SOUVENIR

Training cum Workshop
on
Automation in Academic Libraries
of North-East India

September 25th - 27th, 2008

Organised By :

Centre for Library and Information Science Studies

Dibrugarh University

In Collaboration with

National Library, Kolkata

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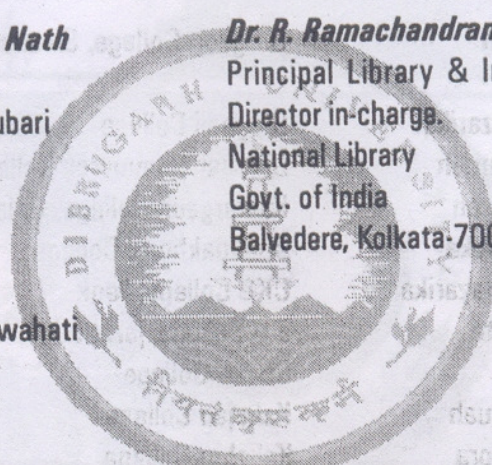North -East Institute of Science and Technology,
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Internet service - usages in academic library

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The Internet is a global system of interconnected computer networks that interchange data by packet switching using the standardized Internet Protocol Suite (TCP/IP). It is a "network of networks" that consists of millions of private and public, academic, business, and government networks of local to global scope that are linked by copper wires, fiber-optic cables, wireless connections, and other technologies.

The Internet carries various information resources and services, such as electronic mail, online chat, file transfer and file sharing, online gaming, and the inter-linked hypertext documents and other resources of the World Wide Web (WWW).

Prior to the widespread internetworking that led to the Internet, most communication networks were limited by their nature to only allow communications between the stations on the network, and the prevalent computer networking method was based on the central mainframe method. In the 1960s, computer researchers, Levi C. Finch and Robert W. Taylor1 pioneered calls for a joined-up global network to address interoperability problems followed by development of Packet switching and othe allied technologies2. Following commercialisation and introduction of privately run Internet Service Providers in the 1980s, and its expansion into popular use in the 1990s, the Internet has had a drastic impact on culture and commerce. This includes the rise of near instant communication by

e-mail, text based discussion forums, the World Wide Web.

On August 23rd, 1995, Microsoft released their Windows 95 operating system, including a Web browser called Internet Explorer was released and gradually updated the same along with Windows98, Windows XP, Windows 2000 and lastly Windows Vista. Internet Explorer became a highly used web browser in the present decade. There after large numbers of web browsers were developed across the globe.

Meanwhile, over the course of the decade, the Internet successfully accommodated the majority of previously existing public computer networks and during the 1990s, it was estimated that the Internet grew by 100% per year. This growth is often attributed to the lack of central administration, which allows organic growth of the network, as well as the non-proprietary open nature of the Internet protocols, which encourages vendor interoperability and prevents any one company from exerting too much control over the network. New findings in the field of communications during the 1960s, 1970s, 1980s and till date enhenced the capability of internet in number of ways and bacame a part of day to day life. As of March 31, 2008, 1.407 billion people use the Internet according to Internet World Stats3.

- Internet Use in Libraries and various possible Applications can be summerised as below :
    - Why use Internet in Libraries?
    - Levels of use and requirements
    - Applications
    - Keeping up-to-date with Internet use
    - Why Use Internet in Libraries?
    - Extend local collections to include information sources on the Internet (Internet as an information source)
    - Integrate different L&I services, local and remote information sources using web browser as the common user interface
    - Improve productivity of house-keeping operations (e.g. acquisitions)
    - Deliver information to the desktops of users
    - Efficient information delivery
    - Reach local and remote users
    - Extend information content to full text, animations and multi-media
    - Enable resource sharing among libraries
    - Foster professional development

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- Easy availability of technologies for digitization, indexing, retrieval and dissemination over intranets and the Internet
- Internet is forcing libraries to move from 'Holdings' model of information provision to 'Access' model and integrate all resources to which users have access behind a single Web-based interface

Levels of Use and Requirements

- Internet as an information source
- E-Mail only
- Dial-up to an ISP or Institutional e-mail
- Uses : Messaging, Subscribe to discussion forums, deliver services by e-mail

Web access

Dial-up to an ISP or Institutional intranet

Uses: Access information sources on Internet, web searching

Information provision

Library web site (passive)

Dedicated Internet/intranet connectivity

Uses: Information about the library & its services, Internet resource catalogue, Telnet access to OPAC

Library web site (interactive)

Dedicated Internet/intranet connectivity

Uses: Full fledged web-based services (e.g. database access)

- Applications

Let us consider different Internet-based applications in the library(as shown in fig.1 below)

Assumptions :

Library has a LAN with enough network computers for staff and users

Library LAN is linked to institutional intranet

Has full, round-the-clock Internet access

Library web site is the integrating factor

Information about the library & its services (as shown in fig 2 below)

Locally owned electronic info sources

- OPAC
- Networked CD-ROMs
- Electronic journals
- Internal publications (e.g. staff publications, dissertations,

reports, projects, manuals)
- Reference sources (e.g. dictionaries, encyclopedias)
- Digital audio, video and multi-media collections

Remote information sources :

Available via the Internet

Subscribed: electronic journals, bibliographic databases, reference sources

Free (e.g. PubMed, PubSci)
- Z39.50 based library catalogues and databases

Content available on resource sharing networks (local, regional, national)

Available on the intranet

Content hosted on other web sites in the intranet

Push-based services :
- Current awareness (e.g. new additions, news letters, content pages)
- Profile-based alerting services (e.g. SDIs, content pages)
- Discussion forums

Housekeeping operations :
- Book acquisitions
- Technical processing (cataloguing, classification)
- Serials management

Other content/ services :

Training material, guides

Administrative, procedural manuals

FAQs, Feedback
- Internet Use: Keeping Up-to-date

World Wide Web Consortium - Developments related to Web technology, standards, tools, guidelines, etc. (www.w3.org)

Digital Library Sunsite - Digitisation tools and resources (sunsite.berkeley.edu)

Ariadne newsletter - e-journal for librarians (www.ariadne.ac.uk)

Current Cites - Current awareness service for IT use in libraries (sunsite.berkeley.edu/currentsites/)

D-Lib magazine - e-journal reporting new developments in digital libraries (www.dlib.org)

Scholarly electronic publishing bibliography (info.lib.uh.edu/sepb/sepb.html)

Librarian Web Resources - library.scsu.ctstateu.edu/libbib.html Top 200 Technical Services Benefits of Home Page Development (tpot.ucsd.edu)

10. Web4Lib - Discussion forum for Web use in libraries (sunsite.berkeley.edu/Web4Lib/)

11. PACS-L - Public Access Computer Systems Forum (info.lib.uh.edu/pacsl.html)

12. IFLA (www.ifla.org)
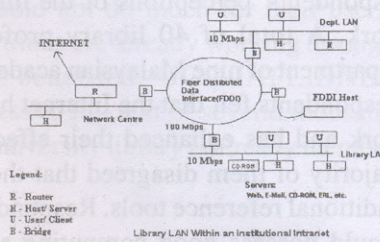
Figure 1. A typical institutional LAN within which Library has a sub-LAN
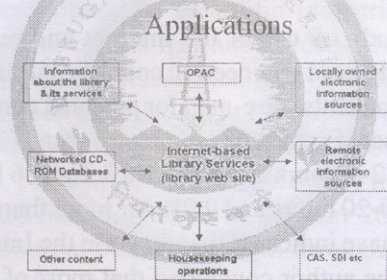
Figure 2. Various Library activities connected through internet
- Use of internet in Academic libraries

The integration of the Internet has affected all functions of the library in all spheres. Resource sharing in terms of document, man power, technology, etc became a reality in libraries. In the reference department, this integration has led to the utilisation of new tools and methods for providing information to library users.

A study on the extent of Internet connectivity and usage among Southeast Asian libraries conducted in 1999 revels that the use of INTERNET found to have no end point to which the INTERNET can be utilized by libraries. Librarians must be made aware that a sense of permanence is elusive in the INTERNET environment and a continuous

investment in training for skills development, software construction approaches and computer technology must be made. Only then can this enabling technology be utilized for information access, communications, and education4. Another study investigated the effect of the Internet on reference services in Malaysian academic libraries. The objective of the study was to find out how the integration of the Internet has affected reference professionals and services. The study also investigated respondents' perceptions of the importance of the Internet in reference work. A total of 40 library professionals working in the reference department of nine Malaysian academic libraries participated in the study. Respondents felt that the Internet has contributed positively to reference work and has enhanced their effectiveness and efficiency. However, a majority of them disagreed that the Internet should completely replace traditional reference tools. Respondents also felt that reference librarians should possess good computing and Internet use skills for providing effective reference services5. Many such studies on use of internet in academic libraries were available else where6-21.

Another study on use of the Internet and related issues among the teachers and students of engineering colleges of Punjab, India indicates that 77% of the respondents use e-mail for personal communication, 76.1% for academic purposes. Further, it also showed that 37% of the respondents use the Internet for 2-4 hours a week, 21.8% for 5-6 hours, 16.6% for 7-9 hours, 9.4% for 10-20 hours and 9.2% for more than 20 hours. Only 6% of the respondents have indicated that they use the Internet for less than 2 hour in a week7. The author concluded that most of the users' were not satisfied because of slow internet and insufficient trained library staff to guide the users in finding proper information quickly.

A recent study on internet usages at Delhi University revels that the research scholars use Internet services for different purposes: 98 per cent used the Internet for communication purposes, 96 per cent reported using it to browse the World Wide Web (WWW); 37 per cent reported using it to access Telnet; 23 per cent for Archie; 21 per cent for List Serves/Discussion Groups; 20 per cent for Usenet and News groups; 16 per cent for Bulletin Board Services; 8 per cent for Frequently Asked Questions; 4 per cent for FTP. The satisfaction level is comparatively low because of slow internet, lack of adequate infrastructure and inadequate help of library staff in finding appropriate e-resources to satisfy the

information requirement22.

In Assam, most of the universities and other academic institution's library to-day have been provided with internet facility and the academic community is utilizing the same. Large numbers of books and journals are now available online to these institutes on subscription basis. Since the cost of subscription mostly to foreign on-line journals are very high all the institutes of higher learning could not do much for their users. However, in national level some consortiums are already working through *which these institutions could get benefited.* UGC-INFLIBNET consortium of e-journals provides access to full text of several thousand journals and it is understood that some university library is already member of this consortium.

Use of INTERNET at NEIST Library

North East Institute of Science & Technology (NEIST), formerly known as RRL, Jorhat is a premier research institute in the North Eastern Region of India under Council of Scientific Industrial Research, New Delhi. The main objective of this institute is research and development and good number of students pursues their study for degree of Ph.D. The library of NEIST(renamed as Knowledge Resource Center [KRC]) has a rich collection of about half a lakh of very valuable books, back volumes of journals, standards, patents, reports, etc. Currently the KRC subscribes to 100 foreign and 120 Indian journals in the year 2008. The KRC is a member of CSIR E-Journal consortium and through this about 4500+ valuable peer reviewed full text foreign journals are available to the user community of the institute. Further KRC also subscribed to an on-line secondary database, namely, SCOPUS. This is available to NEIST staff through internet (web address is www.scopus.com) through institutional IP. It links to published scientific literature of the world, provide facility for downloading abstracts of all retrieved papers and also full text if the retrieved paper is from a subscribed publisher. KRC also subscribed to on-line archives of "J Fluid Mechanics 1966-1996".

CSIR- E-Journal Consortium, apart from providing on-line access to full text primary journals, provides access to WEB of Science, Derwant Innovative Index, Full text Indian Standard database, ASTM Standard database to clientele of KRC at NEIST, Jorhat.

The KRC is kept open from 8.30 am to 8.00pm on all working days and from 8.30am to 1.00pm on Saturday and Sunday. The Library is being automated using SLIM 21 software since November 2007 and already books, Standards, back volumes are entered in the database and with this the Circulation and Cataloguing modules are made operational from July 2008. On-line searching of library holding, reservation of issued books, facility for looking to the loan status, etc are being provided on line to the staff of NEIST through Intranet of the institute. Library also issues reminders to the borrowers on issued books became overdue through e-mail using institutional e-mail ID which has speed-up the work and reduced the work load of circulation counter. Work for making operational the other modules of the software like serial control, acquisition, CAS, etc is on and will be completed shortly.

As a part of the agreement among CSIR libraries, the library offer Document Delivery Service to all libraries of CSIR using e-mail. When requested document is available in soft form or can be digitized using scanner it sends request item as attached file of e-mail to the requestor free of charge. This saves both time and money.

Further, library started a program to collect papers published elsewhere by S&T community of the Institute in pdf format and made available to any one in the world as hypertxt linked to list of publication available in the website. Since 1960 there are altogether 2,595 papers published from this institute till date in various national and international journals, as chapter in books and also in the proceedings / pre conference volumes of conferences and symposia. Already all published papers pertaining to 2008 are hooked with full text and attempt is on to do the same gradually to all past publications.

The institute has 512kbps VSAT connectivity from IPSTAR Gateway for internet and a high speed fiber optic LAN with 500+ terminals connected to it which provide internet access to the S&T community from their desk top. The institute has presently eight stand alone and one blade server with huge storage space where in it hosted its home page, mail server, database server, etc both in Linux and Windows environment. Library has its home page within the institutes website, namely, www.neist.res.in/library.html through which connectivity to all e-journal sites are provided. Further it also gives valuable information about the

library. Some use statistics of full text download from this institute for the years 2005 and 2006 are appended below :

Usage Statistics - full text access at NEIST, Jorhat   Year: 2005

S.no.	Publisher	Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec
1	ACS	0	92	100	53	169	119	0	0	0	0	235	635
2	Cambridge University Press	3	6	2	0	1	0	1	0	0	2	7	12
3	Elsevier	116	281	112	128	608	599	205	293	8	506	838	3694
4	OUP	0	0	19	10	71	11	2	30	10	17	44	26
5	Royal Society of Chemistry	60	34	79	76	32	16	37	33	47	74	81	134
6	Wiley	51	111	218	136	105	12	7	15	10	55	91	167
7	Total	230	524	530	403	986	757	252	371	75	654	1296	4668

Total 10746

Usage Statistics - full text access at NEIST, Jorhat   Year: 2006

S.no.	Publisher	Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec
1	American Chemical Society	1016	988	1018	1448	1818	1236	1046	1368	948	756	1186	832
2	Cambridge University Press	6	2	0	1	27	5	6	0	3	7	4	0
3	Elsevier	881	853	753	906	1041	1207	1058	969	913	828	1015	818
4	OUP	10	23	38	23	33	6	15	38	17	15	0	0
5	Royal Society of Chemistry	58	74	76	60	78	121	110	101	76	76	107	56
6	Springer	187	188	391	215	415	316	303	379	332	303	417	439
7	Taylor Francis	13	471	204	157	189	167	229	144	108	159	180	127
8	Total	2171	2399	2478	2810	3601	3058	2767	2999	2397	2144	2909	2272

Total 32005

CSIR e-Journal Consortium is in vague since 10th Five Year Plan and 40 laboratories of the CSIR is its participant. The consortium has arranged access to 5000+ journals, patents, standards from good number of leading publishers of the world to these participating libraries against their print subscription to very small number of journals. The consortium claimed to have upgraded CSIR information system to a effective one capable of meeting its researcher's divergent nature of information requirements23. The Consortium also claimed that by enhancing the knowledge base it has succeeded in enhancing the productivity in terms of CSIR contribution to the knowledge base as shown in figure-3 below 24.

- Scenario in college libraries of Assam

The scenario of colleges of Assam is seems to be very grim till today. A survey made recently through sixteen college libraries of Jorhat district to see the infrastructure available in these colleges for internet browsing facility to students and teachers (Fig.4). It is observed that all the sixteen colleges have at least one computer and telephone line in the library but only six colleges have Broad band connection for surfing internet. Only two college library have one additional computer dedicated for internet surfing in the Librarian's room where small number of teachers use this facility for e-mail and searching internet25.

Conclusion :

Internet is forcing libraries to move from 'Holdings' model of information provision to 'Access' model that integrate all resources to which users have access behind a single Web-based interface. So we must change our attitude to cope with the need of the hours.

Today we stand on the brink of a revolution in ICT, a breakthrough as profound as anything we have experienced before. This sort of research is in its beginning and is very much needed in order to direct research scholars to an efficient use of the network. Such research can help in the development of new services and new training programs that will assist research scholars to become more productive Internet users. With the growing impact of Internet, there has been a global revolution. The emergence of Internet has changed the role of libraries radically. The increasing reliance on electronic resources will lead to a shift of resources from individual collection to the Library, and this will have to be managed in a transparent manner and create an "information infrastructure" which is flexible and strong enough to cope with today's wide array of technology and handle the demands of tomorrow, enhancing research quality by simplifying and expediting access to information, enabling researchers to spend less time searching for information and more time upon experiment.

Further research is also needed to determine the effects of network use in research. Along with the development of newer and efficient

technology the library should go on adding latest technology / replacing obsolete items regularly. The library staff should be regularly exposed to latest technological development so that new users can get help from them. The libraries should be provided with adequate fund for addition / updating of hardware, software, subscription to e-resources, etc on a regular basis.

References :

III.   http://en.wikipedia.org/wiki/Robert_Taylor_(computer_scientist)

IV.   http://en.wikipedia.org/wiki/Packet_switching

V.   http://en.wikipedia.org/wiki/Internet#cite_note-inetstats-5#cite_note-inetstat

VI.   Rashidah Begum, Wong Sook Jean : Internet use in libraries in South East Asia with special reference to the role of the Universiti Sains Malaysia Library in promoting the use of the Internet for teaching and learning, Proc. 65th IFLA Council and General Conference, Bangkok, Thailand, August 20 - August 28, 1999, Code Number: 019-129-E , Division Number: VIII, Professional Group: Regional Section: Asia and Oceania

VII.   Abdoulaye K.; Majid S. : Use of the Internet for reference services in Malaysian academic libraries, Online Information Review, Volume 24, Number 5, 2000 , pp. 381-389

VIII.   Alison McNab & Ian Winship : Internet: Use in academic libraries, Library Association Record Vol 98 No 12, December 1996 p636-638

IX.   Kumar, R. & Kaur, A. (2005). "Internet and its use in the engineering Colleges of Punjab, India: A Case Study." Webology, 2(4), Article 21. Available at: http://www.webology.ir/2005/v2n4/a21.html

X.   Bavakutty, M., & Salih Muhamad, T. K. (1999). Internet services in Calicut University. National Convention Academic Libraries in the Internet Era. Organized by INFLIBNET, 18-20 February 1999, Ahemdabad, p.37-44.

XI.   Becker, H.J. (1998). Internet use by teachers. Retrieved June 26, 2004, from http://www.crito.uci.edu/TLC/findings/Internet-Use/startpage.html

XII.   Chandran, D. (2000). Use of Internet resources and services in S. V. University, Tirupathi environment. Conference on Information Services in a Networked Environment in India. Organized by INFLIBNET, 18-20-December 2000, Ahemdabad, p.3.124-3.127.

XIII.   Singh, D. (1998). The use of Internet among Malaysian librarians. Malaysian Journal of Library and Information Sciences, 3(2), p.1-10.

XIV.   Hanauer D., Dibble E., Fortin, J., & Col, NF. (2004). Internet use among community college students: Implications in designing healthcare interventions. Journal of American College Healt, 52(5), 197-202.

XV.   Kaur, A. (2000). Internet facility at GNDU: A survey. National Seminar on Academic Libraries in the Modern Era, Organized by IASLIC, 4-6 December 2000, Bhopal, p. 119-124.

XVI.   Kanaujia, S., & Satyanararayana, N.R. (2003). Status of awareness and demand of web-Based learning environment among the S&T information seekers. International Conference on Mapping Technology on Libraries and People, Organized by INFLIBNET, 13-15 February 2003, Ahemdabad, p.587-593.

XVII.   Kooganurmath, M. M., & Jange, S. (1999). Use of Internet by social science research scholars: A study in academic libraries in the Internet era. National Convention Academic Libraries in the Internet Era. Organized by INFLIBNET, 18-20 February 1999, Ahemdabad, p.478-483.

XVIII. Laite, B. (2000). Internet use survey: analysis. Retrieved May 21, 2004, from http://www.ship.edu/~bhl/survey/

XIX. Mahajan, S.G., & Patil, S.K. (1999). Internet: Its use in university libraries in India. National Convention Academic Libraries in the Internet Era. Organized by INFLIBNET, 18-20 February 1999, Ahemdabad, p.483-488.

XX. Mishra, O.P., Yadava, N., & Bisht, K. (2005). Internet Utilization Pattern of Undergraduate Students. University News, 43(13), p.8-12.

XXI. Naushad Ali, P.M. (2000). Internet and its use in Aligarh Muslim University: A survey. Conference on Information Services in a Networked Environment in India. Organized by INFLIBNET, 18-20 December 2000, Ahemdabad, p.1.78-1.82.

XXII. Nicholas, D., Huntington, P., Gunter, B., Russell, C., & Withey, R. (2003). The British and their use of the web for health information and advice: A survey. Aslib Proceedings, 55 (5-6), 258-260.

XXIII. Voorbij, H. (1999). Searching for scientific information on the Internet: A Dutch academic user survey. Journal of the American Society for Information Science, 50(7), 598-615.

XXIV. Margam Madhusudhan : Internet Use by Research Scholars in University of Delhi, India, LIBRARY HI TECH NEWS Number 8 2007, 36-42

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