS*.

Informatics India Ltd was represented by Shri Sanjay Grover, who gave an insight into the activities of Informatics (I) Ltd, highlighting their status, products and services including training programmes offered by them. He also enumerated the features of DIALOG, DIALOG on Disc.

Shri Soumitra Biswas representing TIFAC, made a comprehensive presentation on TIFAC and its services offered through various databases.

Session IV : Continued

Chairman : Mr. K.A. Ranganath, Coordinator
NICFOS/CFTRI, Mysore

There were two more presentations.

Shri Arif Samshad of GIST, mentioning that this being a new venture of Universal Subscriptions Agency, is not a competitor in the market at present. However, he elaborated their plans regarding the products and services.

Shri Satish Mannadiar of Dataware Consultants, outlined the products and services offered by them.

The Chairman summing up the session remarked that there is going to be tough competition of vendors which, eventually is likely to improve the services, thus ending the monopoly.

Session V : CD-ROM/Online Selection, Acquisition, Customs Clearance, Issues etc. Panel Discussion

Chairman : Dr Laxman Prasad, Joint Adviser
DST, New Delhi

The panel consisted of Shri S.M. Dhawan, NPL; Shri N.V. Sathyanarayana, Informatics (I) Ltd.; Shri C.K. Hayatnagarker, CWPRS; Shri V.G. Deodhar, NICHEM/NCL and Shri N. Kumar, ABI Books (P) Ltd.

In this opening remark, the chairman observed that there had been an increase in the

procurement of CD-ROM by non-commercial institutions and duty exemption upto 15% had been extended to R&D institutions procuring their products.

Problems faced in the procurement of CD-ROM and other material on electronic media

Mr. S.M. Dhawan enumerated three problems—delay, irregularity and inconvenience due to the procedure involved. He suggested that material procured for R&D work should not be subjected to customs duty.

Shri V.G. Deodhar agreed with Shri Dhawan on the problems, but stated that they were managing the procurement by making payment of postal charges or the duty as the case may be.

Shri C.K. Hayatnagarker did not face any problems in the selection criteria of CD-ROM of databases and Shri Dhawan was of the opinion that unless one can sustain the cost of these databases, the hard copy should be opted.

Shri N.V. Kumar referred to occasions when they have to pay 150% duty when received through courier and Rs. 200/- per disc otherwise.

Shri N. Sathyanarayana dwelt on the Import Policy (1992-93) the duty structure touching issues under FERA.

Discussing the problems put forward by the panel members, Shri Goudar suggested that certificates can be issued on the basis of information supplied by the user to the effect that such material was likely to be received, thus making the clearance much easier.

Dr Rajasekher supported Shri Goudar's suggestion and added that notification can carry certificate to the effect that the consignment contains educational material. He also suggested that the supplier should be asked to start the supply only after receiving the certificate from competent authority.

Dr Lahiri generally agreed that the definition of book may be extended to materials on electronic media as well. He further suggested that we should consider getting clearance of the consignment in one go. 17

The Chairman summed up the session and

advised that due consideration should be given to all suggestions made before we put forward the solutions to the concerned authority.

Session VI : Summing up

Chairperson : Ms. Veena Mishra, Manager (I&D)
RDCIS, Ranchi

Rapporteurs: Ms. T.A. Pandalai and Ms. Savita
Dhami INSDOC, New Delhi

The rapporteurs presented summary of the

deliberations and discussions at various sessions.

In his vote of thanks, Shri Vimal Kumar Varun, NISSAT, thanked Dr A. Lahiri, Joint Advisor, NISSAT for his valuable guidance, Dr S.S. Murthy, Director, DESIDOC, for the inauguration, Dr S. Mallick, Secretary Society of Information Science for the excellent arrangements and all the chairpersons of different sessions. He also thanked all the participants for their active participation in making the conference a success, the vendors for the presentation and demonstration of their products and services.

Perspectives of Multi-media Information Services in India: SIS Annual Convention and Conference

The theme of the Annual Convention of the Society for Information Science Scheduled to be held in New Delhi during 27-29 January 1994 is 'Perspectives of Multi-Media Information Services in India.

Recent Advances in multi-media applications have provided a quantum jump to the techniques of information handling and dissemination. The conference will highlight state-of-the-art on multi-media systems and services and its future scenario—something that will be of immense benefit to information managers and professionals. Technical sessions are planned on the following topics:

- a) Multi-media systems
- b) Multi-media services
- c) Multi-media applications
- d) Multi-media networks

There will also be pre-conference tutorials on topics related to the theme.

Participation fees are as follows:

For Conference:

Members of SIS	Rs 500
Non-members	Rs 600
Tutorial fee	Rs 300

The venue of the conference is INSDOC, 14 Satsang Vihar Marg, New Delhi-110 067. For details please contact: Dr S. Mallick, Secretary, Society for Information Science, CSIR Complex, Dr. K.S. Krishnan Marg, New Delhi-110012.

INFLIBNET : Current Programme

Information and Library Network (INFLIBNET) a programme of the University Grants Commission, was launched in May 1991. The main aim of INFLIBNET is to establish a national computer-communication network to link libraries and information centres in universities, colleges, deemed universities, UGC information centres, institutions of national importance, R&D institutions, etc; and thereby improve capability in information handling and services. It is a programme for academic excellence to be achieved through establishment of a mechanism for information transfer and access to support scholarship and academic work. It will facilitate pooling, sharing and optimisation of scarce library resources. As a major programme it will help modernise libraries and information centres in the country through application of information technology. INFLIBNET will be a multiple function/service network, providing the following services:

- a) Catalogue based services
- b) Database services
- c) Document supply service (Fax/Non-Fax)
- d) Collection Development
- e) Communication based services viz. Referral, E-Mail, Bulletin Board, Audio/Video/Computer Conferencing, etc.

The National Centre of INFLIBNET is located in Gujarat University campus at Ahmedabad. At present, INFLIBNET aims at computerising and networking of university/college libraries. Every year, INFLIBNET Programme will identify a number of university libraries to be taken up for automation depending on the budget allocation. The selected institutions will be provided funds for procuring computer systems, retroconversion and networking. Application software for data entry and other library functions, library standards and formats, etc. will be provided by INFLIBNET to the

participating libraries. Manpower development is an important part of the programme. Training courses for core library staff engaged in computerised library operations, are being conducted since 1992-93.

First Phase

In the first phase which commenced in April 1993, libraries of the following 11 universities have been identified for automation:

1. Anna University, Madras
2. Ravishankar University, Raipur
3. University of Jammu, Jammu
4. Gulbarga University, Gulbarga
5. Manipur University, Imphal
6. Jadavpur University, Calcutta
7. Osmania University, Hyderabad
8. Jawaharlal Nehru University, New Delhi
9. Jai Narain Vyas University, Jodhpur
10. Banaras Hindu University, Varanasi
11. University of Bombay, Bombay

At the meeting of Vice-Chancellors of these universities held at New Delhi on April 2, 1993, the Chairman of UGC, Prof. G. Ram Reddy formally declared commencement of the programme.

Development of suitable software, standards for various library operations and communication based services viz., E-Mail, Bulletin Board, etc., designing suitable network architecture and preparation of union catalogues of serials, books, non-book materials, etc., and cooperation with other networking organisations like NISSAT, NICNET, etc. are other important activities.

TIFAC-CMC-DSIDC Centre for Industry Information

As an excellent example of maximising synergistic advantages, TIFAC, CMC Ltd. and Delhi State Industrial Development Corporation (DSIDC) have joined hands for a collaborative venture in setting up the Centre for Industry Information in New Delhi. The centre, planned as a 'one-stop information shop', will cater to the technology and trade information needs of the potential entrepreneurs and business planners.

Technology Information, Forecasting and Assessment Council (TIFAC), an autonomous organisation under the aegis of the Department of Science and Technology (Government of India) has carried out a large number of specialised studies concerning technology status, techno-market surveys, technology assessment, etc. While TIFAC functions as the repository of knowledge-based information for the centre, this is backed by the computerisation and system engineering skills of CMC Ltd., the premier public sector enterprise in Information Technology. DSIDC provides the infrastructural support and more importantly, an effective interface with industries in and around Delhi as the ready clientele for information.

As a precursor the inauguration of the centre, an Industry Meet was organised by the three component organisations on August 7, 1993. The meet was aimed at understanding and assessing the specific information needs of the industry and integrating them with the overall objectives of the centre. The meet was addressed and attended by eminent personalities from the Government and industry.

Mr. Omesh Saigal, chairman-DSIDC in his welcome address said that the centre, first of its kind in the country, would cater to the technology and business information needs. He elaborated on the collaborative approach of the three component organisations and their capabilities.

In his presidential address, Mr. Ashok Chandra, Secretary, Department of Heavy Industries opined that Indian industry would have to resort to two strategic tools: information and technology, in order to sustain and substantiate its business especially in the context of recently



Shri Omesh Saigal Chairman DSIDC lighting a lamp to inaugurate the Centre for Industry Information

liberalised economic regime. Mr. Chandra said that technological knowledge and a continued endeavour to acquire the same would be instrumental in reducing technology gaps between the developed and developing economies. He hoped that the proposed centre would help the industries stand on their own feet and make their presence felt in the global market.

Mr. N. Vittal, OSD, Department of Telecommunications, in his special invited lecture on 'Industry and Information' expressed happiness on three organisations coming together on an important project. He stressed the fact that the centre should function as a 'single window' for all the industrial information needs. And hoped that it would go a long way in keeping the industrialists abreast with the latest advances in various fields. Mr. Vittal emphasised on the need for replicating such centres in other parts of the country.

The inaugural speech of Mr. P.K Dave, Lt. Governor, Delhi, in absentia was read out by

Mr. Omesh Saigal. Mr. Dave discussed the importance and criticality of information towards an effective business planning. He congratulated DSIDC, CMC and TIFAC for taking such an initiative and requested the industries to themselves of the services of the centre for more dynamic, more efficient and more competent business decisions.

Mr. S. Setty, Head, Technology Applications Group, CMC Ltd. introduced the project team members to the audience and thanked all concerned for the inspiration and conceptualisation of the project and making it operational.

The technical session was chaired by Dr. K.K.K. Kutty, CMD-CMC. The discussion panel included Mr. Y.S. Rajan, Executive Director, TIFAC, Mr. Saigal of DSIDC, Mr. Setty of CMC and Mr. Pravir Das of CII. A detailed presentation on the activities and services of TIFAC, the networking and system concept of TIFACLINE alongwith the function of its data producers was made by Mr. Soumitra Biswas, Principal Scientific Officer, TIFAC. Mr. Biswas also explained the tie-up between CMC-TIFAC and the European Space Agency (ESA) for offering the well acclaimed international databases in India.

The presentation was followed by an interactive discussion with the industry personnel to assess their aspirations from the centre. Their specific needs on technology trend analysis, enviro-friendly technologies, international market scenario, fiscal and industrial policies and incentives offered by various State Governments, global and local tender information, collaboration with other leading technology change agents viz., FITT of IIT Delhi, BCIL etc. were mentioned—these were to be included within the span of activities of the centre in a phased manner. On assessing various information needs of the industry, it has been planned to offer the following services from the centre:

- i. The centre will act as the host-hub for TIFACLINE technology databases on Composites, Non Ferrous Materials, Food Processing, Energy and Environmental Technologies. Other databases being developed would be added in phases in the future. TIFACLINE databases would serve the purpose of identification of the potential and emerging technologies for the entrepreneurs and business planners. The supplementary databases on Standards and Experts would also be available

at the centre.

- ii. The international databases viz., CHEMABS, COMPENDEX PLUS, INSPEC 2, METADEX, FT PROFILE, PREDICASTS' PRO MT, MARS and 200 others as available from ESA-IRS would be accessed online at the centre according to the specific user queries. The centre would also assign passwords to the users for direct online access to ESA-IRS from their premises. The ESA-IRS databases would address queries on technology trends and advances, technology sourcing and tie-up possibilities, market analysis and market intelligent services, etc.
- iii. The centre would disseminate TIFAC's specialised reports and study findings on technology status and techno-market surveys etc. The reports present a considerable pre-investment knowledge-base for entrepreneurs and business planners.
- iv. The user specific queries concerning technology, market and business opportunities would be serviced on chargeable basis. There may be a need to conduct market surveys or to prepare technology profiles/project reports as desired by the industries; these would be undertaken by the centre.
- v. In order to live up to the expectations for 'one-stop information shop' concept, the centre should attempt to provide assistance in technology sources/tie-ups and transfer. For a meaningful servicing of such queries, the centre would collaborate with the overseas agencies and technology vendors. Some preliminary contacts for the aforesaid purpose have been initiated.
- vi. The centre would continuously scan the environment for any possible business opportunities related to industry information viz. tender database, etc. The centre would also forge strong linkages with other important technology players viz. Foundation for Innovation and Technology Transfer (FITT) of IIT Delhi, Biotech Consortium India Ltd. (BCIL) etc.

The Centre for Industry Information was formally inaugurated on August 14, 1993 by Mr. Omesh Saigal, Chairman, DSIDC at a simple function. The centre has been located at the following address: DSIDC, Bombay Life Building, N-36, Connaught Circus, New Delhi -110001

Upgrade NISSAT Infrastructure to Reinforce Efforts — Evaluation Committee Report

'NISSAT is the only system which covers the entire spectrum of science and technology. It has also a variety of functions to perform ranging from creating awareness of the potential of S&T information, establishing library networks, providing access to international databases, maintaining interaction with national and international organizations and training information personnel.'

The financial resources available to it, however, have not been commensurate with the expectations from the system. Resources have been dwindling or at best, have remained static. It is thus desirable that NISSAT efforts are reinforced by upgrading the unit and its infrastructure.'

This is the conclusion of the Review and Assessment Committee which has just completed its evaluation of the National Information System for Science and Technology.

The five-member Committee headed by Major General A. Balasubramanian AVSM (Retd.), was constituted in August 1991 with the following terms of reference:

- To evaluate the activities of NISSAT centres (sectoral, hard-data and access facilities to international data centres), programmes on computer applications and manpower development and other NISSAT activities.
- To identify ways and means of improving the performance of the NISSAT centres and of other NISSAT activities, and
- To suggest policy guidelines in the identification and selection of, and support to, the various components of NISSAT.

The Committee held several meetings starting with the initial briefing by the Joint Advisor, NISSAT Dr A. Lahiri, who gave an illustrated presentation at the growth of various NISSAT performers. Members of the Review Committee visited Sectoral Information and other centres in Ahmedabad, Bangalore, Calcutta, Lucknow, Madras, Mysore, New Delhi and Pune. They reviewed the working of all the projects and had discussions with the staff at various levels.

Findings and Suggestions

The main findings and suggestions of the committee are the following:

- Under utilisation of resources, products and services
- Little interaction and coordination with Users and no efforts made to assess their views about the services.
- Lack of cooperation with other units in organisation and other information centres
- The promotional leaflets produced could be more attractive and aimed at specific group of users.
- In-house members comprise the larger proportion of users and the services are not used on a national scale to any appreciable extent
- Enlarge user clientele on national basis
- Equipment in some centres is under-utilised and the possibility of earning revenue by taking on outside work has not been explored. Efforts to repair, service and put equipment to maximum use are not adequate.

- Detailed statistics of use made of various services and the rate of success or failure in providing information are not being maintained.
- The viability of NISSAT centres and their access to users is low and this has to be remedied
- Synergistic relations between NISSAT centres and the host organisations are to be established. Currently such relations are purely *ad hoc*, based on individual preferences.
- Local information units have not grown as much as they could in keeping with NISSAT objectives.

Recommendation

The committee notes that the most urgent need is for creating awareness of S & T information, vigorous marketing of information products and services, education and training of information personnel to meet the newer challenges of users' demands more effectively. Activating the present information centres, establishing new ones to provide for national information needs and sustained interaction with host organisations and database organisations within the country and with international organisations abroad are also important. As a matter of priority, a national science information policy should be evolved and the role and function of the NNFP enlarged and suitably strengthened.

Some of the recommendation based on these requirements are:

- City-based library networking programme should be extended and intensified.
- Research programmes in specific areas, such as user surveys, software

development and database creation, should be undertaken

- Newsletters and publication of more directories in specialised areas should be undertaken
- NISSAT programmes to be given wider publicity through appropriate channels of the media.
- Promote vigorous marketing of information products and services and liaison with industry.
- Interaction with host organisations and those producing databases within the country, and collaboration with international organisations should be actively maintained.
- A National Science Information Policy should be evolved to strengthen the S&T base in the country.

In regard to *NISSAT Newsletter*, the quarterly publication of the Unit, the Report says: The Newsletter is most informative and its usefulness could perhaps be enhanced if the various information centres could regularly contribute case studies of feedback from users on the use made of information and, more particularly give details of cases where information searches were not successful. This could provoke response and suggestions from scientists and other readers and help to refine methodologies in the dissemination of information.

Development Perspectives

In a separate section under the above title, the Report marks out possible lines of development of the various NISSAT programmes.

A Multilingual Computer Aided Translating System will Handle Nine Languages

Eurotra, a computer-aided translating system, will, in a few years, make it possible to juggle with the nine official languages of the European Community.

The corridors of the European Commission and the European Parliament often sound like the Tower of Babel. The civil servants and Members of Parliament most often express themselves in their national languages. In the century where efficiency reigns, such a situation might appear totally absurd. But which language should be chosen for the official means of communication? English? French? German? Esperanto?

The Governments presiding the European Community made up their minds on this issue a long time ago. The answer is none. They have refused the hegemony of any linguistic group and imposed the translation of all the official texts into nine languages (Danish, Dutch, English, French, German, Greek, Italian, Portuguese, and Spanish). This amounts to 72 pairs of languages.

Hosts of multilingual translators are thus in charge of carrying out this task which keeps on growing bigger and bigger as the Community's areas of competence extend. Moreover, this activity is becoming increasingly specialised. The vocabulary of aeronautics, for instance, contains no fewer than 200,000 terms. No human translator is able to retain them all, even in his mother tongue. So help has to be obtained from computers which alone can quickly process such a stock of words.

24 In the hope of speeding up the translation process and reducing the enormous costs it incurs, the Community has, since 1982, financed an ambitious computer-aided translation programme, Eurotra. This system, which is to become operational in 1995, has already cost more than an equivalent of Rs. 160 crores. For 9 years, it has

mobilised some 150 researchers in linguistics and data-processing.

Their work has resulted in the development of a prototype containing 20,000 lexical entries (including, for example, 15,000 technical terms from the field of telecommunications). *In the coming years, this research should enable industrialists to put particularly efficient translating software on the market.*

In a Few Seconds

Computer programmes already exist but they are usually not very efficient and work in pairs of languages. For instance, they contain an English-to-Russian module which also requires its Russian-to-English counterpart. However, if one wishes to add another language to this pair, new linguistic combinations need to be created: English to French, French to English, Russian to French, French to Russian, etc. The quality of these products, which is already mediocre, then becomes simply catastrophic and demands a lot of know-how and patience on the part of the user.

Rather than producing 72 different dictionaries and grammars (which is enormous), Eurotra uses a kind of artificial and simplified pivot language which links all the languages together. For the user, this process resembles all the other computer programmes. You enter a text into your computer, in English for instance, and then ask for its equivalent in French. The answer is received in a few seconds, the time needed by the machine to carry out discreet but splendid work.

First of all, the system analyses your prose, breaks it down into sentences and then sorts out the words according to their nature (noun, adjective, pronoun, etc.) and function (subject, verb, object, etc.). It is even able to distinguish different meanings of the same word depending on the

context in order to avoid any ambiguities. For instance "to start" followed by a noun or a verbal expression would mean "to commence" and without a direct object would mean "to make a sudden movement in surprise or shock", the latter necessarily being intransitive.

It then represents the grammatical structure of each sentence in a simplified abstract way, using identical rules whatever be the language in consideration. Thus every sentence appears in the active voice. The sentence: "the proposal is adopted by the council" becomes "the council adopts the proposal". From the schematic form obtained, the system makes a first translation (which does not appear on the screen) without any difficulty.

Finally, in the last stage, Eurotra moves onto

the definitive sentence in the language, using the rules of syntax of that language alone. Sentences which appear in the passive in English can thus end up being written in the active in French, following the most elementary rules of current translation.

In addition to its efficiency, this original system also has a tremendous asset. It can easily be enlarged. The addition of a further language only requires the development of two new modules (instead of 18 or more in traditional computer programmes). One of them translates the sentences into simplified language and the other operates the opposite process. *The linguistic problems that may arise due to the likely admittance of new countries in the Community, should be greatly reduced by this system (CEDUST).*

CISMOD 93: Programme Details

Further to the announcement in *NISSAT Newsletter* Jan-March 1993) regarding the convening of the Second International Conference on Information Systems and Management of Data at New Delhi during 6-8 October 1993, we present here some programme details for the benefit of the prospective participants.

Tutorials: 6 Oct. 1993

Conference: 7-8 Oct. 1993

Hosts: Society for Information Science and Indian National Scientific Documentation Centre, New Delhi

The topics for four half-day tutorials are:

1. Advanced Conceptual Modelling
2. The TEMPORA Systems Development Method
3. Discourse on Query Languages
4. Transmission Management in High Performance Database Management Systems

The conference Venue is Hotel Maurya Sheraton, New Delhi while the Conference Secretariat is located at INSDOC, 14 Satsang Vihar Marg, New Delhi 110067 which may be contacted for further details.

ASTINFO/INDIA, New Delhi: Ninth Consultative Committee Meeting

UNESCO's information programmes in Asia and the Pacific are being coordinated under a programme called ASTINFO (Regional Network for the exchange of information and experiences in Asia and the Pacific). The 19 participating countries are: Australia, Bangladesh, China, India, Indonesia, Iran, Japan, Korea, Laos, Malaysia, Mongolia, Nepal, New Zealand, Pakistan, Papua New Guinea, the Philippines, Sri Lanka, Thailand and Vietnam.

The plan of action of ASTINFO is generally discussed in the Consultative Committee (CC) meetings. So far CC meetings have been held in China (1983), Indonesia (1984), Australia (1985), Sri Lanka (1986), Thailand (1987), the Philippines (1990) and Japan (1991). India is to host the 9th UNESCO/ASTINFO Consultative Committee meet in 1993.

The CC meetings are generally preceded by a short seminar on a topic of current interest. The topic of the Regional Seminar prefixed to the 9th ASTINFO Consultative Committee is *Design and Development of Library Network in Developing Countries*. While the CC meetings are attended only by country representatives, the seminar is generally attended by few more invited foreign and national participants.

The event will be held from sept. 25 to Oct. 1, 1993 at Hotel Raj Hans, Suraj Kund, about 20 km. south of New Delhi.

The cost of periodicals in science and technology is increasing at an alarming rate. At the same time there has been proliferation of demand for new book materials and periodicals. Given an almost stagnated budgetary resource position with the libraries, the only major option available is to promote a resource sharing mechanism among libraries. Based on the principle of collective reliance, several library networks are currently under implementation in India such as those in Calcutta, Delhi, Bombay and Pune. In this light, the ASTINFO meeting is very timely. It is expected that Indian professionals will get an opportunity to learn from networking activities in neighbouring countries with significant fall out impact.

NISSAT-UPLA Training Course on CDS/ISIS

Dates : November 30, 1993 - December 10, 1993

Venue : Indian Institute of Management, Lucknow

Contact Address : Shri S. N. Agarwal
General Secretary, UP Library Association,
C/o Industrial Toxicology Research Centre,
Post Box No. 80,
Lucknow-226 001.

26 Fifteen to twenty participants will be selected for the training course. Last date for submission of application form is November 1, 1993.

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(A Government of India Enterprise)
'Anusandhan Vikas'
20-22, Zamroodpur Community Centre
Kailash Colony Extn., New Delhi - 110048

Phone : 6432121, 6432627 Telex : 031-71358
Cable : NATREDEVCO Fax : 11-6449401

News and Events

Access to International Patents on CD-ROM

Industrialists all over the world could henceforth have access to all international patents thanks to the use of a single software.

This decision, announced in a statement put out by the European Office for Patents (OEB-Office Européen des Brevets), whose headquarters are at Vienna, Austria, is the fruit of a three-way cooperation between the European, American and Japanese offices. This single operation system for the consultation of data banks on catalogued patents will be provided by the French company Jouve Systèmes d'INformation.

However, before the contract is concluded, OEB still has to obtain the approval of this body's administrative board which meets before the end of this year. Thanks to this agreement, *more than 80% of the patents registered every year in the world can be easily accessed.*

This unification of the operating system corresponds to a 5-year plan. A choice that is considered strategic by the Jouve company which also stressed the leading role played by OEB for several years, with its policy of technological evolution.

The 'mixed mode' which will be used is a relatively new method. It has the advantage of associating images to textual data. The preceding system, developed since 1988, after a long time during which text and image were recorded separately, was based on a fax method. It memorised, in digital form, full pages of a data (text and illustrations) and only offered limited possibilities, by association to a data base containing key words and synopses.

With the 'mixed mode' illustrations are correctly associated with the text, which makes reading of the documents easier. Among the advantages also of compact discs, is that of rapid access to information. This is more economical since it avoids the acquisition of voluminous publications — CEDUST.

Computer Backup for Priceless Documents

Museums and libraries do their best to preserve rare and precious works, but accidents do happen. Fires and other natural disasters can destroy rare and irreplaceable artefacts, rendering them inaccessible to future generations. But now, in the USA, California Polytechnic Institute's Multi Media Research Project has teamed up with high-tech companies to soften the blow of losing unique historical records.

The Phoenix Project aims to convert rare and historical documents into digital code for permanent storage on CD-ROMs. This provides a record that is more robust than photocopies or microfiche, and that will allow researchers much more flexibility.

Digitized paintings or photographs, for example, could be

electronically retouched to show how they might have looked originally, and then sent to researchers via a computer network.

— *Business week, January 1993.*

Unconventional Text Retrieval Systems

An article in a recent issue of *Online and CDROM* review looks at some of the more unconventional text retrieval systems. These sophisticated systems improve on conventional retrieval by using either innovative software or hardware to increase retrieval speed or functionality, precision or recall.

— *Online and CDROM Vol. 17, No. 1.*

Copublishing and Marketing of S&T Books and Journals—PID and WEL Agreement

The Publications & Information Directorate (PID), New Delhi, has entered into an agreement with the Wiley Eastern Ltd. (WEL) New Delhi, for copublishing, marketing and translation of S&T books and journals. A memorandum of understanding to this effect was signed by Dr G.P. Phondke, Director, PID and Shri A. Machwe, Managing Director WEL, at a function held on 7 June 1993 at PID. Dr S.K. Joshi, Director General, CSIR, was the Chief Guest on this occasion. He also inaugurated the new conference hall of PID. The function was attended by Dr E.S.R. Gopal, Director, NPL; Dr Ashok Jain, Director NISTADS and staff members of PID.

This link-up between PID and WEL will have a synergistic effect — on one hand it will benefit the two organizations in financial terms and on the other, it will lead to the availability of a larger number of quality publications to the users, at an affordable price.

Expressing his happiness over the agreement between PID and WEL for copublication, marketing and translation of S & T literature, Dr Joshi said that with the continued efforts of the two organizations we should be able to exploit the market of Asia, Africa and Latin America. "This is an important and unique step and I must congratulate Dr Phondke and all of you who have made it possible. This is just the beginning of exploring the strength that lies in PID as well as CSIR". "Whatever help is needed in this venture will be provided", he assured.

Energy and Environment Information System (EEIS)

This new system of UNIDO's Information and Technological Bank (INTIB) offers a number of key services to small businesses and industries with limited communication and data handling capabilities. The services include rapid provision of relevant up-to-date information and its cost effective delivery to industry. Crucial to the success of EEIS is the designation in each country of a key institution as a primary contact point for building up a national industrial information network. Hungary is the first country to join EEIS under a memorandum of understanding signed on 15 March 1993 at Budapest. The memorandum covers an initial two year pilot phase.

Requirement of Computers

The estimated requirement of computers in India during the 6th Five Year Plan is as follows:

Computers	Nos.
Super Computers	24
Large Computers	750
Mini Computers	9300
Micro Computers	1635000

The computers being manufactured in the public and private sectors in the country range from micro computers, graphic workstations, mini computers and large computer systems.

The types of computers being imported include process controllers high-end graphic workstations, large computer servers, file servers and minisuper systems for R&D and other specialised applications. These are mainly imported from USA, UK, Netherlands, France, Hong Kong, Germany, etc. The script of these computers is English. However, for PC range of systems indigenously developed hardware and software solutions are currently available for all Indian languages.

The Centre for Development of Advanced Computing (CDAC), an autonomous society under the Department of Electronics, is engaged in the development of Parallel Processing computers with the capability of super computers in the country.

Indian Languages for Computers

Both hardware and software solutions are currently available for using Indian languages in their respective scripts on computers. Hardware solution is through the Graphics Based Intelligent Script Technology (GIST) add-on card. A number of software solutions from various manufacturers are also available.

Bureau of Indian Standard (BIS) and the Department of Electronics (DoE) have evolved standard keyboard layout and codes for Indian scripts. Data entry is facilitated by using this keyboard with stickers in respective languages.

— Based on the reply given by Shri P. R. Kumaramangalam, Minister of State for Science & Technology in response to a question in the Lok Sabha on 7 April 1993.

On-line Information for Chemical Industry— NICHEM Work Shop

28 On 19 April 1993 the National Information Centre for Chemicals (NICHEM) organized a one-day workshop to create awareness in the chemical industry on the variety of information—scientific and commercial—that can be accessed from India. There were about 20 participants from various chemical industries.

Dr S. Krishnan (Scientific Management and Information Services, NICHEM) set the tone by giving an overview of the kinds of information available on the data bases from various vendors, how to set up communication for searching and cost considerations. This was followed by Mr. Deodhar with a session on searching chemical information on CA and REGISTRY files. Mr. N.V. Satyanarayana took up the business session and discussed the use DIALOG databases with a case study of 'Preparing market survey for Terephthalic acid'. Mr. Hirwani explained the use of some of the important files like Chemical Economic Handbook, Agrochemical Handbook, Chemical Industry News etc. to get techno-economic information. In the concluding lecture, Dr. Krishnan discussed the importance of files like MSDS, HSHB, TOXLINE to prepare material safety data sheets, and for looking up information on hazards and safety data. This was followed by a brief presentation of property data bases available on STN (MPD and CPD network, Beilstein etc.)

In the afternoon, the workshop went on-line and carried out some sample searches. DIALOG and STN made available free time for searches by courtesy of Mrs. Raghini Suresh, Librarian Kent State University, Kent, USA.

World Telecommunication Standardization Conference (WTSC): Advisory Group Set Up

The conference which concluded recently in Helsinki, Finland and was attended by 68 countries and eight international organizations set up a Telecommunication Standardization Advisory Group (TSAG pronounced Tea Sag). The Group's role will be to review priorities and strategies for activities of the Telecom Sector, to review progress in the implementation of its work programme and to recommend measures to foster cooperation and coordination with other standards bodies and organizations.

The conference saw the official launch of ITUDOC — the organization's electronic document exchange service, which includes not only administrative and general information documents, but also the full texts of ITU telecommunication standards approved since 1988. It also announced the availability of all ITU telecommunication standards on CD-ROM.

Potential Health Risk from Computers

A U.S. national research organization has recommended that most computer monitors be tested for extremely low frequency (ELF) radiation, following studies that suggest the emissions may pose a health risk.

Marc Schechtman, Director of education programs at the National Foundation for Cancer Research, said in April this year that several studies have indicated a correlation between the type of radiation emitted by computer video display screens and health risks such as cancer. At the same time, he said, other studies have shown no correlation or even a negative correlation.

Schechtman said that since there is an on-going debate over the potential health effects of ELF radiation, his organization is recommending a policy of "prudent avoidance," which means taking steps to control risks but at a modest cost.

The National Foundation, a non-profit organization that raises public funds for basic cancer research, suggests that computer monitors be tested to determine if, at a distance of 30 centimetres from the screen, they emit two milligauss of ELF radiation or more. An inexpensive hand-held gauss meter can be used to make the measurement.

ELF emissions are a form of electromagnetic radiation, and a milligauss is a unit of strength of the magnetic field.

Schechtman said that many researchers and officials have adopted a guideline that says a radiation level of two milligauss and below seems to be safe. The distance of 30 centimeters or more is recommended because ELF radiation drops off quickly as one moves away from the computer screen.

The Foundation also recommends that computer screens with high emission levels be shielded by placing a small metal canister around the so-called deflection coil that is a component of all computer monitors. The deflection coil, which emits the ELF radiation, is used to direct the vertical and horizontal lines that appear on the computer screen.

Schechtman said that the metal canister, which fits around the coil to contain the ELF radiation, currently costs about \$200, but added that the price is expected to drop sharply as use of the canisters increases.

Schechtman said that while research has shown that long-term exposure to higher levels of electro-magnetic energy, such as X-rays, can break molecular bonds and lead to cancer, no such effects have yet been clearly demonstrated from exposure to extremely low frequency radiation. ELF radiation is emitted by computer monitors as well as many household appliances such as toasters, vacuum cleaners and clothes dryers. — *Science Update* June-July 1993

UNIDO and Economist Intelligence Unit to Copublish Industrial Review Series

UNIDO and the Economist Intelligence Unit (EIU), a leading provider of global business information, have joined forces to help international decision makers in industry, finance, trade, aid and government identify the most promising areas for industrial growth, trade and investment opportunities in developing countries.

In June, UNIDO and EIU launched a new co-publishing arrangement for the *Industrial Development Review series*, which previously had been co-published with Basil Blackwell of Oxford. Each *Review* focuses on the "central industry issues" for a specific developing country, beginning with Indonesia. Three further reports will be published this year covering, Egypt, India and Mexico.

Each report in the series provides an exclusive analysis of manufacturing sub-sectors and the industrial operating environment, giving detailed information on industrial policy, structure and performance, and the investment environment.

The UNIDO Deputy Director-General for Programme and Project Development, Werner Behrens, said: "This joint publication venture with EIU is a landmark in the Organization's increasing interaction with the private sector. The sales network of EIU will undoubtedly facilitate a wider dissemination of information and analysis contained in the *Industrial Development Review series*, which is primarily intended to foster industrialization by keeping the international business community abreast of the changing pattern of industrialization and the emerging industrial investment opportunities in the countries concerned."

AGRIS in CDROM

The AGRIS database is being produced in CDROM discs. The records from 1975-Oct 1991 are available on a set of five CDROM discs. The Silver Platter Information Co., UK is undertaking this project.

The cost of AGRIS data base in CDROM discs:

- a) annual subscription to current discs = \$750.00
- b) archival disc set (1975-1990) \$1250.00
- c) 50% discount allowed on orders received from developing countries.

Contact address for subscription of AGRIS

M/s. Silver Platter Information Co.
10, Barley Mow Passage
Chiswick
London W4 4PH (U.K)

Online access:

The AGRIS data base continues to be available on the IAEA computer and accessible by following online vendors

- a) direct dial up, telex, public packet switching networks (e.g. TYMNET)
- b) through ESA/IRS in Frascati
- c) on DIMDI, Cologne, Federal Republic of Germany
- d) on DIALOG, USA (i.e. data base with non US portion).

Since the production of AGRIS data base in CDROM discs, many individual institutions subscribe the CDROM discs for search and retrieval within the library.

AGRIS is also available on-line on the VAX-NICNET connection from the Bioinformatics Centre, IARI, New Delhi.

Bioinformatics centres having CDROM discs

Data base	Institution	Period
AGRIS	Jawaharlal Nehru Univ. New Delhi	1986-91
AGRIS	MKU, Madurai	1975-91
AGRICOLA	Indian Veterinary Research Inst. Izatnagar	1984-91
AGRIS	Tamilnadu Veterinary Univ. Madras	1991-92
AGRIS	Tamilnadu Agricultural University, Coimbatore.	1975-91

Industrial Directory of Gujarat

The Techno Economic and Marketing Group (TEAM) of Gujarat has just come out with the second edition of its Industrial Directory. This is a useful reference work which contains information on

- Govt. of India's New Industrial Policy 1991
- Incentives available to new industries, expansions, diversifications
- GRs on latest Central and State Government Policies on
- Capital Investment Subsidy Scheme,
- Sales Tax Incentive to Industries,
- Deferment,
- Incentives to 100% EOU, Electronics Industries, Pioneer Units, Prestigious Units, Sick Units,
- Rehabilitation of Small Scale & Non-BIFR Sick Units,
- Employment Scheme, etc.

It also contains addresses of major State & Central Financial Institutions and International Economic Organisations such as

- Export Promotion Council (EPC) & Registering Authorities,
- Exchange Control Department of Reserve Bank of India,
- Industrial Development Bank of India (IDBI),
- Industrial Credit & Investment Corporation of India Limited (ICICI),

- Industrial Finance Corporation of India (IFCI),
- Specialised Financial Institutions,
- State Small / Industrial Development Corporation / State Industrial Investment Corporation (IDC's / IIC's),
- State Financial Corporation (SFC's),
- Government Technical Consultancy Organisations,
- International Organisations offering assistance to Developing Countries,
- Institute of Management Consultancy of India (IMCI)

For financial and other assistance.

In addition to the above, it also contains Index of Manufacturers

- Industry-wise
- Product-wise
- Alphabetically arranged Industrial Units.

This directory can be used in day-to-day bulk purchases, sales, market research/surveys, project planning, appraisal or financial options.

—Vimal Kumar Varun.

Machine Tool and Production Engineering Thesaurus

A thesaurus is the most essential tool for effective indexing and retrieval of information. If information is to be computerised for quick and effective handling of voluminous data, the use of thesaurus becomes a must. The thesaurus indicates the relationship, cross references and use of various technical terms listed like Broader Term (BT), Narrower Term (NT), Related Term (RT), USE and Used for (UF) references, Scope Notes (SN) etc. All the terms in the thesaurus are arranged alphabetically.

This Thesaurus serves as a ready reference tool in the field of machine tools and production engineering for industries, researchers, practising engineers, technical institutions, information centres, libraries, students of engineering and others for indexing or arranging their collected information as well as in formulating technical enquiries to various data banks.

The coverage includes the following:

- Metal Cutting, Metal forming, Machine Tools, Tools & Tooling, Metal Finishing, Metrology, Tribology, Foundry, Welding, Plastics and Allied Fields.

The 84-page A4 size publication, priced at Rs. 150/- (including postage) is available from NICMAP, Central Machine Tool Institute, Tumkur Road, Bangalore 560 022.

BOSLA Exhibition Cum-Demonstration of Library Software

Bombay Science Librarians Association (BOSLA) in collaboration with K.J. Somaiya College of Engineering,

organised an Exhibition-Cum-Demonstration of Library Software, on 7 June 1993 at K.J. Somaiya College of Engineering, Bombay.

The purpose behind this exhibition was to accelerate the pace of computerisation of libraries in the city of Bombay with a view to helping them to come to a networking stage and facilitate sharing of library resources in order to beat the rising cost of books and periodicals. Through this exhibition, BOSLA tried to offer an opportunity for librarians, computer consultants and decision makers, who are thinking of going in for computerisation, to get a fair idea about the availability of various software along with their respective versatilities. BOSLA's role was that of a catalyst bringing library authorities and software owners together.

Ten software owners including two barcoding companies participated in the exhibition.

The exhibition was well attended and nearly 500 persons including librarians, decision makers and computer consultants visited the exhibition.

BOSLA arranged this exhibition as a part of Dr. S.R. Ranganathan's Birth Centenary Celebrations.

CD-NET Workstation

The Library of the All India Institute of Medical Sciences has recently installed a CD-NET Workstation for providing database search facility through CD-ROM. With the installation of this unit, ten users at a time can search the required data. The databases available in the Library are MEDLINE, POPLINE and ONCODISC. The Library is amongst the few pioneers in the country to provide such a service through CD-NET. This facility is available for the members on working days. The Library has two independent units of CD-ROM drives also.

Conferences in Agriculture and Allied Sciences — ICAR Directory

The current issue of the Directory covers events scheduled between July and December 1993 and lists 260 entries.

The Directory was first published in 1988 and was brought out annually until 1990 when it was made half-yearly and the work was taken over by the Agricultural Research Information Centre on a regular basis. Intending Conference participants would indeed find the publication a valuable source of information for ready reference.

Bamboo Information Centre

Bamboo Information Centre-India (BIC-India) has been established with the support of the International Development Research Centre (IDRC), Canada with the prime objective of collecting, organising and disseminating information on tropical bamboo from South East Asia. The Bamboo Information Centre-China (BIC-China) based at Beijing deals with temperate bamboo.

To disseminate information on bamboo the Centre is



Exhibition-Cum-Demonstration of Library Software organized by BOSLA and K.J. Somaiya College of Engineering

publishing a half-yearly BIC-India Bulletin and occasional Information Bulletins. BIC-India Bulletin contains original research articles, abstracts of literature, directory of scientists working on bamboo and directory of ongoing bamboo projects. Information Bulletins are publications on specific practical aspects of bamboos.

The large quantum of information produced has to be widely disseminated for furtherance of research, productivity and utilization of bamboo. Now scientists have to look for information on bamboo in various botany and forestry journals. The Centre has, therefore, decided to include research articles in the BIC-India Bulletin. It is proposed to develop the Bulletin into a full-fledged scientific journal devoted exclusively to bamboo so that the scientific community engaged in bamboo research all over the world has a medium for exchange of information.

COPSAT: INFLIBNET — NCSI Information Service

The COPSAT service is provided by NCSI, Bangalore to the universities through INFLIBNET. This is a monthly service by which each participating university can obtain the content pages of latest issues of any 25 journals. The university can choose from nearly 3,000 top ranking journals covering the subjects of *Life Sciences, Physical Sciences, Chemical Sciences, Earth Sciences, Engineering, Technology and Applied Sciences*. For around 60% of the journals covered in COPSAT service, abstracts are also available.

An annual subscription of Rs. 3,300/- is to be paid towards the running costs of the service by the participating university.

For more details and the COPSAT form write to:
O.P. Arora, INFLIBNET Programme, Near Gujarat University
Guest House, Post Box No. 4116, Navrangpura,
Ahmedabad - 380 009.

Ranganathan Birth Centenary Celebrations Conclude

The year-long celebrations organized by the Centenary

Committee concluded on 9 Aug. 1993. The function at Y.B. Chavan Centre, Bombay was attended by luminaries and high dignitaries like Shri Nani Palkhiwala Dr S.D. Karnik, Vice Chancellor Bombay University and Shri Prabhakar Dharkar, Minister for Higher and Technical education, Government of Maharashtra.

Several seminars and discussions on librarianship marked the year long celebrations. These included seminars on Trends in librarianship in the U.K., Reading habits, an Exhibition on library software which was inaugurated by Dr S. Ramani, Director NCST and several other events.

IASLIC National Conference

BIT, Mesra, Ranchi will be the venue of the XIX IASLIC National Conference to be held during 26-29 December, 1993.

The themes of the conference are:

- I Collection Development in the context of Economic Recession.
- II Organization of information for Industry.
- III Special interest Group Meetings.
 - i) Computer application in LIS
 - ii) Public administration terms in Indian languages.
 - iii) Publishing trends and development in humanities subjects in Indian languages in the 20th century.
 - iv) Information for Entrepreneurs
 - v) Research and Development in Informatics during the year.

Both invited and contributed papers will be considered. Synopsis giving scope of the proposed paper (in duplicate must reach IASLIC soonest possible followed by full paper (not exceeding 2000 words) by 15 September, 1993.

For further information please contact Mr. U.N. Singh, Organizing Secretary, IASLIC, P-291 CIT Scheme 6M, Kankurgachi, Calcutta 700054.

Medical Library Association: National Convention and Workshop

The National Convention and workshop of Medical Library Association of India will be held in New Delhi during the third week of October 1993. The themes of the Convention are:

1. Modern Technology and Health Science Libraries
2. Status of Health Science Libraries in India

There will be a workshop on CDROM Technology along with the convention.

Correspondence regarding convention and workshop may be addressed to Dr R.P. Kumar, Secretary, Medical Library Association of India, K-43 Kailash Colony, New Delhi 110 048.

MAIT: New Office Bearers

At their Annual General Meeting held on July 23, 1993, the Manufacturers' Association for Information Technology elected Mr Ashok Soota (Wipro Infotech Ltd.) as *President*, and Mr K.R. Palta (Larsen and Toubro Ltd.) as *Vice President*.

Database Production and Distribution : Resources, Technology and Management INFOTEX '93 Bangalore

This international conference, promoted by the Society for Information Science New Delhi, is designed to focus on the role that countries like India can play in the global alliance of information industry and profession.

The theme of the conference to be held during 28 November-1 December 1993 comprises the inputs required to design develop, produce and distribute databases which are the prime source of information industry. Papers on any of the following areas are invited:

- Intellectual base for database production
- Production technology for database industry
- Full text databases
- Retrieval engines
- On-line emerging trends and challenges
- CD-ROM and Multi-Media
- Impact of new media and technologies on publishing and global dissemination or distribution of information resources.
- Marketing opportunities in the developing world

The last date for submission of completed papers is 15 sept. 1993.

The delegate fee (Rs. 2,500/-) is to be remitted to the Conference Director, INFOTEX'93 C/o Informatics (India) Pvt. Ltd. P O Box. 360, Bangalore-560 003.

We have a date with you

at

NAARM, Hyderabad

for

4th CDS/ISIS User Group Meet

February 10-13, 1994

Contact

Mr. B.N. Sarkar
Senior Scientific Officer
NISSAT / DSIR
Technology Bhawan
New Mehrauli Road
NEW DLEHI - 110 016

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Mr. R. B. Gaddagimath
Librarian & Head
Information & Doc. Unit
NAARM
Rajendranagar
HYDERABAD - 500 030