

Liberator

CMC's Comprehensive Library Management Software

- * Designed by eminent library scientists and computer specialists under the auspices of NISSAT.
- * Encompasses all activities of a library.
- * Networked for libraries to share resources.
- * Designed to international standards for data security and database management.
- * Supports UNIMARC.
- * Suitable for small/big libraries.
- * ACQUISITION, CATALOGUING, CIRCULATION, SERIALS CONTROL, QUERIES & REPORTS, UNION CATALOGUE, INTER LIBRARY LOAN, E-MAIL & other features.

For more details, contact :

Mr. S Sasmal
CMC Limited
28, Camac Street
Calcutta - 700 016



NISSAT

NEWSLETTER

Vol. 12

No. 4

Oct.-Dec. 1993

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.

© 1993 DSIR, New Delhi.

Published by the Society for Information Science on behalf of National Information System for Science & Technology (NISSAT)
DSIR, Government of India
Technology Bhawan
New Delhi-110016.

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.

Poised For Dramatic Change

Not many realize that the information market scenario in India is in for a dramatic change.

Until the 60's, the libraries of universities, laboratories under CSIR, DRDO, DAE and the like, were the only sources of information services. The seventies saw the emergence of NIC and NISSAT and the Eighties — ENVIS and BTIS.

Though part of the Electronics Commission, NIC was developed so as to ultimately evolve as an independent entity. On the other hand, NISSAT, ENVIS and BTIS tagged on to a few established institutions for their programme implementation. Their identity as plan programme still continues. They uniformly follow the philosophy of marginal support — which being a small part of the total budget, host institutions do not always attract strong internal support.

From the mid-1980's, independent organisations dealing with information systems and services started coming up e.g., NCSI, TIFAC, DELNET, MALIBNET, and CALIBNET. Since these organizations are created with specific objectives, and nurtured in the flexible framework of registered societies, they are likely to generate a strong market force, provided of course, they get proper sponsor, mentor, and a monitor (may be in the guise of a tormentor).

Better late than never! With the exception of Informatics India — which started much earlier, there has been a mushroom growth of private enterprises on information services from the beginning of this decade. In keeping with the global trend, the impetus mostly comes from major book and journal agencies e.g., UBS — GIST and Dalal Street Journals — DART; newspaper houses like *The Hindu*, *The Times of India*, *Business India* and *The Deccan Herald*. Such linkage is essential for the smooth transfer of information resource base to their subsidiaries, for facilitating deployment and redeployment of manpower and other infrastructure and also for absorbing the shock of initial low returns. The market is also witnessing the nucleation of small, unattached enterprises on information broking, online and database services.

It is not clear how much the liberalization policy has to do with it, but the big players in information business are turning their attention to the Indian market. For example, Reuters not only provide information on international Forex market but also supplement it with Indian information; Derwent and STN International had a marked presence in the recently held exhibition at INFOTEX '93 besides DIALOG which had set up its Indian operation much earlier. Some big names are tying up with Indian ventures — Faxon with Informatics, ESA-IRS with TIFAC. It is likely that database co-production arrangements, as successfully demonstrated in the case of NICFOS — FSTA, would also proliferate.

If this be the shape of things, should NISSAT be left behind? We shall talk about this in our next issue.

— A. Lahiri

NISSAT NEWSLETTER NO. 4, 1993

NISSAT
NEWSLETTER

Vol. 12

No. 4

Oct.-Dec. 1993

CONTENTS

	Poised For Dramatic Change	1
	9TH ASTINFO: New Delhi Hosts Regional Seminar on Library Networks and Ninth Consultative Committee Meeting	3
	CD-ROM of Asian Information on Health and Environment: First Consortium Meeting	10
	Information Management for Medicinal and Aromatic Plants Industry — Workshop	12
	CSIR Librarians Discuss Networking and Library Management	14
2	Use of IDAMS-PC in Conjunction with Micro CDS/ISIS Through IDIS Interface	18
	A Chronology of Future Technologies	19
	News and Events	22

9TH ASTINFO: New Delhi Hosts Regional Seminar on Library Networks and Ninth Consultative Committee Meeting

Seventeen ASTINFO member countries in Asia and the Pacific, which coordinate UNESCO information programmes in the region, attended the Regional Seminar on Library Networks held at Suraj Kund, New Delhi during 25-27 September, 1993. The Seminar was followed by the Ninth ASTINFO Consultative Committee Meeting (28 September-1 October)

The joint function was organized by the National Information System for Science and Technology (NISSAT) of the Department of Scientific & Industrial Research (DSIR) on behalf of the Government of India and UNESCO.

Inauguration

The tone of the meeting was set by Dr S.K. Joshi, Secretary, Department of Scientific & Industrial Research. In his keynote address, Dr Joshi called for strengthening the infrastructural facilities. Dr Joshi's plea was reinforced by Mr P.R. Kumaramangalam who, while inaugurating the conference, called for exploitation of information technology to promote faster exchange of information among ASTINFO member countries.

Mr Kumaramangalam presented a package of teaching aids on CDS/ISIS, CCF and MIS developed by NISSAT (under a UNESCO/ASTINFO Contract) to all participants. Besides, the Indian language version of CDS/ISIS — the TRISHNA software was ceremonially transferred to the Royal Nepal Academy of Science & Technology and Bangladesh Scientific and Documentation Centre (BNSDOC).

Participation — of the 19 ASTINFO member countries, 17 attended the conference. There were,



The Hon'ble Mr P.R. Kumaramangalam, Minister of State for Science and Technology and Prof S.K. Joshi Secretary, Dept of Scientific & Industrial Research being received by Dr A. Lahiri Jt. Advisor NISSAT

in addition, 20 observer delegates. The countries represented were Australia, Bangladesh, China, India, Indonesia, Iran, Japan, Republic of Korea, Malaysia, Mongolia, Nepal, New Zealand, Pakistan, Papua New Guinea, the Philippines, Thailand and Vietnam. Laos and Sri Lanka could not attend.

Office Bearers

Dr A. Lahiri (India) and Prof. Tamiko Matsumura (Japan) were unanimously elected Chairman and Vice Chairman respectively.

Dr Kerry Webb (Australia) and Prof Gopinath (India) acted as rapporteurs for the seminar while Ms Lindse Milne (New Zealand) and Mr Neil Nicholls (Papua New Guinea) served as rapporteurs for the Consultative Meeting.

Technical Sessions

The topics for the technical sessions of the seminar included the following:

- Rationale for development of networks
- Online access to database services
- Technologies for library networking
- Manpower for network development and operation
- Experiences of library network development
- Hardware and software systems for networking
- Standards for network development
- Standards for network development
- Rural communication
- Management of networks

On each of the above topics Indian experts presented key discussion papers. Experts from participating countries then expressed their view points.



Ms Della Torrijos, Regional Advisor, PGI, UNESCO lighting the lamp at the Inaugural ceremony

- 4 The national papers giving the state-of-the-art and the problems faced in network development evoked keen interest. The quality of the papers reflected progressive development of the member countries and the ASTINFO programme *per se*.



Prof S.K. Joshi, Secretary DSIR delivering the theme address

Recommendations

The discussions that followed led to the adoption of the following recommendations.

- 1.1 The primary rationale for promoting library networks is the economic and viable organisation of information resources. Its emphasis is on the optimal utilisation of information resources available within the ASTINFO region.

For this purpose, it is recommended that every member country of the ASTINFO region must

- a) Strengthen its own information resources and all the scientific and technical institutions to develop a well organised library and information resource system at all levels. It should be provided with necessary infrastructure to meet communication facilities.
- b) Organise periodical assessment of science and technology information needs and capabilities within each country. Such an activity would provide guidelines for need-based establishment of library and information systems.
- c) Provide for library and information professionals to staff the library and information resources system so as to have responsive library and information services.

1.2 One of the recent developments in member countries of ASTINFO region is the provision of Online Access to Information Systems and Databases.

In view of the developments, it is recommended that the ASTINFO member countries may develop their own national databases for information resources available in their respective countries to provide for exchange of information in the following manner:

- a) A directory of library networks and bibliographic databases available in the ASTINFO member countries be prepared by the respective national agencies of ASTINFO.
- b) A directory of experts who have demonstrated their expertise in various specialities of library networking in the ASTINFO member countries be prepared by the respective coordinating units of ASTINFO.
- c) A directory of standards available for library networking be prepared by any one of the coordinating units of ASTINFO along with alternative standards available for each area of specialisation in library networking. Considerations for local, national and regional collaborations among the library and information centres be kept in view.



The representative from Royal Nepal Academy of Science & Technology receiving the TRISHNA and SANJAY software from the Minister

1.3 The development of INTERNET has provided the scope for information exchange, such as:



A section of the distinguished audience

- a) Interpersonal exchange of information among the professionals and delivery of information instantaneously through a variety of data communication systems.
- b) Multi-media access to distance education.
- c) Multiple access to scientific information exchange centres.
- d) Development of multi-cultural, multi-lingual data bases and retrieval strategies.

It is, therefore, recommended that ASTINFO member countries encourage and promote the use of INTERNET in the following manner:

- a) Urge their central and state governments to set up telecommunication channels with INTERNET COMPATIBILITY.
- b) Exchange and provide technical expertise available in each country of the region among themselves and establish compatible equipment to promote interactive programmes between any two organisations within the country and between the countries.
- c) Provide for data communication facilities in the form of E-mail and FAX systems.

For this purpose, the support of decision-makers is needed at the highest level. Funds should be sought to arrange services for site

visits of experts to demonstrate the INTERNET to politicians, bureaucrats and academicians. The presentations will include a combination of video-tape, computer simulations and some online demonstrations using ISD. The cost will include travel expenses for experts, ISD expert, video tape presentation, and computer simulation presentation.

1.4 In view of the developments in library networking and the need for utilisation of information technology for productive cooperation among libraries, it is recommended that

- a) ASTINFO countries promote through short-term training programmes hands-on experience aspects of E-mail, FAX, communication modems, and other network technologies.
- b) This may be augmented through mutual cooperation among technologically developed countries and technologically deficient countries of ASTINFO.
- c) Trainers be provided hands-on-experience on a priority basis so as to help faster development of required human resource for staffing the library and information centres.
- d) Develop instruction manual/audio/video aids for providing knowledge and skills for networking libraries.
- e) Establishment of formal educational facilities in some schools of library and information science in each country to provide scope for learning library network technology and skills in its use.

1.5 Since a large population of ASTINFO member countries is living in rural areas and as these areas do not have access to good library and information facilities, and



Ms Della Torrijos receiving the teaching kit on CCF, CDS/ISIS and MIS developed by NISSAT

therefore, do not have access to appropriate science and technology information, it is recommended that

Well developed wireless radio, satellite, cellular telephone communication facility with provision for data transfer facility be provided in a phased manner. Such a facility would help access information resources available in any part of the country or the ASTINFO region, and the world at large.

1.6 In view of the developmental changes occurring at faster pace in information generation, storage, transfer and retrieval and in view of the need to adapt them in a manner conducive to the library networking in different nations of ASTINFO region, it is recommended that

Frequent interactions be promoted among ASTINFO nodes on latest developments in library networks by periodic informal exchanges through ASTINFO newsletters, periodic conferences, promotional visits of library and information professionals, and through audio, video and other means of information exchange.

Consultative Committee Meeting

Overview

Giving a brief overview of the PGI/ASTINFO activities, Ms Delia E Torrijos, Regional Adviser stated that significant developments had taken place in some countries through their participation in the regional networks, such as the ASTINFO, APINESS and APINMAP. ASTINFO continues to provide the programme focus for the region. Therefore, the support for the development of national information infrastructures and services must remain a cornerstone of the ASTINFO programme. She also highlighted ASTINFO's achievements for the period 1992-93. The major ones were: Innovative Community Information Service Project in Thailand, Philippines, Bangladesh, and Indonesia; Document delivery service pilot project under the auspices of the National Library of Australia; Advanced training course in Micro-ISIS and the regional users and distributors meet in Manila; National training course in Indonesia; Advisory missions in Laos, China, Mongolia Malaysia and Nepal.

Country reports presented by each participating member focussed on the provision of infrastructural facilities, the status of online access services and the document delivery services, the status of programmes for database creation, the status of developments in networking at the national level and at the level of libraries.

Under the Australian document delivery project 50% requests are satisfied by NLA and CSIRO. NLA would henceforth accept document requests by E-mail. The importance of the project was highlighted and funding for the project was recommended to UNESCO for 1994-95.

Programme for 1994-95

Ms Torrijos, then outlined the UNESCO/PGI programme for 1994-95 which among other things included the following activities:

- Consultative meeting & Regional workshop/seminar

- National and regional studies
- Publication of ASTINFO Newsletter and reports
- Support for APINMAP
- Advisory and consultative service upon request

ASTINFO evaluation report prepared by Dr. D.E.K. Wijasuriya was discussed. The focus of the report was on drawing up principles and strategies for further development of ASTINFO. The main points were:

- a) That participating countries are expected within a six year period to have made significant progress in national infrastructure developments for scientific and technological information.
- b) That specific countries within a sub-region be designated as sub-regional nodes in order to forge effective links with countries within the sub-region not participating in ASTINFO at the present time. This is crucial in Oceania where there is a large number of widely scattered countries.

Sub-regional nodes were then agreed to in principle for the Pacific and IRANDOC.

The status of recommendations made at the Eighth ASTINFO consultative meeting in Tokyo and Tsukuba in 1991 was reviewed.

The three interested countries namely, Papua New Guinea, Iran and China were asked to submit firm proposals for holding the Tenth ASTINFO consultative meeting to UNESCO/PGI Bangkok by December 31, 1993.

Recommendations

The following recommendations emerged from the discussions that took place at the Ninth Consultative Committee Meeting

1. As recommended at the Eighth ASTINFO Consultative Meeting, participating member states of the ASTINFO recognise the positive and catalytic effect of the network, and the assistance given by UNESCO in supporting regional and national projects to develop S & T capabilities within the region. The ASTINFO members very strongly urge PGI/UNESCO to draw the attention of UNESCO to the value of this regional mechanism, the significant advantages to member states, which have been achieved in the last 5 years in particular because of the catalytic effect of ASTINFO, and the need for continuing and increasing its funding in the light of the work programme.
2. The Meeting commended the efforts by the governments of several member states in supporting regional STI workshops and in assisting ASTINFO become more self-reliant. The Governments of Japan, Australia, New Zealand, Malaysia, Republic of Korea and the Philippines were commended on the total (Japan) or partial cost-sharing for attendance at the Ninth ASTINFO. Thailand, Malaysia and Indonesia were also cited for sending observers for the Regional Seminar on Library Networks, at their expense indicating its relevance to their national programmes. Member states are requested to continue and also extend these cost-sharing initiatives for the Tenth ASTINFO Consultative Meeting.
3. Great importance within the region is given to **document delivery** by ASTINFO participants. UNESCO is requested to ensure that sufficient funds are provided to enable the National Library of Australia to implement the 5 year document delivery project. Emphasis should be directed to aspects which will enable ASTINFO members to gradually develop national document delivery systems.
4. Requests for **membership to ASTINFO** are constrained by the limited funds available. In considering requests for membership, it is essential to endeavour to create a better balance in the level of membership from Asia and the Pacific. There are currently only three Pacific participants; Australia, New Zealand and Papua New Guinea. It was agreed that sub-regional nodes at Papua New Guinea for Pacific and Iran for the Central Asia be supported as an interim measure and that resources be made available.
5. That as stated at the 8th ASTINFO Consultative Meeting, the principle of continuity of country, institutions and, where possible, personal attendance at the Consultative Meetings be supported as far as practical by each Member State.
6. That non-attendance at two consecutive ASTINFO Consultative Meetings would result in that country's membership of ASTINFO being reviewed, so that optimum use is made of ASTINFO's limited financial resources.
7. It was agreed that the responsibility for reporting at the Seminar/Workshop and the Consultative Meeting be rotated among the ASTINFO members. For future meetings, the host country would, where possible, undertake to prepare the minutes for the Regional Seminar/Workshop. For the Consultative Meeting the workload would be divided to allow separate rapporteurs to report on the workplans, summary country reports, recommendations, etc. It was agreed that written summaries of major presentations e.g. country reports, UNESCO/PGI activities be provided by the presenters. One or two rapporteurs would be appointed to co-ordinate the minutes of the Consultative Meeting and Seminar/Workshop.
8. That the Member State Mongolia be thanked for their offer to facilitate translation into English, for any ASTINFO member state, documents from and into both Russian and Mongolian.
9. Given the many common documents that appear in the proceedings, the Consultative Meeting recommends that its proceedings be stored on disk, in an appropriate format to be made available to the next host, to facilitate reporting.

10. That the required country reports and other information of ASTINFO activities and the proposed workplans should be submitted to the host country, by the liaison officers, not later than two months before the Consultative Meeting. It was further agreed that in the absence of a country report and other documentation, ticketing (PTA) arrangements for the relevant liaison officers would not be completed.
11. That the ASTINFO Consultative Meeting final report be supplied to each ASTINFO Co-ordinating Unit on Floppy disc with 5 hard copies. The ASTINFO ACU's would be responsible for distribution within each country.
12. The meeting congratulated Korea on their generous offer to loan a laptop for reporting purposes at the next Consultative Meeting. It was strongly suggested that Korea would investigate the possibility of donating a laptop to participating ASTINFO members. To assist the progress of the Consultative Meetings member states, wherever possible, were also requested to bring laptops to the meeting.
13. That the proceedings of the Regional Seminar on Library Networks should be published. The proceeds are to go to ASTINFO through the ASTINFO Co-ordinating Unit in India, DSIR/NISSAT and used to support ASTINFO activities. A report of the results of this activity will be tabled at the Tenth ASTINFO Consultative Meeting.

We Wish all Our Readers & Patrons

a Very

Happy and Prosperous New Year

CD-ROM of Asian Information on Health and Environment: First Consortium Meeting

The modalities of bringing out the CD-ROM of Asian information on health and the environment formed the subject of discussion by about 30 experts from Bangladesh, Hongkong, India, Malaysia, the Philippines, Singapore and Thailand. The occasion was the first Consortium Meeting sponsored by IDRC, Canada.

The meeting, held in New Delhi during 20-23 September 1993 was hosted by PID and inaugurated by Prof. S.K. Joshi, Director General, CSIR.

Prof. Joshi congratulated IDRC and PID for taking the initiative of organizing a meeting for the development of this CD-ROM and assured the Consortium of all possible help from CSIR for its successful launching.



Ms Maria Ng Lee Hoon, Regional Program Officer, IDRC Singapore addressing the Consortium Meeting. Seen at the dais are (from left) Dr Vijay Pande, Regional Director IDRC, New Delhi, Prof S.K. Joshi DG CSIR and Dr G.P. Phondke, Director, PID, New Delhi

10

Welcoming the participants, Dr. G.P. Phondke, Director, PID, expressed the hope that this CD-ROM on health and environment, when available,

will be highly useful for easy access of data and meet the information needs of researchers and decision makers. Dr. Vijay Pande, Regional Director, IDRC Regional Office, New Delhi, in his address, outlined the role of IDRC in promoting research, development and use of information services, systems, networks and technologies for accelerating the development process. He congratulated and thanked PID for hosting this groundbreaking meeting for development of the first regional CD-ROM on the subject of health and environment. Ms Maria Ng Lee Hoon, Regional Program Officer, IDRC, Singapore, traced the developments and genesis of the project prior to this meeting. She also thanked PID for hosting this Consortium.

During the technical sessions the feasibility and market studies relating to the project were presented by the resource persons, Dr. P.K. Abeytunga and Mr. Chin Saik Yoon, for the consideration of the participants. A prototype of the proposed CD-ROM was also displayed. An intensive discussion on the case studies for deciding the feasibility of the project, contents of the discs, and the management structure for the efficient functioning and publication of the CD-ROM was held. As a consequence of the 4-day deliberations, it was decided that a series of three CD-ROMs under the title "Asian Information on Health and the Environment" may be developed. The specific titles proposed for the first three CD-ROMs are: (1) Environmental and Resource Management; (2) Occupational Safety & Health, Natural Toxins and Tropical Diseases; and (3) Traditional Asian Medicines and Natural Products. To start with, the CD-ROMs will have both bibliographies and full text and pictures, which will be augmented later on to become a multimedia presentation.

The initial CD-ROMs will contain relevant information on health and environment contributed

by the following nine institutions in the Asian region : International Centre for Diarrhoeal Disease Research, Bangladesh; The Chinese University of Hongkong; Publications & Information Directorate, New Delhi; Asian Alliance of Appropriate Technology Practitioners, the Philippines; Asian & Pacific Information Network on Medicinal and Aromatic Plants, the Philippines; National University of Singapore; National Institute for the Improvement of Working Conditions and

Environment of Thailand, Thailand; Asian Institute of Technology, Thailand; and SEAMEO Tropical Medicine and Public Health Project, Thailand. However, search for new sources of information and data in the Asian region will continue for inclusion in subsequent CD-ROM discs.

All the sessions were chaired by Mr. Shahid Akhtar, Director, Information & Communication Systems and Networks, IDRC, Canada.

Mangroves Ecosystem Information Service

The Madras-based Centre for Research on Sustainable Agricultural and Rural Development (CRSARD), belonging to M.S. Swaminathan Research Foundation, had developed a database package on mangroves aimed at helping preservation of global biodiversity and ecological balance. Mangrove Ecosystem Information Service (MEIS) is an integrated package of four databases namely Mangrove Experts Directory (MANEXP), Mangrove Bibliography (MANBIB) Mangrove Resources and Inventorying Database (MANRES) and Mangrove Genetic Variability Database (MANVAR).

MANEXP contains a directory of around 500 experts in the field from 54 countries including the entire membership of the International Society of Mangrove Ecosystem (ISME). The database presents the biodata of all these experts with their areas of specialisation and their achievements.

MANBIB is a database on bibliography of mangrove literature published by the UNESCO covering the period 1600-1975 and further covers another 2100 bibliographic entries updated till 1993.

MANRES provides information on mangrove ecosystems at different levels ranging from the national to the site level. Further, MANRES provides visuals of sites, which can be enlarged using high resolution.

MANVAR consists of information on variability at three levels namely ecosystem, species (interspecific) and intraspecific. The database is a compilation of the morphological variations of mangrove fauna reported so far in journals and indexed.

Originally designed to have six databases, MEIS package now offers five databases. The database consisting of mangrove sites named Mangrove Visual (MANVIS) has been merged with MANRES. The fifth one named Mangrove Socio-Economic (MANSOC) will be ready very soon. MANSOC is a database on the survey of socio-economic information related to human population who live in the vicinity of mangroves worldwide.

MANEXP and MANBIB have been developed on microcomputer version of CDS/ISIS, a package developed and distributed by UNESCO, so that these databases can be used worldwide. The other databases MANVAR and MANRES were developed using Dbase IV.

(Contd. on Page 17)

Information Management for Medicinal and Aromatic Plants Industry — Workshop

In order to bring potential users of information on medicinal and aromatic plants on one platform so as to provide closer interaction and coordination among them, a three-day workshop on the subject was organized by the Publication and Information Directorate (PID), New Delhi during 12-14 October 1993. About 70 participants from research institutions, pharmaceutical houses, government departments, herbal and essential oil industries including cultivators and traders, attended the workshop.

The inaugural session was chaired by Prof. S.K. Joshi, Director General, CSIR; Dr Nitya Nand, former Director, Central Drug Research Institute (CDRI), Lucknow, and Senior INSA Scientist delivered the keynote address. Prof. Joshi also inaugurated the exhibition which housed stalls of some well-known pharmaceutical companies displaying their new plant-based products and publishing houses displaying recent publications on the topics related to the workshop.

Dr G.P. Phondke, Director, PID, welcomed the participants and guests expressing his happiness at the overwhelming response the workshop received from the industry as well as R & D personnel.

Dr Joshi in his inaugural address congratulated PID for organizing this much-needed workshop and offered all possible support to the implementation of specific mission oriented recommendations emerging from the deliberations of the workshop. He also released a Souvenir brought out to mark the occasion.

12 Delivering his keynote address, Dr Nitya Nand appreciated the role played by PID in the field of information dissemination on medicinal and aromatic plants. He reiterated that a sound database and management of information on different aspects of medicinal plants will greatly



Prof S.K. Joshi, Director General CSIR and Secretary, Dept. of Scientific and Industrial Research releasing the Souvenir brought out to mark the occasion. Also seen at the dais are (from left) Shri H.C. Jain (PID), Dr Nitya Nand, former Director, CDRI Lucknow. At extreme right is Dr G.P. Phondke, Director PID

help in the development of the photochemical drugs industry. He said that the Ayurvedic system of medicine is ideally suitable for being put in an information base on account of the detailed classification and systematization in-built in the system.

Shri H.C. Jain (PID) proposed a vote of thanks.

The topics covered in the sessions included — Development and Management of a Computerized Database on Medicinal and Aromatic Plants by Dr G.P. Phondke; Establishment and Management of Commercial Plantations on Medicinal & Aromatic Plants in India by Dr Rajendra Gupta, Project Coordinator, Medicinal & Aromatic Plants, NBPGR, New Delhi; Integrated Management to Utilize and Conserve Genetic Diversity of Medicinal & Aromatic Plants by Dr A.K. Gupta, Director, CSIR Complex, Palampur; Application of HPTLC in Crude Drug Analysis by Shri V.M. Khanpure,



Prof S.K. Joshi inaugurating the exhibition of plant-based products and recent publications on topics related to the workshop

Anchrom Enterprises, Bombay; Industrial Processing and Formulations by Dr D.B.A. Narayana, Manager (R & D), Dabur Research Foundation, Ghaziabad; Formulation Development — Art or Science by Dr Neena Sharma, Ranbaxy Laboratories, New Delhi; Standardization and Quality Control for Medicinal Plant Materials by Dr S.S. Handa, Professor of Pharmacognosy, Panjab University, Chandigarh; Regulatory Information — Sources and Availability by Shri K.C. Sharma, Asstt Drug Controller of India; Information Management for the Marketing of Medicinal and Aromatic Plants by Shri Gokul Patnaik, Chairman, APEDA, New Delhi; Medicinal Plants and Society Interface by Dr Sharadini Dahanukar, Professor of Pharmacology, Seth G.S. Medical College, Bombay and Shri Darshan Shankar, Director, FRLHT, Bangalore. Shri Samir Shah, Joint Managing Director, Themis Pharmaceuticals, Bombay, delivered the valedictory address on Innovation and Entrepreneurship as and for Harvest of Plant Heritage.

Several recommendations/suggestions emerged from the deliberations of the workshop.

Some of the salient recommendations are:

1. The database developed and managed by PID should be comprehensive, multidisciplinary, synthetic, and analytical.
2. Information about compatibility of different drugs, wherever available, should be included in the database.
3. Chemical structures of active compounds should also be included in the database.
4. Data on availability of medicinal herbs, agrotechnology, adverse drug reactions, clinical information, etc. should be strengthened.
5. A concrete effort to standardize ayurvedic drugs should be made.
6. Industrial houses involved in herbal drug manufacture should go into details of correlative active principles of drugs with parameters like activity, shelf-life, stability, etc.
7. Herbal drug industry should project its requirements of raw materials in terms of quantity; only then, organized cultivation can be undertaken.
8. Endangered plant species should be identified and methods developed for their propagation and cultivation involving new methods of regeneration.
9. Farmers may be trained and convinced to grow medicinal plants which have demand in the international market; specifications of the users should be adhered to.
10. Value-added finished products may be exported instead of crude drugs.

CSIR Librarians Discuss Networking and Library Management

The Information Centre for Aerospace Science and Technology NAL, Bangalore and INSDOC hosted last July a two-day meeting of Heads of CSIR libraries to discuss several important issues of vital concern to the scientific community of CSIR in regard to library and information services. The issues discussed included: (i) co-operative acquisition (ii) sharing of resources of library and information centres (iii) networking of CSIR libraries through SIRNET (iv) shared cataloguing (v) rationalisation of procedures of management of library/information centres (vi) document delivery service (vii) combined newsletters of library/information centres (viii) HRD policies.

Sixty-five participants from almost all CSIR laboratories attended the meeting, the first ever to be held.

Inauguration

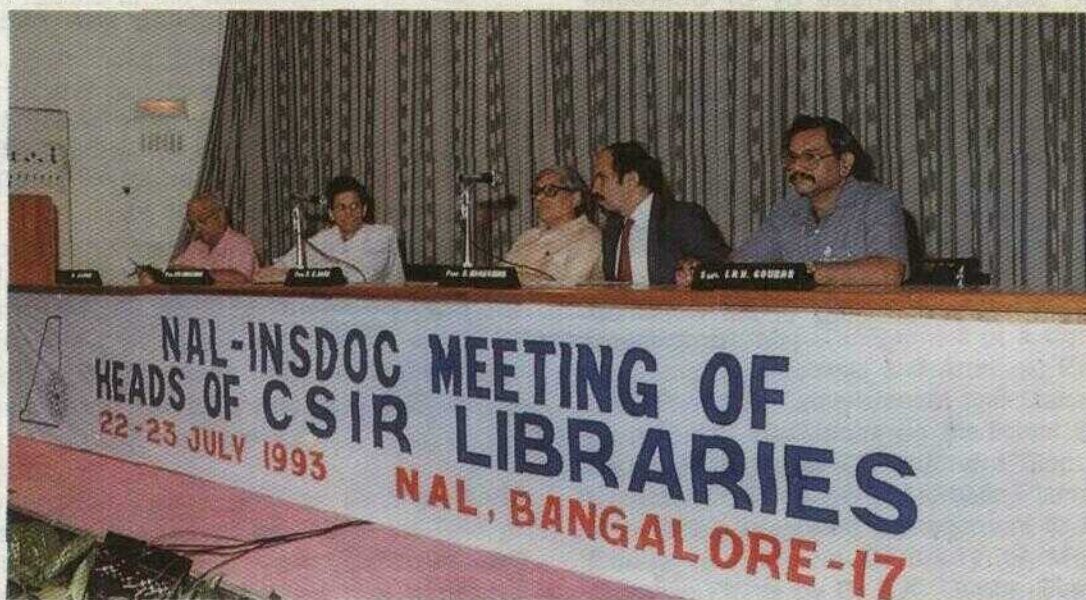
The meeting was inaugurated by Prof. V.K. Gaur, CSIR Distinguished Scientist and presided over by Prof. R. Narasimha, Director, NAL. In his key-note address, Prof. T. Viswanathan, Director, INSDOC, explained the objectives of the meeting

and proposed the formation of "CSIR Information Consortium". He described the resources and the services of all CSIR libraries put together as a vast "S & T Information Reservoir" and stressed the need for making these resources available for the benefit of S & T Community as well as industries in the country and in the process earning a sizeable revenue for CSIR through the value-added services. He stressed further on the need for the rationalisation of acquisition of serials in CSIR by bringing down the redundancy in journal titles. He proposed the creation of a globally competitive bibliographic database on a co-operative basis and make it available on a central host.

Mr. I.R.N. Goudar, Head, ICAST, NAL welcomed the gathering and Mr. D.N. Gupta, Deputy Head, NSL, INSDOC gave the vote of thanks.

Technical Sessions

There were seven technical sessions in the two-day programme. Prof. T. Viswanathan chaired all sessions and moderated the discussions.



Third from left is Prof. V.K. Gaur, who inaugurated the Librarians Meet. Others at the dais are (from left) Shri D.N. Gupta, Prof. Viswanathan, Prof. R. Narasimha and Mr I.R.N. Goudar

Session I : Resource Sharing

Mr. Goudar, gave a bird's eye view of the facilities and services in CSIR libraries and information centres, including document collections, technical expertise and a host of modern information access and search facilities such as Online, CD-ROM, E-Mail, photocopying etc. A survey conducted by him shows that all the CSIR libraries have more than nine lakhs of books of which nearly half could be unique titles. The total number of serials subscribed is more than 12,000 of which more than 8000 are foreign serials. Among all CSIR Libraries, about 3000 foreign serials could have been duplicated. Through a resource-sharing network this duplication could be avoided resulting in saving lot of foreign exchange. The total estimated budget of all CSIR libraries put together is around 9.5 crores for 1993-94. It is observed that the library budgets of CSIR libraries vary from Rupees five lakhs to seventy lakhs without having any relation either to the total budget of the laboratory concerned or the number of scientific staff or the number and nature of R & D projects in progress. As many as 30 CD-ROM databases are already being subscribed by the CSIR group and On-line facility is being made available in nine libraries. E-mail facility is available in twenty-six CSIR libraries. However, the efforts in automating CSIR libraries is mostly of an experimental nature and more efforts are required in this direction, especially in the context of networking. Photocopying service is satisfactory with most of the libraries having good facilities. However, the charging pattern for xerox service is not uniform in all libraries. There seems to be an imbalance between the professionals, semi-professionals, and supporting staff in most of the libraries. Only five libraries collect overdue charges for document transactions. The period of stock verification varied from one year to five years. While most of the libraries have Library/User Committees, there are no well defined terms of reference concerned. Sixty per cent of the libraries bring out accession lists in one form or other. A little more effort and participation by all the CSIR libraries in bringing out a combined accession list would facilitate better resource sharing. The eligibility in number of borrowers' tickets for internal members varied from 2 to 20. There is no uniform policy regarding issue of tickets to the retired staff members.

There was lively discussion following this

presentation. A number of measures were suggested for effective resource sharing amongst CSIR libraries such as forming CSIR Library Network using SIRNET; rationalising of journal subscription and CD-ROM database acquisitions; bringing out CSIR part of National Union Catalogue of Scientific Serials in India; strengthening xerox facilities; simplifying loan and charging procedures for books, journals, xerox services; bringing out combined accession lists; creating indigenous database, etc.

Session II : Networking

Mr. J.M. Bhardwaj (INSDOC) led the discussions on networking. He dealt in detail with the concepts in networking, citing examples of networks both at the international and national levels. He gave salient features of communication networks like INDONET, NICNET, ERNET, SIRNET and Library networks such as INFLIBNET, MALIBNET, DELNET, etc. The SIRNET, a venture of INSDOC has total of 62 nodes out of which 26 are unique CSIR nodes. It is derived on ERNET and linked to INET. Mr. Bhardwaj further discussed the design considerations, the technology involved, the protocol, file transfer, database search and remote log-in using SIRNET. He also talked about hardware/software requirements to have User/Mail node for SIRNET connection.

A discussion on the varied experiences of CSIR users on various aspects of SIRNET followed. Some of the identified problems are concerned to connectivity, unreliable Modems, difficulties in telecommunications, lack of training and communication gap between SIRNET users and INSDOC. Prof. Viswanathan assured formation of a SIRNET Monitoring Committee, which would look into the problems concerned and also suggested the laboratories having network connection to extend the same to the respective libraries.

Session III : Specialised Databases

Mr. M.P. Tapaswi (NIO) discussed different types of databases like bibliographic, dictionary, numeric, text/image, etc. He enumerated the reasons for going for computerised searching of databases and further compared advantages and disadvantages of CD-ROM versus On-line database searching. He suggested the generation of Current Awareness Service based on Current

Contents on Disc. Creation of indigenous databases on specialised subjects to suit the requirements was advocated.

Session IV : Library Networks

Mrs. Jayasri Raghavan (INSDOC) gave an overview of the existing as well as emerging library networks in India like CALIBNET, DELNET, INFLIBNET, BONET, PUNENET, BLNET, etc. She gave a detailed account of MALIBNET (Madras Library Network, which is a registered society), its aims and objectives, benefits, etc. She listed the services offered by MALIBNET such as information on current serials, holdings in selected libraries in Madras, contents page service of journals, specialised database service, real-time access to international databases and E-mail services. The MALIBNET Service Centre is located at Regional Centre INSDOC, Madras with a dial-up connectivity to all the member libraries.

Session V : Library Services on Networks

Mr. S.M. Dhawan (NPL) broadly grouped the network-based services such as networking of library databases, resource sharing and connectivity to external services. Further, he listed the services that could be generated on networks like shared cataloguing, combined accession lists, document location and supply, referral service, direct patron borrowing, bulletin board service, union catalogue, rationalisation of acquisition of serials and monographs, access to On-line systems, etc. He discussed the pre-requisites for generating these services and the need for a general CSIR policy in this matter.

An interesting discussion about Union Catalogue versus Bulletin Board took place and it was felt that both Union Catalogue and Bulletin Boards have their own advantages and accordingly both should exist. It was agreed that services should not be free for outsiders and there should be a uniform charging system within CSIR system.

Session VI : Library Management

16 Mr. S.N. Agarwal (ITRC) raised several issues relating to the management of library and information centres such as budget allocations, library automation, manpower needs, purchase procedures, stock verification, overdue charges, loss of books, weeding out policy, issue of tickets

to retired scientists, ILL norms, distribution of consultancy fees, etc.

After an interesting debate a slab system for allocations to libraries based on the laboratory's budget was suggested -5% for Rupees ten crores and above 6% for between Rupees five and ten crores and 7% for less than Rupees five crores. It was also recommended that 5% of the budgets of all the sponsored projects should be made available for library and information centres. To facilitate this it would be necessary to incorporate library component of budget in the project proposal itself and accordingly the proforma should be modified. It was decided to form a small Committee to look into these questions and take up the matter with CSIR for approval.

Session VII : Manpower and Training

Mr. K. Hari Hara Prasad (IICT) gave details of the imbalance of professionals versus non-professionals in libraries, recruitment and promotional avenues for library staff, training library staff in the context of the emerging modern technology in library services including library automation, On-line and CD-ROM information retrieval, E-mail, etc.

The discussions on this session were at times animated. It was recommended that only library professionals should be appointed as heads of libraries, 2-3 training centres having modern facilities and services should be identified treating Group-III and Group-IV working in the libraries on par with the scientific staff for the sake of promotions, especially when considering on merit basis. A suggestion to adopt the designations of the staff working in CSIR libraries in line with those of INSDOC was also mooted.

Concluding Session

Dr. S.R. Valluri, Chairman, Technical Advisory Board, CSIR, while delivering an inspiring valedictory address stressed the need for making the services of the library and information centres more dynamic. He mentioned that every year a sum of Rs. 13,500 is being spent on every CSIR scientist for meeting his information requirement and if the budget is spent judiciously, CSIR libraries can cater to the information requirements of entire S & T community in the country.

Prof. Viswanathan in his concluding remarks touched upon the important aspects that transpired during the two-day deliberations and endorsed the opinion of Prof. Gaur that the proposed CSIR Information Consortium should serve the public in a much bigger way and in the larger interests of the nation. He stressed the need for galvanising the libraries and turning them into dynamic forums and centres of activities all the time. There is a need to create an atmosphere similar to those of British Council and American Centre Libraries, in giving satisfaction to the users visiting CSIR libraries. He was very happy to see the overwhelming response from delegates for the proposal to form the CSIR Information Consortium and floating it as a profit making body or society. He emphasised the need for settling up a CD-ROM making facility and creating indigeneous databases and for CSIR libraries to have CD-ROM reading facility for their own use and for the users of the

local S & T community. SIRNET should be used to link CSIR libraries. He listed the problems identified in connection with SIRNET such as telecommunications, connectivity to STD, hardware, addressing system and training people to handle the network, etc. Further he mentioned about the need for a well-defined CSIR policy on library and information science, the need for having CSIR part of NUCSSI on a floppy disc along with the associated retrieval software for distribution and updating the union catalogue on a regular basis with the co-operation of all those concerned and compiling combined accession lists.

It was decided to have similar meetings every year, possibly the next one being at NIO, Goa. Mr. A. Joseph (INSDOC) summarised the proceedings of the Meet and Mr. Goudar gave the vote of thanks.

(Contd. from p. 11)

Ecosystem

MEIS has two design components. One is the design of databases and the other is the design of a software platform to enable online access, integration of CD-ROM components and image-editing software. The second component of software integration through a Unix server is being carried out in collaboration with Indian Institute of Technology, Madras.

According to Dr M.S. Swaminathan, "MEIS is aimed at converting generalised information into a relevant need-based application by bringing in more effectiveness." MEIS is targeted at policy makers, researchers and foresters.

Sponsored by the International Tropical Timber Organisation (ITTO), Japan, the project is being supported by the Department of Biotechnology, Government of India and Ministry of Environment and Forests, Government of India.

CRSARD has recently installed a 10 KVA solar photovoltaic generator, the biggest in South India, designed and developed by Central Electronics Ltd. The Centre will be soon equipped with a computer centre named Honda Informatics Centre (HIC), after the sponsor Honda Motors of Japan, which will be the first computer centre in the country to function on solar power. HIC will have two 486- and five 386-based systems, supported by a variety of peripherals, including a colour scanner and image printer, with CD-ROM drive and a modem as add-on features. The CD-ROMs have been made available by Commonwealth Agricultural Bureau International (CABI), UK. Further, the Centre has obtained online connection to over 300 databases through Dialog Corp., USA. CRSARD has also plan to establish a CD-ROM library in collaboration with CABI, that would have a LAN, an online information system, CD-ROM information services and an electronic database in the field of agriculture and allied areas. Also on the cards is the full-fledged training programme on CD-ROM.

— *Computers Today* Vol. 9, No. 106

INFORMATION PROVIDERS TO THE WELL INFORMED

Universal
Subscription
Agency
Pvt. Ltd



18-19, Community Centre, Saket, P.B. No. 8,
New Delhi-110 017
Fax No.: 91-11-6866138, Tel: 668167, 668192,
6852563 Telex: 31-73021, 31-65106,
Cable: WORLDMAGS



Global
Information
Systems Technology
Pvt. Ltd.

AT YOUR SERVICE.....

FOR TOTAL INFORMATION SOLUTIONS

-
- JOURNALS
 - MAGAZINES
 - BOOKS
 - CONFERENCE PROC.
 - PATENTS & STANDARDS
 - CD ROMS & DRIVES
-

OUR STRENGTHS:

- * STRONG LINKS AND SPECIAL ARRANGEMENTS WITH MOST INTERNATIONAL PUBLISHERS
- * EXTENSIVE AIRFREIGHT ARRANGEMENTS
- * COMPUTERIZED SYSTEMS & SERVICES
- * NATION WIDE NETWORK OF 12 OFFICES
- * I-NET NETWORK (X.25) TO LINK AHMEDABAD, BANGALORE, BOMBAY, CALCUTTA, DELHI, HYDERABAD, MADRAS AND PUNE.
- * OVERSEAS BANK ACCOUNTS — TO PROMPTLY PROCESS PAYMENTS.
- * OUR COMMITMENT; ONE STOP TOTAL INFORMATION SOLUTION FOR ULTIMATE CUSTOMER SATISFACTION.

For orders and Enquiries, please write to :

Head Office : 18-19, Community Centre, Saket, P.B. No. 8, New Delhi-110 017

Regional Office : BANGALORE: 19/2 Ulsoor Road, Ulsoor, Tel:080-585837; BOMBAY : 308, 310 Shiv Smriti Chambers, 49-A, Dr. Annie Besant Road, Worli Tel : 4928349; CALCUTTA : 39A/24 Prince G.M. Shah Road, Lake Gardens Tel : 4734483

Sales Office : GUWAHATI : Rajgarh, Bihutoli; LUCKNOW : 53, Ram Gopal Vidyant Road, Maqbool Gunj; AHMEDABAD : Unit No. 2, 3rd Floor, Aakar Complex, Natha Lal Colony, Near Golden Triangle, Stadium Road; PUNE : 201, Goodwill Enclave, Building No. 14, Kalyaninagar, Yerwada; MADRAS : No. 8, Mookambika Complex, Lady Desikchari Road, Mylapore; HYDERABAD : 5009, 5th Floor, Emerald House, Sarojini Devi Road, Secunderabad; COIMBATORE : Room No. 1055/8 First Floor, Gautam Centre, Avanashi Road

abi

The Designated Country Distributor of

ADONIS,

Silver Platter Information Inc.

&

Dialog Information Services Inc.

is pleased to announce

the supply and commissioning (on turnkey basis) of

ADONIS CD-ROM WORKSTATION

(PC-486, VGA Colour Monitor, HP Laserjet IV Printer and CD-ROM Minichanger)

and

introduction of Express CAPS

(Express Contents, Abstracts and Photocopies Service)

at

INSDOC, New Delhi

ADONIS (1991-1994) is a powerful tool that will enable INSDOC information users the fast and efficient service they require. This is comfortably achieved through:

Journal Coverage: The **ADONIS** covers full text (Bit-mapped Page Images) of more than 500 international journals from biomedical and related disciplines (including Chemistry, Biochemistry, Bioengineering and Biotechnology).

Delivery Speed: If your required journals are covered in **ADONIS**, you can not get a quality copy any faster - it is real "on-demand" delivery.

Up-to-date: Full-text articles (including all figures, references, etc.) are produced on **ADONIS CD-ROM** within 3 weeks of hard copy Journal Publication.

Contact :

Marketing and Customer Services Division

INSDOC (Indian National Scientific Documentation Centre)

14 Satsang Vihar Marg, New Delhi-110 067

Ph: 6803617, 660143, Fax: 91-11-6862228

abi

ABI BOOKS (P) LIMITED

404 SKIPPER CORNER, 88 NEHRU PLACE,
NEW DELHI-110 019, INDIA.

PH: 6432653, 6461682

FAX:91-11-6448917/6447347

Use of IDAMS-PC in Conjunction with Micro CDS/ISIS Through IDIS Interface

IDAMS, distributed by UNESCO since 1987 in its mainframe version and since 1989 in its version for microcomputers, is intended for professionals who, in scientific and/or administrative environments, have to analyze numerical data and handle numerical databases. It contains the classical range of statistical techniques and a powerful language for transformation of data. The version of IDAMS for micro computers is equipped with performant editors, graphic facilities and on-line help messages. IDIS performs data description and data transfer between micro CDS/ISIS and IDAMS-PC in both directions. Institutions working with micro CDS/ISIS, IDAMS and IDIS will be able to handle in a unified way all types of textual and numerical information gathered for administrative as well as for scientific purposes.

ISIS is written in CDS/ISIS Pascal, and is integrated in micro CDS/ISIS with two options *added to the main menu, for the time being implemented in English only:*

- database export to IDAMS
- dataset import from IDAMS

The mutual transfer is controlled basically by the data description files of the respective packages, namely,

- in the case of an ISIS to IDAMS transfer, by the ISIS field definition table (FDT), and
- in the case of an IDAMS to ISIS transfer, by the corresponding IDAMS dictionary file and data files are always constructed and

they can be matched merged with other data using IDAMS data management facilities.

When going from IDAMS to ISIS, there are three basic possibilities:

1. a completely new database can be constructed
2. imported records can be added to an existing database as new database records
3. records of an existing database can be updated with the imported data

In case of options 2 or 3, the FDT can be modified with the description of the imported fields or can be left as it is, since ISIS can also handle *fields not defined in the FDT.*

When importing an IDAMS dataset, the ISIS FDT and therefore the master file records as well, can be constructed quasi automatically. The other vital components of ISIS database (like FST, display formats, etc.) should be defined further.

When exporting an ISIS database to IDAMS, the user is requested to complete his/her IDAMS dictionary.

Acknowledgement is given here to Dr. Peter Hunya, Scientific Adviser, TUDORG Informatics & Organization, Budapest, Hungary, who developed IDID for UNESCO. Interested institutions may contact CII/PGI at UNESCO, 7, Place de Fontenoy, 75700 Paris, France.

A Chronology of Future Technologies

The following chronology was compiled by Japanese researchers and is reprinted, from STA TODAY, the Monthly Newsletter of the Science and Technology Agency, Japan.

2001

- An economical selection and separation method to recover valuable materials from urban wastes will be in practical use.
- Implantation of internal organs, such as the kidney, liver, etc. will be conducted as frequently in Japan as in Europe and America in 1991.

2002

- An ultra LSI 1 giga-bit or more memory chip will be in practical use.
- The mechanism of formation, variation and elimination of the ozone layers surrounding the earth will be, elucidated.
- Crop breeding (for volume, resistance to cold or disease, etc.) by gene manipulation will be in use.

2003

- A technological system to automatically divide waste, including urban waste, into flammables, metals, glass, etc. will be in general use in Japan.
- A four-dimensional aircraft control system by position and time will be developed to cope with high density flight operations and the requirements to improve safety.
- An early detection system for cancer will be completed, and more than 70% of all cancer patients will have at least five years.

- A system will be in practical use whereby health conditions can be checked and a proper diagnosis received at home.
- With the progress of TV telephone, on-line systems, facsimile, etc., home-work will be common for general office jobs other than interviews and negotiations.
- A multipurpose nursing robot which can properly take care of the handicapped and the elderly kept in bed will be in practical use.

2004

- The precise mechanisms of generating and removing carbon dioxide in the atmosphere will be made clear.
- Micro-machines will be in use in a variety of operations in wide-ranging areas such as *biochemistry, micro-processing and assembling*, manufacturing of semiconductors, etc.
- A waste-recycling technology, which may reduce urban wastes by half will be developed.
- With the development of a battery with a capacity for commuting, electric automobiles, which can run in conformity with in-city traffic will be in general use.

2005

- Water purification technology for rivers, lakes, swamps and other water areas will be in practical use and will contribute to improving the environment and facilitating water use.
- Rises in the sea surface due to global warming will come to be predicted precisely.
- To replace dialysis machines, two types of artificial kidney — partial refit and total 19 implantation-types — will be developed.

2006

- Certain predictions of volcanic eruptions a few days in advance will become possible.
- A treatment method for AIDs will be established.

2007

- Solar cells will be used generally to supply electricity to residential homes.
- Telephone numbers responding to individual's use will be achieved, and personal mobile communication allowing communication with any desired individual from anywhere in the world will be in practical use.
- A linear motor car with a maximum speed of about 500 km per hour will be in practical use.
- An effective method to treat arteriosclerosis will be in practical use.

2008

- Electric machines for industrial purposes using superconductive materials which have a critical temperature higher than that of liquid nitrogen will be in general use.
- A portable particle accelerator which can be loaded onto an aircraft to repair ozone holes will be developed.
- An automatic interpreting telephone between Japanese and English with real-time operation will be developed.
- A three-dimensional broadcast employing a three-dimensional picture display which can be used at home without glasses, will be in practical use.
- Regional disaster-prevention systems for predicting earthquakes, landslides, etc. will be in general use.

2009

- 20 — Technology for biochemical conversion, storage, etc. of solar energy will be in practical use.

- Breeding of drought-proof and salt-resistant plants to help prevent desertification will be in practical use.

- An approach to mental health will be developed so that prevention of mental troubles due to stress will become possible.

2010

- Intelligent materials incorporating sensor-programming and effector-functions will be developed.
- The mechanisms of human memory, recognition and learning will be made clear will be modelled to the extent of being applied to computer science.
- All DNA base-pairs of the human chromosomes will be determined.
- Technology will be developed with which one can predict several days in advance the occurrence of earthquakes of magnitude 7 or more.
- The mechanism of carcinogenesis will be clarified for almost all cancers.

2011

- Pictures of the movement and storage of carbon dioxide across sections of the atmosphere, oceans and seabeds will be clarified, and technology to maintain a balance use of fossil fuel and preservation of the earth's environment will be developed.
- A passenger plane will be developed with a speed of Mach 4 and passenger capacity of 300, which can fly across the Pacific Ocean in two hours.
- An effective method of preventing Alzheimer-type dementia will be developed.

2012

- A superconductive-electromagnetic propelled ship will be in practical use.

2013

- A medicament to prevent carcinogenesis will be developed.

- A mechanism of aging will be elucidated.
- A space factory will be achieved to commercially produce semiconductors, medicaments, etc. by using the spatial environment.
- A space plane which will be operated as an aircraft between the ground and a space station will be in practical use.

2014

- The process of the generation and growth of the brain will be elucidated at a molecular level.

2015

- On the lunar surface, a permanent manned base will be built for space observation, such as the Showa Base in Antarctica.
- The world emissions of carbon dioxide will be reduced to 20% of the 1991 level.
- An ultrahigh building — at a height of 1,000 meters or more — will be constructed with comfortable dwelling spaces.

2016

- Gene therapy will be in practical use for many diseases caused by gene defects.

2017

- A superconductor with a shifting superconductivity point at room temperature will be developed.
- A fast-breeder reactor (FBR) system, including the full nuclear fuel cycle will be in practical use.

2018

- A long-term (10-20 years) forecast of variations in major fishery resources will become possible, and a production-adjustment system for controlling resources and the fish will be developed.

2019

- A superconductive energy-storage system with a capacity comparable to a pumping-up power plant will be in practical use.

2020

- A method to preserve a living body using hibernation, etc., will be developed.

— Excerpted from
Global Technoscan June 1993

News and Events

DRDO Librarians Meet

The Sixth meeting of the Heads of libraries/Technical Information Centres (TICs) of DRDO was inaugurated by Dr APJ Abdul Kalam, Scientific Adviser to Raksha Mantri at Metcalfe House, Delhi on 29 Sept 1993. The two-day meeting was organised by DESIDOC with a view to assessing common problems confronting the libs/TICs in procurement of foreign publications, and to discuss information handling and networking of information resources of DRDO labs. Fifty librarians/information scientists from 35 TICs including those from DESIDOC participated.

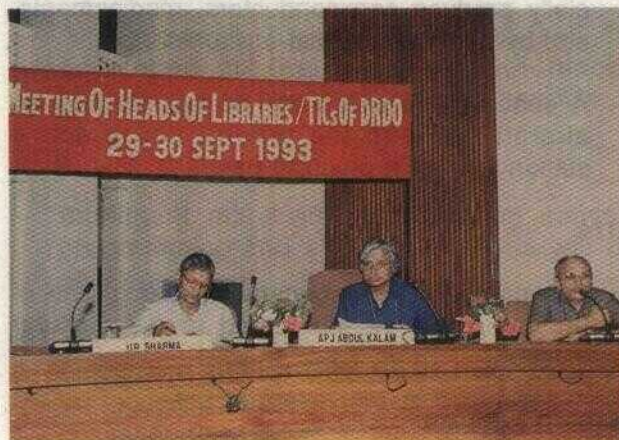
Dr. Abdul Kalam in his inaugural address wished that all libraries and TICs should be managed by professionals, as they are trained to handle information in a better way and can offer effective library services to the user scientists. He urged that the library professionals should be motivated and trained in the use of the latest information technologies to cater to the information needs of scientists/R&D managers. Research element should be incorporated in the library and documentation activities and services.

The Scientific Adviser cautioned the library managers to be vigilant about loss of publications in TICs. They should make the best use of the resources available to them. For this purpose he felt the necessity of creating regional databases at Delhi, Bangalore, Hyderabad, etc where major clusters of DRDO labs/estts are located, and network them for getting maximum benefit. He emphasised the need for launching SDI services for the scientists based on their interest profiles, which should be constantly updated.

Dr. Abdul Kalam felt that librarians and information professionals should be made to attend project discussions as far as possible, so that they are able to get a clear idea of the information requirements of projects and keep providing relevant information to the scientists without loss of time. The Librarians should make information services more dynamic.

The Scientific Adviser, answered many questions from the participants and a lively discussion followed.

Earlier, Dr S.S. Murthy, Director DESIDOC, welcomed the Scientific Adviser, the participants, the local Lab Directors present and other invitees. He informed the participants that the meeting was being revived at the initiative of the SA to RM and his presence at the Meeting showed his interest in and support to the development of an effective information system for DRDO. He pointed out that the unique feature of the meeting was that all technical sessions were going to be chaired by the corporate directors who are well informed about the subject and looking after such functions in the Headquarters. This would give the participants an opportunity to pose their problems and express their views directly to the concerned Directors in the Headquarters. He stressed the need of avoiding unnecessary duplication in library acquisitions



Dr APJ Abdul Kalam (Centre), inaugurated the Meeting. He is flanked by Dr. S.S. Murthy, Director (right); and Shri U.R. Sharma, Deputy Director

and advocated resource sharing in this era of financial crunch. Establishment of regional databases was a viable alternative for effective utilisation of the library resources and for largely meeting the information needs of the scientists.

Shri U.R. Sharma, Deputy Director, DESIDOC proposed a vote of thanks.

The deliberations on various topics of common interest were spread over two days in five technical sessions. The topics included were : creation of in-house databases in specific areas, networking of regional databases, ways and means of improving library services including SDI services, speedy delivery of documents, need of managing libraries/TICs by professionals, organisation of short and long-term training courses for scientists engaged in information work, resource sharing to overcome the shortfall in annual budgets of libraries, need for a library manual covering relevant procedures and practices for use in the DRDO libraries/TICs, stock-taking and simplification of procedure for release of FE for procuring foreign publications, etc.

Briefly the recommendations include the following:

1. The libraries/TICs should develop their own databases as per the requirements of their respective labs either by using the existing databases or through their local efforts, so that these databases could be made easily available to DRDO scientists. When sufficiently grown, these databases can be made accessible to outside users also on suitable terms.
2. Regional databases could be developed and maintained at Delhi, Hyderabad, Bangalore and Pune and networked. The libs/TICs at other places in different regions can join the network through their nearest regional centres.

3. All the libs/TICs of DRDO labs should provide the databases and their regular updations to their regional centres in the 'Common Communication Format' (CCF) and AACR2 for rendering data elements. The regional databases thus maintained would be made accessible to DRDO scientists in all the regions. The libraries/TICs shall follow other standard procedures in creating the databases as advised by appropriate authorities from time to time.
4. An Expert Committee should go into the various aspects of networking like suitable library application software, computer hardware and networking nodes may be appointed by the HQrs.
5. The officer-in-charge, library may be invited to attend any suitable FORA of the lab to enable him/her to comprehend the information requirements of the scientists in relation to their projects.
6. DESIDOC should develop continuous training programmes, suitable to various levels of personnel, in database creation, networking, SDI and other areas in association with Defence Institute of Management Technology, Mussoorie and other agencies. The duration of the programmes may range from 2 to 6 weeks and they should be included as part of the Continuing Education Programme (CEP) of DRDO and should have weightage in the assessments for promotion.
7. The library budgets should be related to the project budgets of the labs so that libraries can get proportionate increase in their budgets with the increase in the budget for project programmes.

DESIDOC should arrange to draft a library manual covering relevant procedures and practices for use in all DRDO libraries/TICs. It may cover the library management aspects and procedures including the procurement of documents, stock verification, loss of books and Director's powers for writing off losses, etc.

Union Catalogue of Periodicals in DRDO Libraries Released

Dr. VK Aatre, Chief Controller (Research & Development), DRDO released the Union Catalogue of Periodicals in the DRDO Libraries, at the Meeting of Library Experts held at DESIDOC on 17 August 93. Dr. APJ Abdul Kalam, Scientific Adviser to Defence Minister and Secretary, Defence Research & Development was present on the occasion. He complimented the staff of DESIDOC for putting in a good deal of effort in compiling this volume and DRDO libraries/TICs for their cooperation.

The data from various libraries/TICs was collected by DESIDOC through a questionnaire based on the common communication format (CCF). The data was received from 43 libraries of DRDO and was compiled by using CDS/ISIS software package.

The Catalogue is in two volumes and includes 6000 periodicals, including proceedings, transactions, bulletins, etc of learned bodies and government organisations. All the titles of periodicals have the main entries and cross reference entries (in case of change in title due to split or amalgamation) arranged in one alphabetical sequence.

The data are also maintained in machine-readable database form and can be searched by title, publisher, ISSN, subject and record No. The database can also be made available on floppies to DRDO libraries on request.

S&T libraries, which are willing to share their resources with DRDO libraries, may obtain printed copies from: The Director, DESIDOC, Matcalfe House, Delhi-110054.



Dr V. K. Aatre, Chief Controller (R & D) DRDO releasing the Union Catalogue of Periodicals in the DRDO Libraries at DESIDOC as Dr APJ Abdul Kalam (seated) looks on in appreciation

Sree Chitra Institute Accessed to MEDLARS

Sree Chitra Tirunal Institute for Medical Sciences and Technology Library, Thiruvananthapuram has opened its access to MEDLARS (MEDICAL LITERATURE ANALYSIS AND RETRIEVAL SYSTEM), the most extensively used biomedical information system in the world. Dr. M.S. Valiathan, who inaugurated the facility, described it as a stepping stone for the library and information services of the Institute.

MEDLARS, created by National Library of Medicine, Bethesda, U.S.A, provides information on literature published and unpublished in all areas of medicine. In India, the service is provided by National Informatics Centre (NIC), which has been designated as Indian Medlars Centre, through its satellite communication network, NICNET.

Medical professionals in Kerala can now avail themselves of biomedical information from MEDLARS through the Institute library which is linked to NICNET through the Microearth station installed at the Library premises. The facility is expected to provide crucial service to doctors and scientists of Kerala, engaged in medical and biological education and

research and patient care. The facility will provide information from all MEDLARS databases, interactive access to MEDLINE and AIDS databases, and online access to condensed Union Catalogue of biomedical serials containing holdings of 150 libraries in India.

Herbal Drugs and Aromatic Chemicals : Theme of UNIDO Consultation for Asia and the Pacific

The need for a systematic, integrated approach to industrial utilization of medicinal and aromatic plants was underlined at Vienna at the close of a regional Consultation on the subject for Asia and the Pacific (5-8 July).

Attended by more than 70 participants from 32 countries and 9 international organizations, the Consultation was organized by UNIDO and the World Health Organization (WHO) to focus on issues crucial to modernizing this traditional industry.

The Consultation recommended a range of measures, including development of national policies for the identification and cultivation of medicinal plants, agro technology and process technologies, research and development and training for industrial-scale production of herbal medicines.

Because of the widespread reliance on plant-based medicines in developing countries, official government recognition of their use and their incorporation into national health systems were considered essential.

At national level, participants also called for the establishment of national drug regulatory and registration authorities for herbal medicines and an information centre for technical and trade aspects of the industry. They felt that national policies should foster development of small- and medium-scale industries for production of essential oils, aromatic chemicals and the like.

At industry level, the Consultation recommended that industries and research institutes, especially in developed countries, provide training for technical and managerial personnel from developing countries. North-South joint ventures should be undertaken while national industries should modernize production processes. Industry at national level should also encourage the use of multi-purpose pilot plants for process development.

At international level, organizations such as UNIDO and WHO were asked to strengthen training programmes and research institutes, organize periodic consultations on medicinal and aromatic plants at regional level, expand technical assistance by introducing modern technologies, help coordinate programmes for converting raw materials into processed and semi-processed products, and foster the creation of interregional and regional centres for industrial utilization of medicinal and aromatic plants.

Under the sponsorship of the Medical Library Association of India and the All India Institute of Medical Sciences, New Delhi a four days National Convention and Workshop was held during 13-16 October 1993. About 150 delegates from

all over the country attended the convention and workshop. Prof S.K. Kacker, Director, AIIMS addressing the Convention dwelt on the explosion of knowledge in the field of biomedical sciences and need for proper dissemination through the medium of modern technology. He hoped that the workshop on (CD-ROM) technology would provide a very useful orientation to the professionals engaged in this field. Shri S.J. Kulkarni in his presidential address stated that the use of latest information technologies in the medical libraries is a challenging task before the medical librarians of all the developing countries. He added that the editing, formatting and printing information has undergone a functional change as a result of the impact of information technology. The distributing and accessing processes are changing as CD-ROM and databases networks are being increasingly used in the libraries.

Delivering the keynote address, Mr. P. Jayarajan the Regional Librarian of the British Council Library emphasised the role of libraries in human resource development and national progress. Cautioning the librarians and information managers against too much dependency on technologies, Mr. Jayarajan observed that "librarians should interact more with their users and use the available technologies only as a means."

Delivering his inaugural address, Mr. Arjun Singh, Minister for HRD stated that all aspects of human development depended on the technologies of communication. Mr. Singh further said that with modern technology and systems at hand the medical profession should make it possible to achieve the goal of health for all by 2000 AD. Shri Arjun Singh released two publications specially brought out by the Medical Library Association on this occasion.

The inaugural function came to an end with a vote of thanks proposed by Dr. R.P. Kumar, Chief Librarian of All India Institute of Medical Sciences.

Later, Shri Arjun Singh declared open an exhibition of medical books, use of computers and other modern technologies in the field of the medical libraries. The opening day was exclusively devoted to a Workshop on CD-ROM and Online data bases and their technology. The Workshop had the benefit of resource persons like Prof. T. Viswanathan, Director, INSDOC, New Delhi, Dr. T.A. Murthy, Chief Librarian, Indira Gandhi National Centre for Arts and Smt. Sonia Relan, Scientist, DESIDOC. A large number of vendors presented the salient features of their products in the field of CD-ROM and other aspects of information technology.

The Convention had two themes before it for the presentation of papers. The first theme was modern technology and health science libraries. The second theme of the Convention was the status of health science libraries in India. More than 35 papers were presented during the Convention.

Resource Sharing Among Medical Libraries in Madras City

The resource crunch and ever increasing cost of information sources have made information professionals think

in terms of sharing their meagre resource. The demand from medical professionals, who are concerned with better health care delivery, for current information has also been growing rapidly and librarians have to be responsive to this challenge.

With these objectives in mind, a one day seminar on 'Resource sharing among medical libraries in Madras city' was organised on 25 September at the Tamil Nadu Hospital. 70 librarians from medical and other libraries participated. 24 papers were presented and the major issue discussed included the need to design a system for networking of medical libraries in the State.

Inside Information

Sounds like spying or 'scoop' in journalistic jargon! Well, for information professionals, it is something different. It is an electronic 'table of Contents service' launched last May by the Document Supply Centre of the British Library (BLDSC). Details of every article in 10,000 of the most used journals in their collection are made available to UK academic institutions as JANET and EbscoNet network in North America and throughout the world, for an annual subscription. 'Inside Information' will provide citations of more than one million articles every year and the selection is based on the most requested titles in BLDSC's 50,000 strong serial collection." Full texts of articles will be provided through the document delivery services. A monthly CD-ROM version is also available for an annual subscription of £ 1000. The service logo is a 'key' encircling the world — providing the key to stored information! BL claims that this is only the first in a new range of electronic table of contents services. Next in line are conferences which will provide access to half a million conference papers received by them.

— MALA Oct. 93

Virtual Library

Michael Bauwens, an Information Officer at BP Nutrition in Antwerp has impressed Information Providers Community by creating a "Virtual Library" with all information gathering and most of its redistribution to users, achieved electronically through a PC. All his work is carried out through his PC closing down paper-based library and completely focussing instead on the delivery of electronic information using external databases, bulletin boards, E-Mail and computer conferencing. He does all the work single-handed with assistance from Information-Partner package which automatically links both on line and locally stored databases. He claims, "Information in his Virtual Library is made available at the touch of a button." The Management of BP Nutrition reckons that they are extremely happy with his services as it is better than the one they received from four information staff working in traditional way with paper resources. He argues that Information Specialists have no choice but to change their approach since it will be politically very difficult to continue to have large information Centres especially with the budgetary constraints and cutbacks many are facing. Traces of Doomsday again.

— MALA Oct. 93

Sustainable Agriculture Networking and Extension Programme (SANE)

This interregional programme of UNDP is geared towards enhancing capacity-building in sustainable agriculture. It will bring together NGOs, and other existing organizations in Africa, Asia and Latin America to share experiences and information, express needs and priorities, and seek advice about collaborative activities in all areas related to sustainable development.

UNDP contribution : \$ 1,500,000 Funds will provide training, equipment NGO-based coordinators, and technical advisers.

Pollution Information System : NISTADS Training Programme

As part of its responsibility of organizing a series of training programmes on Pollution Information System using remote sensing and Geographic Information System (GIS), the National Institute of Science, Technology and Development Studies (NISTADS) New Delhi convened the first training programme during 13-17 Sept. 1993.

The first batch of trainees comprised participants from Central Pollution Control Boards of Himachal Pradesh, Gujarat and Kerala. The thrust of the training programme was on upgrading the ability of the environmental functionaries for better use of scientific data and adoption of rational approach for environmental planning and management decisions.

Shri M.A. Qureshi, Deputy Director, NISTADS, in his inaugural address said that environmental status will determine the major criteria for decision making for development in future. Those who are suffering from the degradation of environment are not the real beneficiaries and will form strong pressure group against development projects. It is essential that the development projects should be made transparent to the people so that they are able to participate effectively in decision making. In view of this, the information system to be evolved must respond to various concerns of the people in different areas. Dr Subhan Khan, Project Leader, in his keynote address emphasized the importance of Geographic Information System, remote sensing and computer technologies in management of information on environment in general and pollution in particular.

The training programme had four technical and four laboratory practical sessions. In laboratory practical sessions, various GIS software packages like ARC/INFO, TERRASOFT, PAMAP, THEMATIC, IDRISI, GRAM, NRDMS-LIS, CADMIS, UDIS etc. were demonstrated. The participants had hands on experience of the software during the lab sessions. Similarly, practicals on remote sensing equipments like Optical Pantagraph, Procom-2 Multiband Spectroradiometer, Stereoscope, Digital Plainimeter as well as on Cartographic and Map making instruments were provided. Leading computer firms demonstrated new software and equipment

25

related to environmental monitoring. An exhibition of books on pollution and GIS was also organized.

Library Science Experts Meet at DESIDOC

Leading experts in library & information science met at DESIDOC, Metcalfe House, Delhi last August to make recommendations on the R&D work to be carried out by DESIDOC in the field. Dr APJ Abdul Kalam, Scientific Adviser to Defence Minister and Secretary, Defence Research & Development and Dr V.K. Aatre, Chief Controller Research & Development, DRDO also participated in the Meeting.

Initiating the discussion, Dr Abdul Kalam said that DRDO libraries/information centres had rich collection of books, reports, etc and subscribed to a large number of scientific journals. There was need to provide an integrated approach to information service to avoid unnecessary duplication in collections and services and to maximise the use of libraries. He cautioned that libraries should not just race for accumulating more and more books but try to inculcate reading habit among the users so that library resources were fully utilised. He stressed the need for research and training the field of library and information science and suggested making the best use of any information technology including the electronic information highway proposed by the Department of Electronics as and when available, by the libraries. Dr. Aatre advised the experts to suggest a plan for the establishment of R&D facilities at DESIDOC.

Earlier Dr. Murthy, Director, DESIDOC welcomed the Scientific Adviser, and the Chief Controller and the experts. He briefly explained the purpose of the meeting and said that DESIDOC needed to carry out R&D work in LIS to constantly improve its information services and hoped that the experts would suggest areas for the R&D work. The experts deliberated over topics like database creation, information access, information retrieval, document delivery systems, networking, CD-ROM and online searching, hypertext, hypermedia systems, expert systems, training and research facilities, etc.

By consensus the experts brought up the idea of establishment of an R&D facility which will initially function with the infrastructural support of DESIDOC and eventually become an autonomous centre. DRDO should play a major role in its establishment and financial support may be sought from other agencies also that are deeply involved in information processing and dissemination activities. This facility should carry out high quality R&D work in the LIS field and extend its expertise and facilities to doctoral and post-doctoral students and other researchers from various organisations including the universities for carrying out R&D work in the field. Research associateships, and fellowships must also to be provided by the new facility centre to deserving candidates/specialists both at junior and senior levels. It was suggested that Dr S.S. Murthy and Prof M.A. Gopinath (DRDC) would prepare a proposal for such a facility for consideration by DRDO. Dr. Abdul Kalam and Dr. Aatre agreed to consider all possible support for the facility.

Online Searching for Pharmaceutical Industry — NICHEM Workshop

The National Information Centre for Chemistry and Chemical Technology organized a workshop entitled On-line information for Chemical Industry at Pune on 25 October 1993. The aim was to create an awareness in the chemical industry on the variety of information, both scientific and commercial, that can be accessed from India.

Fifteen participants from various industries registered for the workshop.

Dr. S. Krishnan set the tone by giving an overview of the kinds of information that is 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 entitled "Molecules" — on searching chemical information on CA and REGISTRY files. Mr. M. Waikar took up the "Patents" session, wherein he described the utility of patent information with examples. Mr. Deodhar followed by "Patents" session — searching medical information using MEDLINE and EMBASE. The "Market" session, by Mr. Waikar was illustrated with a number of examples on getting various types of business information like Directory information, Export/Import data, Production and Demand data etc. Mr S.M. Karandikar (SMK consultants) described the information needs of a typical end-user. The concluding session was on Biotechnology information sources and an overview of the data bases that are relevant for the pharmaceutical industry.

In the afternoon, the workshop went on-line and carried out some sample searches. The participants were able to get most of their questions answered.

STN International made available free time on the files: CA, REGISTRY and MARKUSH and DIALOG and their representative in India from Informatics (India) Private Ltd. offered free time on all the files on the DIALOG.

Resource Sharing Discussed at IIM Librarians Meet

A meeting of the librarians of all the four IIMs in India was organized to discuss various issues related to "Resource Sharing and Cooperation" among the four IIM libraries. The meeting was organized at IIM, Lucknow during June 26-27, 1993. The Librarians of IIMA, IIMB and IIML participated in the meeting. IIMC could not, however, participate.

The meeting was inaugurated by Prof. J.S. Rao, Director, IIML. Prof Rao stressed the need of evolving an effective and workable resource sharing mechanism as a strategy to cope with the problems like increased budget cuts, rising cost of learning resources and increasing demands from the users. He exhorted the librarians to work towards achieving economy and effecting savings without sacrificing quality in services. He also alerted the librarians to think in terms of optimizing the use of rich resource base held by the IIM Libraries by extending the library facilities and services to the external clientele.

Prof. S.K. Singh (Chairman : Library Advisory Committee, IIML) in his introductory remarks emphasised on the need for i) improved work methods in libraries; ii) absorption of technology in libraries and iii) better management of library systems as appropriate alternatives to cope with problems like shrinking library finances, increasing knowledge output and growing information service demands.

Prof. S. Chakraborty (IIML) chaired the second session in which Mr. Roshan Raina (Librarian : IIML) presented the theme paper "Resource Sharing among IIM Libraries : Problems and Perspectives". He identified the areas where resource sharing could be a cost effective measure to ensure better library facilities and services to the clientele. In particular, he analysed the data for the periodicals being subscribed by the four IIM Libraries and the expenditure involved. From the database of "Union List" of current periodicals subscribed by the IIM Libraries he identified the commonly subscribed periodical titles by all the four IIMs (108 titles); three IIMs (average 142 titles); and two IIMs (average 217 titles). About 9% of total periodicals whose annual subscriptions come to Rs. 10,000 or more account for approx. 50% of the periodical budget of the four libraries. The extent of overlap of even these periodicals is quite significant and is of the order of 25 titles on an average among two IIMs. The analysis thus revealed that there was great scope for avoiding duplications particularly in terms of high cost foreign periodicals.

Similarly, he also outlined the scope and feasibility of cooperation in acquisition of other high cost reference materials, computer readable databases and databases in CD-ROMs. Standardization issues related to the library processing and computerization activities and issues related to the professional exchange were highlighted as essential prerequisites for a successful resource sharing and networking programme among the 4 IIM Libraries.

Thereafter, the participating Librarians met, discussed and deliberated on the various ways and means for implementing the resource sharing programme. The discussions were summed up in the concluding session which was chaired by Prof. Vipul (IIML).

The Meet ended with formulating a set of recommendations under the chairmanship of Prof. J.S. Rao. These recommendations are being forwarded to the Directors of all the four IIMs for consideration and adoption.

Better Information Management with Global Standards

A seminar on 'Information Management : Faster and Better with Global Standards' was organized by the Bureau of Indian Standards (BIS) to mark the celebration of World Standards Day on 14 Oct. 1993.

Lt Gen A.S. Bhullar, Director General BIS, speaking at the Technical Session on the need for Standardization observed.

Information technology standards for information are standards necessary for ordering information in such a way that it will be potentially useful. It facilitates clear,

unambiguous recording and transfer of information to all concerned. Storage and retrieval of information are the two areas where general standards are needed and have been developed. Analysis of information is still an activity which requires human rather than computer potential though in many scientific areas computers can do this to a large extent.

Standardization is also necessary for fast growth of this technology. It was only because of standardization of various aspects in the earlier functionally separate areas of computers and telecommunication that these two could merge. Today, it is again because of standardization that users of systems and network can see the world as global village and transact business around the world without being overcome by the technological problems involved in sharing resources for computing and communication across national boundaries.

Talking of the future Gen. Bhullar declared that standards are providing the guide map to success for the users as well as the manufacturers in today's rapidly changing scenario of information technology. It is helping in judicious investments for development, manufacture and implementation which are protected against obsolescence and continue to grow with time and technology. The international and national standards provide the ideal combination of innovation, utility and technology arrived at by consensus of a large number of experts drawn from research, industry, users and other concerned. Therefore, implementation of national and international standards assures of technologically best solutions of recurring problems and thereby efficient management. Standards thus provide the optimum long term solutions also which lead to better and faster management continuously. The same is more true for information management where the technological developments are so fast and divers that one cannot navigate in the fastest possible way without the help of technological map of standards.

In messages sent to the Seminar on this year's theme, the President International Organization for Standardization, the President International Electro-technical Commission and the Secretary General of ITU emphasized that unless the existing rush of developments in the world of computing and telecommunication was channelled productively by international standards, an electronic jungle will result.

Among the other speakers at the Seminar were Dr. N. Seshagiri, Director General, National Informatics Centre, Shri Dewang Mehta Executive Director, National Association of Software and Service Companies. Shri N. Vittal, Chairman, Telecom Commission chaired the Technical Session.

The Inaugural Session was addressed by Shri A.K. Antony, Union Minister for Civil Supplies, Consumer Affairs and Public Distribution and Shri Kamaluddin Ahmed, Minister of State in the same Ministry.

Sustainable Development Network

An interregional project christened Sustainable Development Network (SDN) is being executed by UNDP office for Project Services. The purpose is to provide access to information relevant to economic and social development

which has long been a priority of all governments concerned with improving the living standards of their people.

SDN is a computerized information system. The project will enable UNDP to provide training, computer equipment, software, information packages and management tools to SDN sites. UNDP contribution to the project is of the order of \$ 1 million.

Informatics (India) Pvt Ltd Joint Venture with the Faxon Co. Inc.

The promoters of Informatics (India) Pvt Ltd., the Bangalore based information company, have joined hands with The Faxon Company, Inc., USA, to promote a joint venture.

Faxon Informatics Pvt Ltd., the new venture in which the American company holds a stake of 40 per cent is poised to usher in wide range of information products and services both for global and domestic markets.

Faxon, a US \$ 600 + Million (Rs 1800 crore) American Multinational services over 60,000 institutional clients, a majority of which are academic, research and corporate libraries, in more than 90 countries. As the world's largest subscription agent, Faxon sources journals, magazines and CD-ROM databases from over 30,000 international publishers.

The joint venture will give the Indian Company access to global markets for information products and services. In particular, it will facilitate.

- Export of Indian journals, periodicals technical reports and books.
- Publishing databases on CD-ROM both for domestic and international markets.
- Establishing a system for handling the distribution of periodicals (both Imports as well as Exports) which will ensure assured delivery to subscribers. Faxon-Informatics has already been appointed as agents by Oxford University Press, UK for marketing their journals in India. Silver Platter, UK, ADONIS BV, The Netherlands, and Bowker Saur, UK, have appointed Faxon-Informatics as their distributors for their CD-ROM databases in India.

Union List of Current Serials in Libraries of Hyderabad and Secunderabad

The Union List of Current Serials in Libraries of Hyderabad and Secunderabad, 1993, is the result of a cooperative effort of 46 special and academic libraries in Hyderabad, and lists the key titles, publishers subscription cost, and libraries that are currently receiving these journals. The library at the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) coordinated the compilation of the Union List. The cost of duplicating the list was shared between NAARM and ICRISAT.

The present effort is part of a larger one to build a computer-based library and information network for Hyderabad and Secunderabad. Librarians of various libraries of Hyderabad and Secunderabad decided to constitute a Core Working Group (CWG) of librarians belonging to different special and academic libraries to address networking, resource sharing and related issues. One of the first tasks taken up by the CWG was to compile the present Union List. The Union List is meant to provide the basis for libraries to enter into suitable mutual agreements to better share current journals, and rationalize subscriptions to journals across libraries, thereby saving costs for the institutions cooperating in this effort.

The 46 libraries covered in this Union List subscribe to 4401 journal titles at a cost of Rs. 3.04 crores (30 million). Of the 4401 titles, 32% (1418 titles) are being received in 2 or more libraries. In other words 32% of the titles are duplicated in Hyderabad libraries.

The list is compiled by Shri V.N. Krishna Murthy.

Bio-Informatics : Current Scenario — Workshop-Cum-Symposium

An overview of recent developments and advances in Bio-informatics would be in focus at the workshop to be held at Bose Institute, Calcutta during 18-21 January 1994. The broad spectrum of topics includes : analysis of databases, applications of computation in biological sciences, biocrystallography, etc.

The registration fee is Rs 1000 for participants from industries and Rs 500 for those from academic institutions. For further information contact Dr. S. Mukhopadhyay, Distributed Information Centre, Bose Institute, Centenary Building, Calcutta.

New Standard for Abbreviations

The third edition of ISO 4; *information and documentation — Rules for the abbreviation of title words and titles of publications* has been published in draft form by the international Organization for Standardization (ISO). The rules contained in the standard are applicable to the abbreviations of the titles of serials and, if appropriate, of non-serial publications. They are intended to guide and assist authors, editors, librarians and others working in various fields of information transfer in preparing unambiguous abbreviations for the titles of publications cited, for example, in footnotes, references and bibliographies.

For further information, contact ISO, Case postale 56, CH-1211 Geneva 20, Switzerland, or Bureau of Indian Standards (Sales Service) 9, Bahadur Shah Zafar Marg, New Delhi-110002.

ILA Conference : Diamond Jubilee Celebration 7-10 January 1994

Bangalore will host the Diamond Jubilee Celebration Conference of Indian Library Association during 7-10 January

1994. The occasion coincides with the Silver Jubilee of the Dept of Public Libraries of Karnataka State.

The theme of the national seminar to be held on the occasion is Library Movement and Library Development.

A registration fee of Rs 300 is payable by all participants.

For further information contact Shri C.P. Vashishth, President, ILA, A/40-41, 201, Ansal Building, Mukherjee Nagar, Delhi-110009.

Information Storage and Retrieval Systems : NISIET Programme

NISIET, Hyderabad is conducting a two week programme on Information Storage and Retrieval-Systems (ISRS) from 3 Jan to 14 Jan 1994. The programme focuses on the methods of collection, organisation and dissemination of information through modern techniques which ultimately helps in designing a user oriented information system in an institution. The programme is residential for which a fee of Rs 4500/- is charged. For further details, contact Mr. M. Subba Rao, Programme Director, NISIET, Yousufguda, Hyderabad-500 045.

Artificial Neural Networks — Short Term Course at IIT, Bombay

The course scheduled to be held during 24-28 Jan. 1994 is designed to share the experience of IIT, Bombay in the area of artificial neural networks and their applications with industry and R&D organizations and teachers from engineering colleges. The idea is to critically examine the power of neural networks in solving some difficult problems. The project has been actively pursued at the Institute for some time with financial support from the Ministry of HRD.

The 5-day course would benefit all those who have been working with non-neural network based techniques on problems in image processing computer vision, hand written character recognition pattern recognition, optimization problems, etc.

For further information contact Professor-in-charge (CEP), IIT, Powai, Bombay-400 076.

Microelectronics in Information Technology

The Central Electronics Engineering Research Institute, Delhi Centre, organized workshop on the Role of Microelectronics in Information Technology in collaboration with the National Telematics Forum on 21 August 1993 at India International Centre, New Delhi. The workshop was inaugurated by Dr N. Seshgiri, Director General, National Informatic Centre, Special Secretary, Planning Commission. He referred to the developments in Application specific VLSI and underlined the importance of such devices in the Indian context. He stated that the government should have a close look at the policies for scientific research in this area. He highlighted the revolution the microchips have brought in the fields of communication leading to personal communication

systems. Dr K.V. Ramakrishnan, Scientist-in-charge, CEERI, Delhi Centre introduced all the speakers.

Dr Yashpal in his presidential address mentioned that without microelectronics there could be no communication and it has had tremendous impact on society. Dr V.K. Atre, Chief Controller R&D, DRDO in his keynote address highlighted the role of microelectronics in the Defence and general purpose applications. Dr C.R. Chakraborty, Director SAG, DRDO delivered a special lecture on Advances in Microelectronics, and its Impact on Computers. Dr Surindra Prasad of IIT, Delhi, delivered a talk on Digital Cellular Telephones. Dr U.P. Phadke highlighted the programme initiated by DOE in this area. Dr V.P. Trehan, Vice-President NTF highlighted the role of NTF in the formulation of policy for proper growth of Telecommunication in India. Dr W.S. Khokle, former Director, CEERI, Pilani highlighted the work carried out in the area of microelectronics at CEERI and the future plans of CEERI. Dr Khokle was presented a memento in recognition of his contribution to the field of microelectronics on the occasion. A large number of people engaged in the field of electronics and telecommunication, both in the government and private sectors attended the workshop.

Status Report on Medicinal Plants for NAM Countries

Most of the NAM (Non-aligned and other Developing) countries, specially those situated in the tropical belt, are endowed with rich flora and hence it is natural that they have been using them since ancient times for treatment of human ailments. Of about 15,000 species of higher plants in India, e.g. medicinal uses are attributed to atleast 1500. Considerable efforts are being made all over the world to bring the vast knowledge contained in this indigenous system of medicine into mainstream of modern medicine by extensive investigation, both chemical and pharmacological, on indigenous plants.

The Centre for Science and Technology of NAM countries commissioned a *Status Report on Medicinal Plants* under the authorship of Dr Aktar Husain.

Status Report on Medicinal Plants brought out by the Publications & Information Directorate (PID), New Delhi, gives detailed information about medicinal plants available in NAM countries. The book (price Rs 300) will be useful for administrators, planners, scientists and all those engaged in this area of work.

Nationwide Communication System

The U.S. Administration has created a task force to accelerate development of thousands of electronic networks that would link schools, businesses, homes and health-care facilities across the United States over the next decade.

The development of the National Information Infrastructure, also referred to as the "information superhighway," is a high priority issue for the Administration and the task force is expected to prepare legislation to offer Congress on the initiative before the end of 1994.

The Administration also released an "Agenda for Action" recently, a 26-page report that describes plans for a "seamless web" of communications networks that would include computers, televisions, fax machines, telephones and other consumer electronics capable of putting vast amounts of information at the fingertips of users throughout the United States.

"We are in the early stages of an information revolution as sweeping and powerful as any technology revolution in the history of human kind," said Vice President Albert Gore. "That's why this Administration has made the National Information Infrastructure one of our top priorities.

— *Science Update* November 1993.

NICTAS Launches CULT

The National Information Centre for Textiles and Allied Subjects (NISSAT), Ahmedabad has launched a new service "Current Universal Literature on Textiles (CULT). A standing order service, it requires users/beneficiaries to inform NICTAS of the micro-subjects (on textiles and allied subjects only) on which they need published literature in the world during the past six months. Based on their requirements the latest published literature with abstracts will be mailed to them.

Technology Information, Forecasting and Assessment Council

TIFAC



..... the technology edge

Technology Information, Forecasting and Assessment Council (TIFAC), an autonomous Organisation under the aegis of Department of Science & Technology (DST) has been set up with the objectives : (i) Undertake Technology Assessment & Forecasting studies in key areas of national economy (ii) Technology watch on global trends and formulation of preferred options for India (iii) Establish a nationally accessible technology information system. In pursuit of such objectives, TIFAC has brought out documents in a number of areas with the help of experts and developed an online Information System.

LATEST DOCUMENTS ON EMERGING TECHNOLOGIES AND BUSINESS OPPORTUNITIES

About hundred reports have been brought out by TIFAC in specialised areas. These reports have survey of the world trends and reflect realistic technology forecasting, assessment and market estimates, tailored to Indian needs and are considered as an additional ARMOUR for Indian business scenario now being speedily exposed to global competition.

With a view to promoting technologies in India the documents are available at nominal charges. For orders above Rs. 3000/ discount @ 10% is allowed .

Some highly acclaimed documents enjoying excellent users' response are :

A) TF/TA Reports

- i) Human Settlement, ii) Sugar, iii) Technology Planning, iv) Steel, v) Aviation,
vi) Electronics vii) Information Technologies

B) TECHNO-MARKET SURVEY reports on Indian Foundry Industry, Structural Ceramics, Advanced Composites, Light Alloys, Coating & Surface Engineering, Titanium & its Downstream Products : a Demand Survey, Industrial Safety in Forge Shop & Small Foundries, Nickel Recycling and in many other areas.

C) OTHERS

Intellectual Property Protection In India : A Practical Guide for Scientists, Technologists and Other Users. There are many reports covering other areas as well are also available.

For further information on TIFAC publications, please contact, Manager, TIFAC, Technology Bhawan,
New Mehrauli Road, New Delhi.

Ph. No. 6867764, 6862331 Fax : 011 - 686 3866

D) TIFAC has undertaken two Projects on Mission Mode i.e. i) Sugar Production Technologies ii) Advanced Composites on behalf of Govt. of India and third one is under finalisation.

INFORMATION SERVICES

Technology databases on Composites, Non-Ferrous Materials, Energy, Food Technologies and Environmental Technologies are available on-line from Delhi and Bangalore. Also supplementary databases on Standards (Indian and International) and Indian Experts (including NRIs) can now be accessed by the users.

TIFAC and CMC are jointly offering international databases from ESA-IRS for online user accesses. Internationally acclaimed databases viz. METADEX, CHEMABS, COMPENDEX PLUS, INSPEC 2 etc. can be accessed online by Indian users. Also databases on technology sources, business scenario, export opportunities viz. FT Profile, PROMPT etc. are available for on-line accesses by the users or alternately searches to be carried out at TIFAC on users' request.

For further details on user registration, passwords etc. for on-line searches or for off-line information to be provided by us, please contact Project Officer, TIFACLINE (Telephone : (011) 686 3877, Fax : (011) 686 3866)
at E-6, Qutab Hotel, New Mehrauli Road, New Delhi - 110 016