

# **DELNET - The Functional Resource Sharing Library Network : A Success Story from India**

by

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## **1 Introduction**

India, the largest democracy in the world with an estimated population of 114 millions has more than 1,00,000 libraries comprising academic libraries, public libraries, special libraries and libraries attached to the research and development institutions, government departments and ministries, etc. There is no denying the fact ICT has brought a paradigm change in the functionality of the libraries in the country but this technological change pattern is not seen uniformly across the wide-section of the libraries in the country. On one hand the country is proud to have the most sophisticated libraries with ISO certifications and the implementation of modern tools and technologies, on the other hand, we do encounter the challenges of providing a better infrastructure in the form of PCs and Internet connectivity in the libraries that are still striving hard to get the necessary hardware and Internet connectivity in their libraries from their managements. The adoption of standards, retrospective conversion work, the adoption of suitable library software packages continues to remain as the major areas of concerns for the libraries and the library and information science professionals.

In such constraints and hostile conditions, DELNET has been able to establish itself as an effective, operational resource sharing library network in India. The network whose journey started as a city based library network in 1988, emerged as a major operational library network not only in India but in South Asia, connecting more than 1597 libraries in 30 States and UTs in India and seven other countries. (Appendix I). The network is growing from strength to strength, with escalating resources of union catalogues, the wider coverage of libraries from varied disciplines, the growing number of users and the horizontal and vertical expansion in its services to its members. This paper highlights the incredible and pioneering work being done by DELNET-Developing Library Network (formerly Delhi Library Network) which is a non-governmental, non-profit making organisation with inputs from the Ministry of Communications and

Information Technology, Government of India and located in its own building in the well-known academic environment of Jawaharlal Nehru University at New Delhi. I would like to reiterate that DELNET do not receive any government funding and is based on a self-sustainable model, it is considered as a role model for the library networks especially of the developing nations. A survey has also been conducted by the author to assess the utilisation of DELNET resources among the member-institutions and is reported in the article. The questionnaire technique was used to get the inputs from the member-libraries. 147 libraries responded to the questionnaire.

## **2 The Genesis of Library Networking in India**

In India during the late 1980s and 1990s there was a movement to establish city and regional-based library networks by NISSAT (National Information System for Science and Technology), a body under Dept of Scientific and Industrial Research (DSIR), Government of India. It provided some financial assistance for the setting up of these library networks. This has led to the mushrooming of various city library networks in India including BONET (Bombay Library Network), CALIBNET (Calcutta Library Network), DELNET (Delhi Library Network which later became Developing Library Network in 2000), PUNENET (Pune Library Network). The University Grants Commission has also developed INFLIBNET (Information and Library Network) in 1991 to network the University Libraries in the country. Only a few networks were able to work on the self sustainable model and continued to exist after the initial phases of implementation and functioning. DELNET, started as a project in 1988 became a national library network in India by the year 2000. UGC continued funding INFLIBNET to provide the support to the University Libraries in the country. The remaining city library networks due to the lack of planning for developing the networked resources and its functions soon perished from the networking scene of the country.

## **3 DELNET-Developing Library Network**

DELNET-Developing Library Network is a major operational resource sharing library network in India connecting more than 1597 libraries in 30 States and UTs in India and seven other countries. DELNET was conceived as a city based library network in Delhi in 1988 and was known as Delhi Library Network, networking the libraries of the Delhi region. It got registered as a society in 1992. With the availability of DELNET services on the World Wide Web, the accessibility soon was transformed from the local dial up connectivity for the Delhi region institutions to the global access through the Web. This gave a great boost to DELNET and soon DELNET crossed the geographical boundaries within the country and also became accessible outside. It was on 13<sup>th</sup> September 2000 that the name of DELNET got changed from DELNET-Delhi Library Network to DELNET-Developing Library Network. The main objectives of DELNET is to promote resource sharing among the member-libraries by collecting, storing and disseminating information and by providing networked services to the researchers and scholars to supplement their research activity.

## **4 5 Cs - Functional Parameters of DELNET**

I would like to mention the 5 Cs of the Library Networking which are essential for an operational library network and governs its functionality. These 5 Cs are (1) Connectivity (2) Cost (3) Computers (4) Client (5) Content. I am going to discuss these five parameters in relation to DELNET and its member-libraries and how these parameters have contributed to the growth and success of DELNET.

### **4.1 Connectivity**

The connectivity is a life line for the smooth functioning of a library network. There is an availability of the leased-line, wireless, broadband, VSAT and Wifi connectivity in the libraries.

The DELNET services are accessible through the World Wide Web by the registered member libraries. The DELNET databases are hosted on Basis Web server and are connected with a 11 mbps RF link offered by National Informatics Centre, Ministry of Communications and Information Technology, Government of India. The network remains functional on 24/7 basis. The web tracking software installed at DELNET servers gives a day to day picture of the usage of the DELNET services by the member libraries. It is quite heartening to note that the access to the servers hosting the databases are being made by the researchers and scholars of the member libraries at different times starting from midnight to early morning besides the usual peak hour network access.

The survey conducted among the member libraries have shown very encouraging figures regarding the availability of the dedicated links in the libraries. 89.9 percent of the respondents have confirmed the availability of the dedicated Internet facility in their libraries. The University Libraries have the largest availability of the dedicated Internet facility with 95.2 percent affirmed the availability of the dedicated link, followed by 90.7 percent in Institutes, 89.7 percent in Research/Special Libraries and 86.7 percent in the Colleges. The survey results shows that Internet has been able to penetrate well among the organisations in the country and the libraries have the Internet bandwidth availability with them.

It is found that in 97.3 percent of the organisations, the faculty has Internet facility at their own desk. It is quite essential to have the direct internet access in order to utilise the library network's resource and services to the fullest.

### **4.2 Cost**

The cost of membership to the library network and the resources provided through them are important for the sustainability of a library network. DELNET membership charges are quite nominal, it is Rs 7500 (USD 150) per annum for the libraries in India and SAARC nations, the non-SAARC members pays USD 500 per annum. The membership fee is kept same for all Institutional Members whether it is a University, an Institution, an R&D organisation, a specialized library or a school library. The democratic approach, an unbiased one, helps in promoting the resource sharing. Also it leaves an impression of being equal in their participatory roles in a network for resource sharing. It is worth reporting that some of the library networks in India could not grow and sustained themselves due to the exorbitant membership charges rates and different categorization of the members on the basis of their collections, etc. DELNET charges for the actual courier charges for sending the books on Interlibrary loan and the member-institutions and their researchers finds it an affordable one. In a developing country like India, Cost of getting the desired material plays a crucial role. Herein, the researchers and scholars for higher research are not being helped financially to a reasonable extent through scholarships, grants, etc. contrary to their counterparts in the Western world.

### **4.3 Computers**

In order to facilitate the optimum use of the library network resources and services, the researchers, scholars and faculty of the member institutions should have adequate availability of the computers. Through the survey conducted, it was found that 43.2 percent of the libraries have upto 10 computers in the library whereas 59.1 percent of the University Libraries have more than 20 computers in the library and only 32.2 percent of the respondents have more than 20 computers in their libraries. It is quite evident that the libraries are not better equipped with the availability of the computers in their libraries though there may be separate computer labs or the computer departments but they are not the part of the libraries.

### **4.4 Client (Member-Libraries)**

The more diverse the library network has the coverage, the more effective would be the resources of such a library network. In DELNET, the participating libraries are from various disciplines and they pool their resources together and share them across the network. I would like to mention the fascinating scenario of resource sharing wherein a technical book required by a S&T Library will be available in a library specialising in Commerce discipline rather than being available in the best technical libraries. The resources and the collections becomes more transparent for the act of resource sharing. The details of the DELNET membership on subject and type of Institution basis is mentioned in Appendix II.

The survey results have shown that 91.8 percent of the member-libraries are aware about DELNET services (Table 1) and 60.7 percent are the frequent users of the DELNET services (Table 2). I would like to mention that DELNET organizes one day orientation programmes in member-institutions located in various parts of the country. This enables in better promotion and spreads awareness about DELNET and helps in popularizing the services among the users, faculty and researchers of the member-libraries.

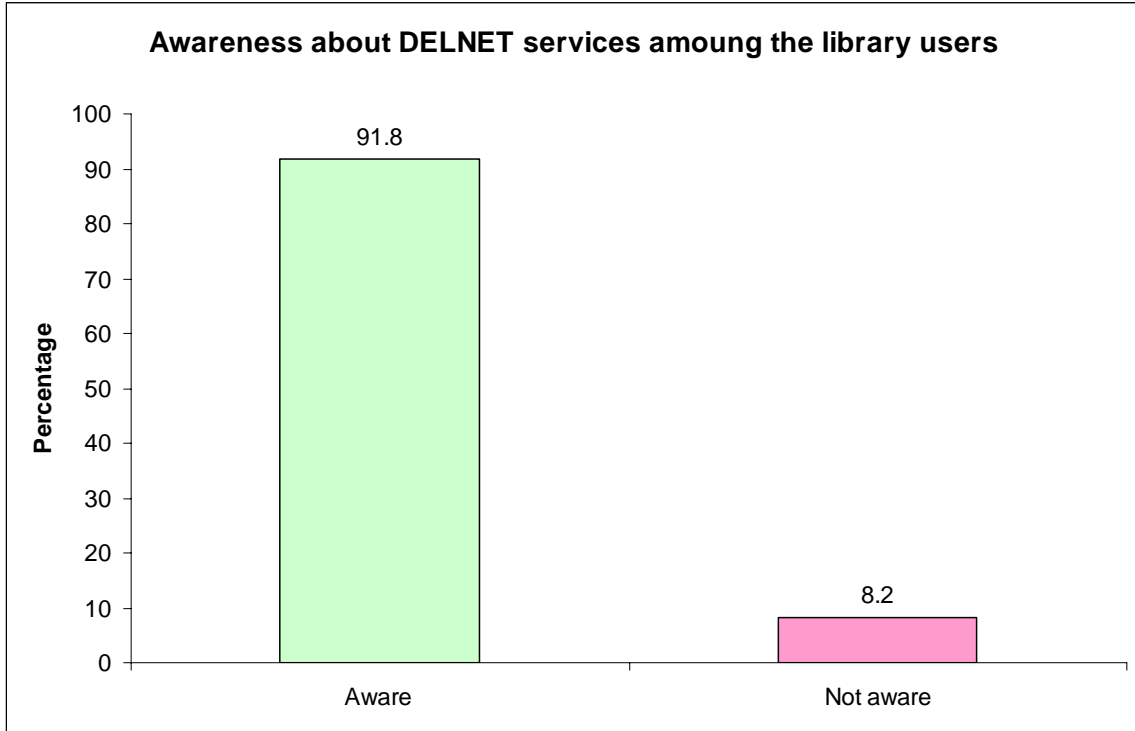


Table 1

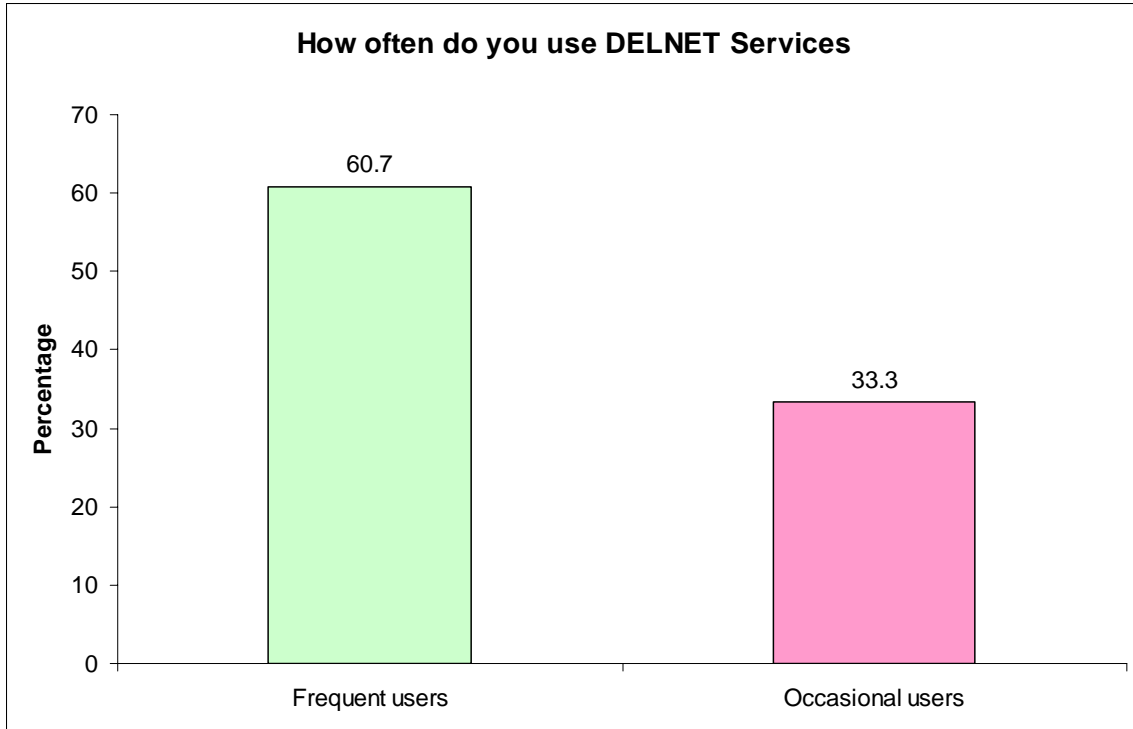


Table 2

#### 4.5 Content

Content is a major resource of a library network. The greatest concern for a library network is the consolidation of the resources lying scattered across the member-libraries. This ensures a wider access to information to the information seekers. Since inception, DELNET is actively engaged in developing the union catalogues and union lists which are the major resource strength for any library network. The records in the DELNET databases are growing in size and more and more resources are becoming accessible to the member libraries. These resources are the major source for resource sharing as they carry the locations data wherein physically the information may be available. The database are collected through the electronic transfer of the exported records through the online facility, email, ftp protocols; the data is physically sent in CDs by the member libraries. I would like to mention that in a country like India, the cooperative cataloguing or cooperative collection building is still not in existence. There is a lot much of duplication efforts in the libraries for cataloguing the same titles in different libraries. The various libraries in the country are using various software packages which ranges from the commercial software packages (Libsys, Alice for Windows, Virtua, etc) which may be adhering to international standards to the inhouse developed software packages developed with the backend on SQL, Access, Excel, Oracle, Sybase, etc. DELNET collects the records from the member libraries in the default exported format and the conversion programs are being developed to convert the base records into the standard ISO 2709 format before they are finally being merged in the Union Catalogues. I would like to mention that the information is also collected from the

prominent libraries of the country who may be non-members since they can always be approached for getting the desired references. There is an online facility for uploading the machine readable records to DELNET by the member-libraries. The bibliographical databases do not strictly adhere to the international bibliographic formats and the library professionals are not much familiar with MARC 21 cataloguing.

## **5 DELNET Databases and their significance**

### **5.1 Union Catalogue of Books**

DELNET provides access to more than 8 million bibliographic records of books in English language available with various member libraries located in and outside the country. The databases can be accessed by any of the desired fields including Title, Author, Subject, Date of Publication. The Boolean operators can also be used for refining the search queries. The sorting can be done on the searched results. The searching using Phrase searching, Any Words and includes can be used. The records can also be retrieved using the specific indexes including Title, Author, Subject, etc. The database size grows with each passing day as more and more data from the member libraries are being merged in the centralized union catalogues. DELNET has developed its own modules on Basisplus software, an RDBMS.

The member libraries availing to the Interlibrary Loan facility can place the requests online through the system itself for getting the books on loan. The Interlibrary Loan is one of the most popular services of DELNET, the resource sharing is done not only between the libraries located in India but also outside India. It is quite heartening to note that DELNET has evolved a very successful functional model of Interlibrary Loan/Document Delivery services. Through these services, the users, faculty, researchers and scholars of the member libraries are able to get and refer to the books which are not readily available in their own libraries. At times the books are out of print and are not even available with the book publishers themselves. The Reference books are also lent out though for fewer loaning period. It is worth mentioning that certain libraries in the country which are reference libraries like Central Reference Library, Delhi University, Indian Institute of Advanced Study, Shimla does lend out books to DELNET. It is only possible due to the mutual cooperation and benefit the libraries generates from the process of resource sharing. It demonstrates a win-win situation. DELNET charges only for the nominal courier for sending the books on loan and it is the responsibility of the borrowing Institution to return back the book at their own cost. In India wherein the users and also the libraries have the limited resources, through the resource sharing the needs of the information users are fulfilled in most economical ways. I would like to mention that DELNET also serves its member-libraries outside India.

DELNET has also created a database of E-books which are available in the public domain.

## **5.2 Union List of Current Journals and E-journals Consortium in India**

The journals are a vital source of current information for the scientific research. The information about the availability of the current journals is of great help for the document delivery services. DELNET is maintaining an online union list of current journals available in the fields of Science and Technology, Social Sciences and Humanities. This database has more than 25,000 unique titles of current journals available in member as well as the non member libraries of DELNET. The database is updated continuously by receiving the list of currently subscribed journals and this database contains the information about the journals not only available with the member libraries but also with the major reputed libraries in India which are the non members. The photocopies of journal articles are arranged from the libraries and are supplied to the requesting libraries. It is also one of the most popular services.

In India a major E-journals consortium was formed in 2000 named “INDEST (Indian National Digital Library in Science and Technology Consortium)” with a financial contribution of Rs 200 million by the Ministry of Human Resource Development (MHRD), Government of India. All India Council for Technical Education (AICTE) has also contributed Rs 37.5 million to this. Thirty Eight centrally funded government institutions including the IITs, NITs and NITs and few others are the core members of INDEST. The private Institutions are self supported. Under the consortium, an access to more than 6500 journals from various publishers and aggregators are provided. The UGC Infonet E-journals consortium covers 4453+ ejournals and provides access to nearly 100 Universities of the country. It has been noticed that private institutions who are not able to afford being the member of the consortium is greatly utilizing to the DELNET Document Delivery Services. Moreover, at times the members of the Consortium also approaches DELNET for the delivery of the journal articles since the desired journal may not be the one covered under the access or the desired specific issues are not available online. There is lot much of speculation about the extent of utilization of E-journals in the Institutions and a large number of studies have been carried out to know about the pattern of accessibility. Moreover it has been noticed that if a Institution ceases to be a member of the Consortium because of the non availability of the digital archiving, the users are deprived to browse the issues for which the Institution had paid to the consortia.

## **5.3 Union Catalogue of Journals**

DELNET has also created a database containing the holdings data of the journals available in the member libraries besides containing the other bibliographical information about the journals. At present the database contains 19,289 records of the journals. It is a good resource for tracking down the articles from the rare, old issues of the journals dating back to late 19<sup>th</sup> and early 20<sup>th</sup> century. DELNET does receive a number of

requests from the libraries for locating the journal articles from the very old issues of the journals. It is a good resource for locating the articles from the rare old issues of the published journals.

#### **5.4 Database of Journal Articles**

There are a number of libraries, though not many on the network who are involved with the articles indexing in the machine readable form. A large portion of the library budget is annually spent on subscribing to the journals, either in print or in online mode by the libraries but the libraries lack the access to the databases containing the bibliographic details about the journal articles. For the researchers and scholars it is very essential to know about the latest articles getting published in their specific fields of discipline. This specific database contains more than 800,000 records and is growing in size. For journal articles, the concerned users, researchers sends the requests with their bibliography through email and DELNET arranges for the full text delivery. DELNET also helps in providing the list of articles through various other networked sources and the fulltext copies of the selected articles are provided on demand.

#### **5.5 Databases of Non-print materials**

DELNET does maintain the databases of CD-ROM, Video recordings and sound recordings available in the member libraries. The non-print materials can not be loaned out from the libraries, however the video recordings and sound recordings are being taken on loan in special cases though for a lesser period of time. The CD-ROMs are used for keyword searching and the concerned bibliography containing the abstracts are provided to the requesting libraries. There are 2,281 records of CDs available with member libraries, 748 sound recordings and more than 5,000 videorecordings listings in the respective databases.

#### **5.6 Database of Thesis and Dissertations**

This database contains around 45000, Thesis and Dissertations submitted to the various Universities and Institutions. This database contains bibliographic information and since thesis and dissertations are the reference materials available in the libraries, the researchers and scholars use this database to know about the works being carried out in their specific fields. There has been some projects in India concerning the digitization of the Thesis and Dissertations by INFLIBNET and University of Mysore (Vidyavahini project), but the project has not taken off due to the copyright restrictions.

## **6 Usefulness of DELNET Union Catalogues**

The access to Union Catalogues created and developed by the library networks remains the most highly used resources by the member-libraries. The locations data available in the union catalogues helps the respective users to find out the availability of the documents in their own regions, state and in different locations of the country and outside. It is a very effective resource discovery tool and is a great boon to the scholars and researchers of the country. The survey results have highlighted the fact that 85.7 percent of the member-libraries finds DELNET Union catalogues useful and 86.3 percent of the library users are getting benefited. While 78.9 percent of the Postgraduate students, 62.5 percent of the faculty and 53.7 percent of the graduate students are getting benefited from the DELNET services. The content available through the union catalogues are very selective in nature since the libraries purchase the titles through a strict selection process.

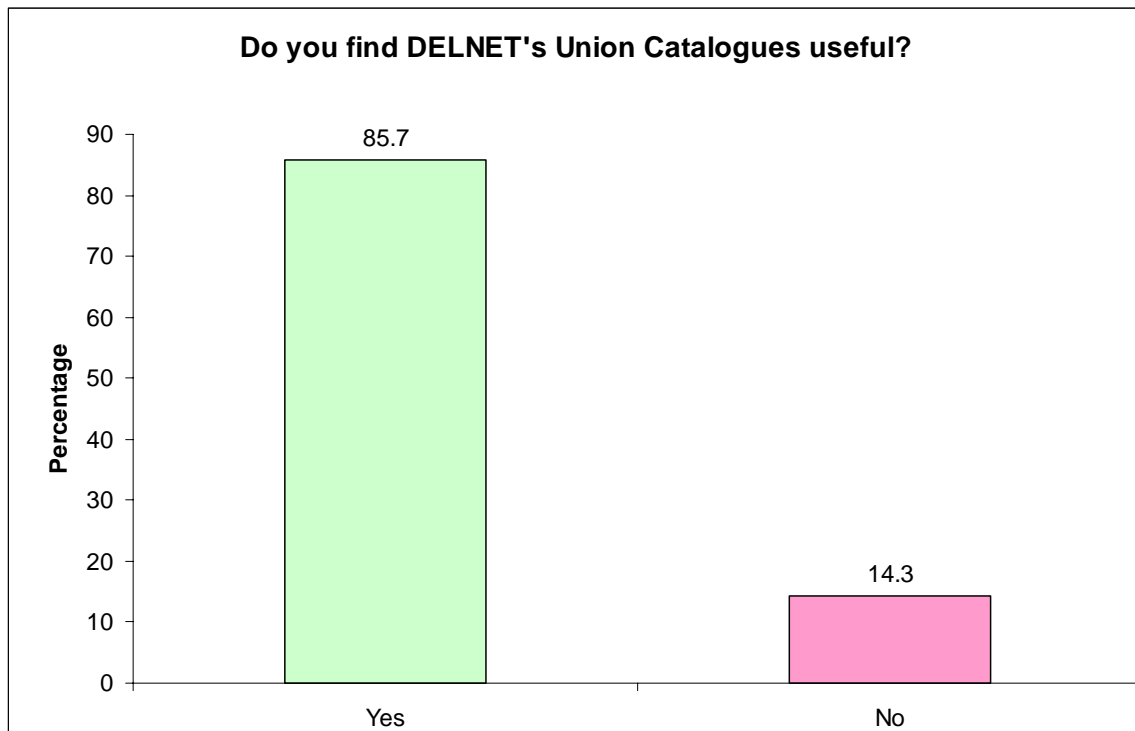


Table 3

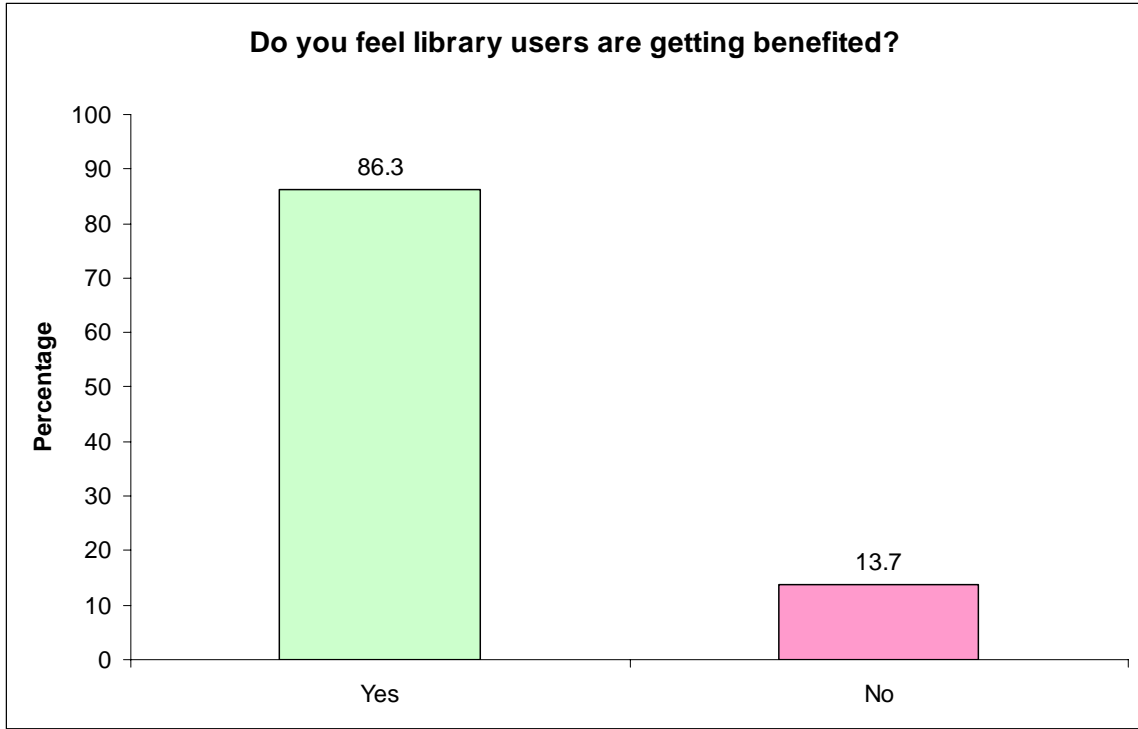


Table 4

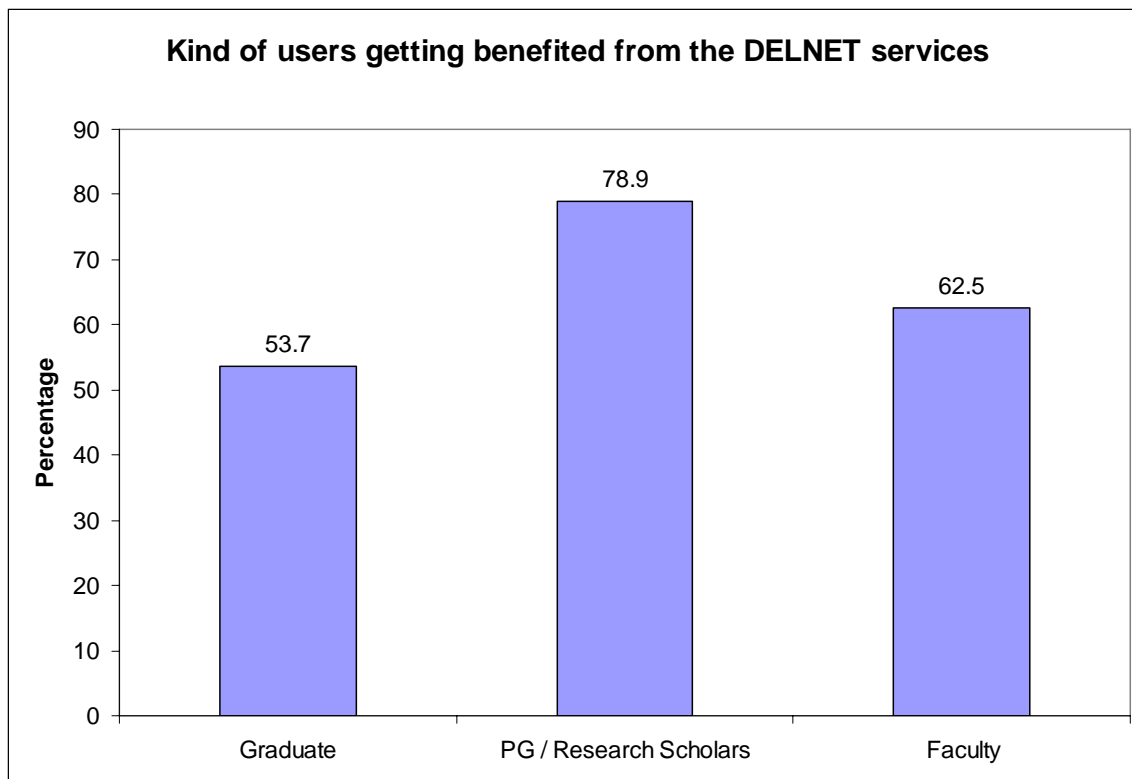


Table 5

## 7 DELNET Services and its Utilisation

### 7.1 Inter Libray Loan (ILL) and Document Delivery Services (DDS)

The DELNET's ILL and DDS services are one of the most popular services among the member libraries located in different parts of India as well as outside the country. The requests for the supply of books on Interlibrary Loan or the requests to arrange for the journal articles are received by DELNET through various modes including DELNET Online System (options are available through the online databases), Email (one of the most prevalent method used by the member libraries), also through fax and at times through post also. DELNET promotes the electronic communication since it is more faster and interactive and it facilitate the process of quick and safe delivery of the ILL/DDS items. DELNET has a separate ILL tracking system wherein each and every transaction is recorded and status about its date of dispatch, date of retun, etc. are well recorded. DELNET is able to reach out to the users of the member libraries located in far-flung, remote parts of the country apart from those from the main stream cities. The material is sent through the insured courier services. It is worth mentioning that DELNET not only provides the ILL/DDS to its member libraries located in various parts of the country but is also engaged with International Interlending. DELNET sends the books on Interlibrary Loan to the member institutions outside India like Baha Social Sciences,

Kathmandu, Nepal and Caledonian College of Engineering, Oman; Waljat College of Science and Technology, Muscat. Also the photocopies of journal articles are provided to the member libraries to NILIS, Sri Lanka, IRRI, Philippines, etc. DELNET is also working towards the implementation of ISO ILL protocols. The member libraries saves a lot of revenue by availing to the Interlibrary Loan and Document Delivery services of DELNET. It is of great boon to the faculty, researchers and scholars since the expensive, reference books and also out of print titles are made available to the member institutions besides other titles.

The DELNET ILL/DDS services are the heart-line of DELNET. There is a great sense of satisfaction among the member-libraries availing to the services. The timeliness factor is crucial in library services. The survey results supplements the fact that 30.7 percent of the respondents find the response time of ILL/DDS requests as excellent, while 36 percent rate it as very good and 33.3 percent finds the response time as 'good'.

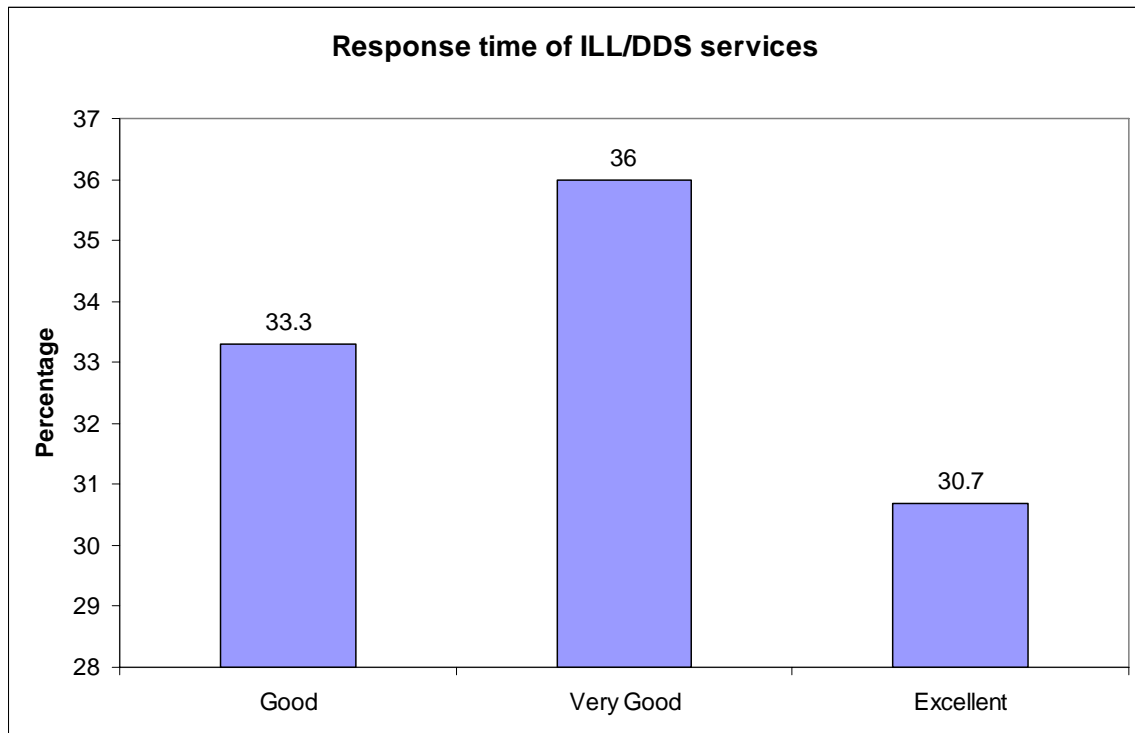


Table 6

Regarding the overall impression of DELNET services, 35.3 percent consider it as 'good', 31.9 percent founds it to be 'very good' and the rating of being 'excellent' was given by 23 percent and 2.72 percent considered the services as poor. The growth of DELNET membership since the year 1992 when it got registered as a society is highlighted in Appendix 3.

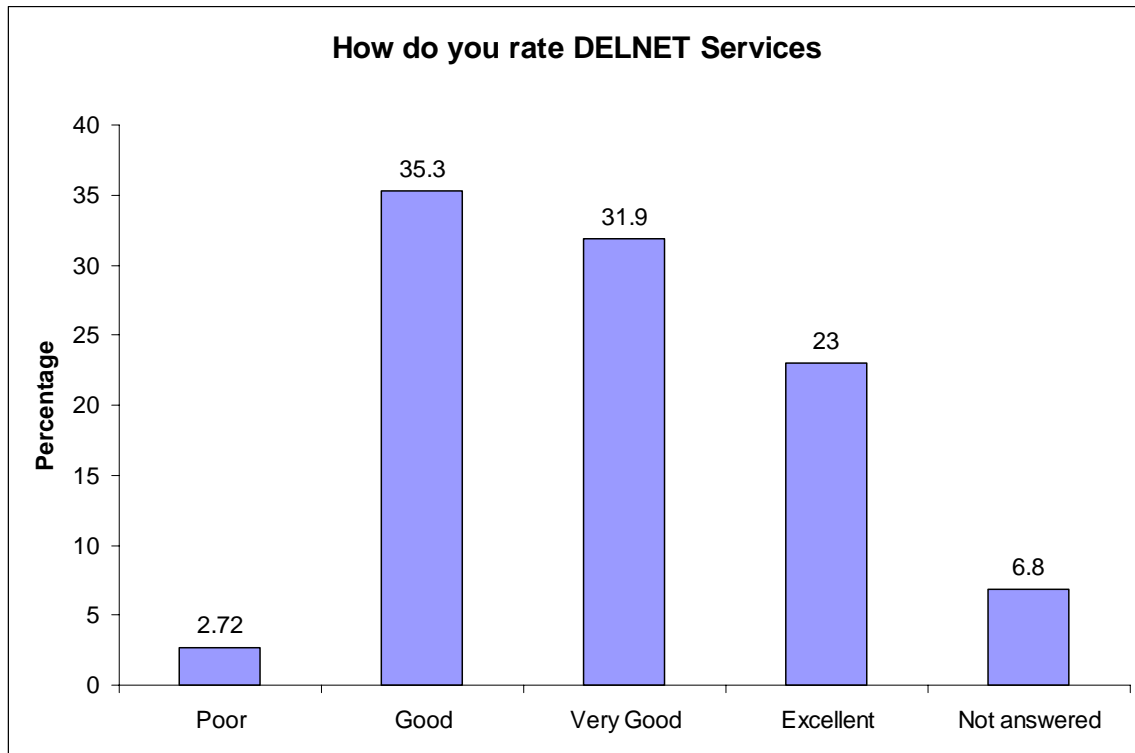


Table 7

DELNET has also opened up a coordination units in Southern part of India i.e in Bangalore (Karnataka). The unit coordinates for the ILL/DDS services as the nation wide catalogue of the member libraries are available on the DELNET system and these it deals on day to day basis with the respective libraries of the region for the ILL/DDS.

## 7.2 Reference Services

DELNET receives a large number of reference queries every day through various modes. DELNET maintains a referral centre which provides reference services to the researchers, scholars and users from and outside India. DELNET is planning to start a national referral centre wherein the reference queries will be saved and accessed by the users on anytime, anywhere basis. It will be based on the question-answering technology.

## 8 Networking Ahead – New Challenges

The new challenges posed by the growing Knowledge economy is the need to network knowledge more vigorously and dynamically. DELNET is also chalking out its plans to move with the needs of the time and to gradually move into the knowledge

sharing model. I have listed below some of the immediate plans of DELNET, though they are full of challenges but with its strong networking capabilities in the country, it is confident of moving ahead with the time in a self-reliant manner.

1. DELNET intends to network both libraries and knowledge in the integrated network model. National Knowledge Commission of the Government of India has identified DELNET as one of the major library network in India which will network more than 25,000 libraries in the near future in India.
2. DELNET is interested to help the libraries in tapping the tacit knowledge available in their Institutions and to contribute for the development of the Knowledge Repositories and networking the knowledge resources.
3. DELNET is supporting the establishment of Knowledge Centres in India. The plans are under consideration for establishing a Central Institutional Repository for the member-libraries in order to tap the tacit knowledge available with the researchers, scholars and the faculty members.
4. DELNET is interested to open shortly the State Centres in different parts of India and also the Regional Centres in order to provide training to the library professionals, promote the usage of network resources and also to help the local libraries in the development of the digital content.
5. DELNET is wanting that more libraries especially specializing in South Asian studies from different parts of the World should become a part of the network and utilize the services and resources created for their researchers and scholars at much affordable cost.
6. DELNET is wanting to implement the social networking tools in order to enhance the user interaction. The DELNET Helpline support is also offered through the YMS. The users of the member-libraries of DELNET interact with the official of DELNET in an interactive mode and it brings the end users closer to DELNET.
7. DELNET is launching the Technical Support System for Koha- the Open source ILS in order to help the Indian Libraries for adopting the open source software. An online portal will also get launched soon by DELNET wherein the online audio/video learning material for implementing Koha, including tutorials on MARC 21 will be offered. It will be operational on 24/7 basis against a nominal registration fee.

## Appendix I



### DELNET

**Number of Member-Libraries as on September 18, 2009 - 1597**

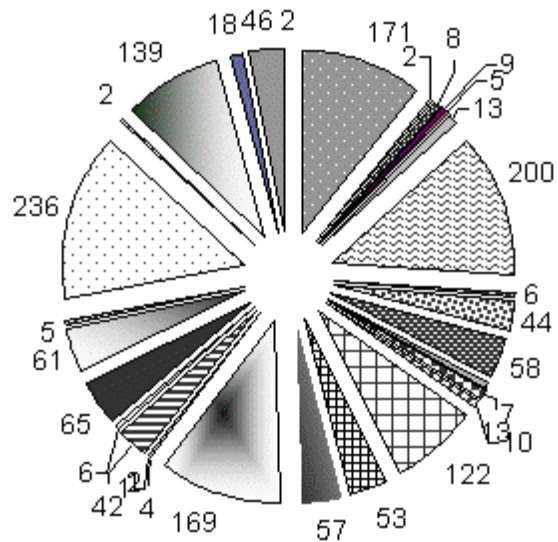
#### Geographical Distribution

##### 1. India

Andaman and Nicobar Islands	2
Andhra Pradesh	171
Arunachal Pradesh	2
Assam	8
Bihar	9
Chandigarh	5
Chhattisgarh	13
Delhi	200
Goa	6
Gujarat	44
Haryana	58
Himachal Pradesh	7
Jammu & Kashmir	13
Jharkand	10
Karnataka	122
Kerala	53
Madhya Pradesh	57
Maharashtra	169
Manipur	4
Meghalaya	1
Mizoram	2
Nagaland	1
Orissa	42
Puducherry	6

#### Geographical Distribution

### INDIA



Punjab	65
Rajasthan	61
Sikkim	5
Tamil Nadu	236
Tripura	2
Uttar Pradesh	139
Uttarakhand	18
West Bengal	46
<b>Total</b>	<b>1577</b>

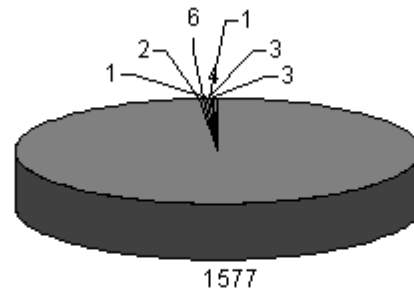
**2. Other SAARC Countries**

Nepal	2
Pakistan	1
Sri Lanka	6
<b>Total</b>	<b>9</b>

**3. Outside SAARC**

Oman	3
Philippines	1
United Arab Emirates	3
United States	4
<b>Total</b>	<b>11</b>

**GRAND TOTAL 1597**



## Appendix 2

### Subject -wise Breakup

General	319
Science and Technology	1072
Social Science	177
Humanities	29

**Total 1597**

**Subject-Wise Breakup**

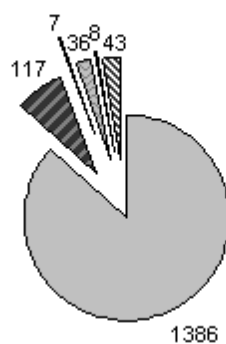


### Types of Libraries

Academic		
Universities	93	
Colleges/Institutes/ Deptt./Centres	1293	1386
Research/Special		117
Public Libraries		7
Government Libraries		36
Libraries of Diplomatic Missions/UN Agencies		8
Miscellaneous including Trusts		43

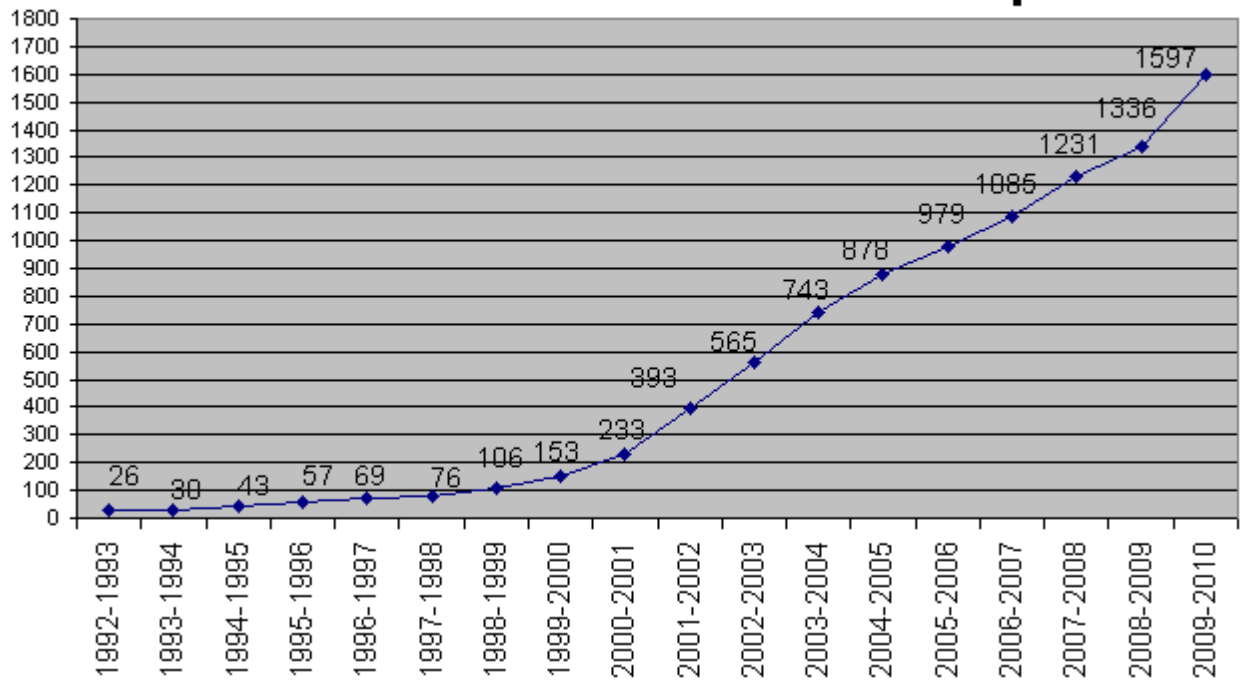
**Total 1597**

**Type-Wise Breakup**



### Appendix 3

## Growth of DELNET Membership



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