
E-MAIL SYSTEM IS A FACILITATOR TO UNIVERSITY LIBRARIES FOR NETWORKING IN INDIA

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Introduction

Today the libraries of all types are facing financial problem in acquiring materials and extending the services, especially in view of fast increase in publications cost and abnormal growth of publications. Therefore, it is advised to go for resource sharing of reading documents and other things related to library management. Resource sharing as we mean is to share reading documents among the libraries for economy and maximum use.

As we are living in computer age, it is felt that resource sharing in libraries can be achieved through inter library linking following certain standards. In other words resource sharing among libraries can be achieved through library network. Therefore, the library resource sharing activities can be achieved through national library networking policy. In this article the benefits of E-Mail System and the cost involved in establishing it in the Indian circumstances are discussed.

1. Library Network

Library networks have progressively grown over the last three decades in developed countries. Over the last few years their needs are being sown in developing countries as well. Today the need for library networks is found as a top priority in Research and Development organisations, especially in the university libraries in India.

When two or more libraries are engaged in a common pattern of information exchange, through communications, for some functional purpose, it is called library network. The library network aims at providing materials, information, and services by different types of libraries to all potential users. These libraries may be in different jurisdictions but agree to serve one another on the same basis as each serves its own constituents. Computers and telecommunications may be among the

tools used for facilitating communication among them.

Alphonse F. Trezza defines library networks as "a formal organisation among libraries for cooperation and sharing of resources, in which the group as a whole is organised into subgroups with the exception that most of the needs of a library will be satisfied within the subgroups of which it is a member".

2. Importance of networking

A computer network is a collection of computers and peripheral devices (the network components) connected by communication links that allow the network components to work together. The network components may be located at many remote locations or within the same office. In any case, data communication is the glue that holds the network together.

Networking, in general, serves the following five important purposes:

1. It allows organisations/libraries to share hardware. Organisation often want peripheral devices that are affordable only if they are shared by several computers.
2. It allows information to be shared by all libraries. Some files/data may be used constantly throughout in a library.
3. It allows electronic transfer of text. Organisations often transfer textual data from one place to another through a network. An E-Mail system may be used to distribute copies of documents, etc.
4. It allows for decentralisations of various data processing functions by different information centres.
5. It allows for communication between organisations/libraries. Various organisations cooperating in performing certain tasks can link their computers in a network in order to share information. This allows for sharing of data and software and for rapid communication among the various network members.

3. E-Mail

Communication of mail from one computer to another through a modern and generally a telephone cables is called Electronic Mail. It could be from:

One	-	to	-	One
One	-	to	-	many
Many	-	to	-	One
Many	-	to	-	Many

It supports the interchange or sharing of data, electronic messaging and electronic filming. The facilities include:

Controlled and automatic access

Archiving and

Retrieval by subject, Keyword or Index.

E-Mail is also used for producing digests or electronic journals, bulletin boards, databases and remote log-in facilities.

There are about nine major E-Mail service providers who are currently operating in India. The services and reach vary in each case. These are:

A. Government line

1. ERNET - Education and Research Network
2. SIRNET - Scientific and Industrial Research Network.
3. NICNET - National Informatics Centre Network.
4. INDONET - Indian Documentation Network
(of Computer maintenance Corp., Ltd.)

B. Private Line

1. ICMail - "ICMAIL of ICNET" Madras
(earlier known as integrated computer services limited)
2. UUNET - UNIX User Network, Hyderabad
3. DARTMAIL - Dartmail of DART, Bombay
(Dataline and Research Technologies (I) Ltd)
4. GEMS 400 - GEMS 400 of VSNL, Bombay
(Gateway Electronic Mail System)
5. AXCESS - Access of B I Infotech, Bombay
(Business India Information Technology Limited) Access E-Mail

From the above, we are only concerned with ERNET and SIRNET which are providing E-Mail nodes for library users.

A.1.0 ERNET

Education and Research Network was initiated as a result of identification of computer networking as a thrust area by the Department of Electronics during the Seventh Plan (1985-90). It is aimed at setting up a computer network for academic and research community with initial

participation from eight leading academic and research institutions including Department of Electronics.

A.1.1 Objectives

1. To progressively set up a nationwide network for academic and research community starting with eight participating premier institutions.
2. To undertake design, development and advanced research in emerging concepts of computer networking and related technologies.
3. To carry out continuing education, training and consultancy programmes to generate critical manpower needed by industry and users in this field.

A.1.2 Services

ERNET Provides the most extensive cooperative computer network for the academic and research community. Over 300 institutions in the country representing a cross-section of universities, government, societies, research and development organisations, research laboratories are already using it extensively serving over 20,000 users throughout the country. The following services are available on the network:

- | | | |
|-----------------|---|---|
| Electronic mail | - | File transfer |
| Remote log - in | - | Mailing lists, new groups and bulletin boards |
| Database access | - | Information retrieval tools |

In addition to the above, access is provided to computing, resources and users across 120 countries through global INTERNET.

A.1.3 E-MAIL

The E-Mail facility can be availed by getting connected to the nearest transit node of ERNET through a dial-up telephone connection. E-Mail of ERNET is currently supported by the UUCP (UNIX to UNIX Copy) utility of UNIX/XENIX operating system. Thus no other special software is required if your organisation has UNIX environment. In case of a DOS machine, this software is available (free of cost) at all the transit nodes of ERNET. The only demands on the hardware are serial ports supporting upto 9.6 kbps and a modem.

An annual membership contribution of Rs.one lakh would be payable by small to medium size organisations with average traffic not exceeding 200 k-bytes per day. Larger institutions would be required to

pay Rs. Two lakhs annual membership contribution for tariff not exceeding one M-byte per day.

B.1. SIRNET

Scientific and Industrial Research Network is a computer communication network for the CSIR laboratories in India. It is situated at INSDOC, New Delhi. It is a fast expanding network with an objective to link science and technology establishments throughout the country. It has its network management centres at Delhi, Bangalore, Calcutta, Madras. Besides E - Mail, the network also offers the following value-added services:

- i. Access to indigenous databases of INSDOC
- ii. Document copy supply
- iii. CAPS (Contents, Abstracts and Photocopies service)

B.1.1 E-Mail cost of Installation and Training for Node in SIRNET

a) Installation Charges

Mail node - Rs.15,000 per node

User node - Rs. 12,000 per node

Conversion of
user node into } 5,000 per node
mail node

(Note:- In addition to this T.A/D.A at government rates for scientists, visiting the customer site will be borne by the customer)

b) Usage Charges

Mail node - Rs. 20,000 per annum

User node - Rs. 12,000 per annum

B.1.2 E-Mail for University Libraries

Almost all university libraries are suffering with decreased budgets and facing problems of subscription to current periodicals. The CAPS Service of INSDOC on E-Mail will be of much useful and reduce the problem of subscription to current periodicals in science and technology with minimum expenditure. Further, the use of E-Mail by the university libraries will be limited. Therefore, there is no need to have direct E-Mail connection from ERNET which charges Rs. One lakh as annual subscription, where average traffic not exceeding 200 K-bytes per day and Rs. Two lakhs for larger institutions whereas E-Mail through SIRNET charges Rs.12,000/- per user node and Rs.20,000/- per mail node as annual subscription. E-Mail of SIRNET is linked to UUNET and ERNET is

linked to different nodes of SIRNET. Therefore, establishing the E-Mail of SIRNET will be of much useful and economic to the university libraries and also it acts as a first step for networking of libraries in our country.

4. Cost of installation of E-MAIL of SIRNET

At the time of installation, Non-recurring and Recurring expenses are given below:-

4.1) Non- recurring

4.1. a) Hardware	1. PC AT 386 or above 4 MB Ram 80 MB Hard Disk, 1.2 MB/360 KB Floppy Drive	Rs.40,000/-
	2. Printer	Rs.15,000/-
	3. Modem 2400 bps having error correction facility (with software)	Rs.22,000/-
	4. Telephone line with STD facilities	Rs.8,000/-

b) Subscription Charges

1. User node	Rs.12,000/-
2. Annual Subscription	Rs. 12,000/-
3. T.A. And D.A. to two persons	Rs.3,000/-
4. Misc.(Furniture & Fittings)	Rs. 13,000/-
	<u>1,25,000/-</u>

4.2 Recurring

1. Annual Subscription	Rs. 12,000/-
2. Telephone and STD charges	Rs. 38,000/-
	<u>50,000/-</u>

5. Budget provision

The recurring expenditure can be met from the Head "Current Periodicals" of yearly budget of the university library. The non-recurring expenditure can be met from the block grant of the university or from the Head "Furniture and Fittings" of the university library.

The above budget estimation is prepared on economic lines. However it may vary slightly basing on the estimations of each institution from time to time. However going for E-MAIL of SIRNET is more

economical than E-MAIL of ERNET.

6. Whom to contact

For further information, please contact:

1. Director/Add. Director (Dr SP Nawathe, Addl. Director)
ERNET Project
Government of India
Department of Electronics
Electronics Niketan
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(Fax : (011) 4363083, 4363134
(Tel.: 4363071)
2. Marketing and Customer Services
INSDOC
14, Satsang Vihar Marg
New Delhi - 110 067
(Fax : 91-11-6862228
(Tel : 6863617)
3. INSDOC Regional Centre
Indian Institute of Science Campus
Bangalore - 560 012
(Tel. 341461 and 343554)
4. INSDOC Regional Centre
IICB Campus
4, Raja S.C. Mullick Road
Calcutta - 700 032
(Tel. 4733583)
5. INSDOC Regional Centre
CSIR Madras Complex
Taramani, Madras - 600 113
(Tel.2351453)
6. WRIC - INSDOC Information Centre
Western Regional Instrumentation Centre
University Campus
Vidyanagari
Kalive, Santacruz (E)
Bombay - 400 098

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