CHAPTER - V
ORISSA ACADEMIC LIBRARIES
NETWORK
(OALNET) - A MODEL
5.0 INTRODUCTION

Over the last decades the libraries have witnessed impact of information technology that has been affecting the structure and functions of the entire library system to a great extent. In addition to print resources, libraries are facing the challenges of increased resources in electronic media; customers are preferences to use electronics media, changing document formats and storage complexities. Moreover, the problems of space, standardization, professional development of the staff, challenges posed by new technologies, drastic cuts in the library budgets have aggravated problem of the present day librarianship. However, the solution to the problems of information explosion, ever changing needs of users, increasing amount required for subscription to same number of periodicals, shrinking library budget, and devaluation of rupee and its impact on the library acquisitions can best overcome upon certain level by the following means:

- Use of computer and communication networks for resource sharing;
- Use of national and international databases through communications networks.
- Access to full text CD ROM based systems.
- For better sharing and speedy delivery of documents.
- Reducing the operational cost of libraries

To cope with the above factors, libraries should accept cooperative services; cooperation is the key concept of resources sharing. Once, Allen Kant has suggested “the success and survival of libraries will depend on how much and to what extent libraries cooperate with each other in future”. Thus, cooperation among libraries in all respects has become essential for their own sake and survival. Initially library cooperation was limited to interlibrary loan, later extended to cooperative cataloguing and centralized cataloguing or even modern concept of shared cataloguing. Now, sharing of resources is an important issue to cope with present crisis. Therefore, networking is a must for every library. It is the electronic transfer of information between two or more points irrespective of distance. It implies automation, data communication and effective services among libraries.
Library networks have grown mostly during the last thirty years in different geographical environment in order to cater to the specific needs of the users. Several models have emerged that provided specific services in different region of the globe. Not all networks conform to the essential functions of library networks. However, the essential functions should include the promotion of resource sharing, creation of resource sharing tools like: Union Catalogues, rationalization of acquisition and maintenance of international standards for creation of records uniformly. Libraries should be able to join different types of networks depending upon the need and select a model, which conforms to its requirements as per Kaul, (1999)

In the developed countries resource-sharing networking was started long back. For instance the growth of networks in the United States can be traced from the mid of 1960. USA is the birthplace of library networking and by now libraries in each state is networked to local, regional and national network Library of Congress (LC) is one of the most important networked library in the world. It is important to note that the US Department of Education has been advocating a vigorous policy of promoting library networking; It offers networking grants, supports inter-library loan projects, automation and retro-conversion projects, resource sharing schemes, etc. besides providing regular federal grants annually to the public and academic libraries. Resource Sharing works in UK is also well established. The best example is Birmingham Library Co-operative Maintenance Project (BLCMP) in Birmingham, has 13 million bibliographic records of books, serials, music etc. in its database and its catalogues get a hit rate of above 90 per cent with more than 60 libraries comprising public libraries, college libraries, university libraries, national and special libraries. BLCMP has introduced EDI clearing house service in about 25 libraries. In Australia the resource sharing tools have grown from catalogue cards to national databases with the contributions of many older and larger libraries. In Australian Bibliographical Network, the national and central bibliographic databases are maintained and coordinated and maintained by a national agency. The Swedish Model for resource sharing is called the Consortium Model. This model is developed only for six major science and technology libraries in Sweden.

The developing countries like India are lagging behind in library co-operation. The reasons for the same are poor funding and the non-existence of the spirit of give and take or exchange is delaying the prospects of resource sharing programmes. The practice
of resource sharing in the Republic of China (Taiwan) has been as limited in scale as has been in India. Greater efforts have been made in China for the development of documentary information resources because it was considered that these resources would work as China’s knowledge reserve to promote the development of economy, science, technology and culture. The main effort was made on the rational distribution of the resources with the adoption of new technology. In some countries, at present resource sharing has become an important library programme such as in Thailand. The growth of library Networks in India can be traced to the initiatives made by NISSAT in establishing CALIBNET in 1986, DELNET in 1988 and other networks subsequently. University Grants Commission (UGC) established INFLIBNET in 1988. DELNET has emerged as the first operational library network in India with the support of the National Informatics Centre. No efforts have been made to network public libraries since it is becoming essential to provide networked information to the public. The progress of INFLIBNET has not been at the level as it was planned. There has not been much progress made by BONET and CALIBNET as library networks. They have prepared no union catalogues. MALIBNET has also not prepared union catalogue, which is a must for resource sharing. DELNET, on the other hand, has made considerable progress. More than one hundred and sixty six libraries have joined DELNET as institutional members. The database have increased from one in 1995 to 12 in 1997 with an average increase of about 160 percent in the size of data from 1996 to 1997 and 138 per cent from 1995 to 1996, quoted by Seth and Others (1995). There are various other resource sharing networks have been observed at local, regional, national in our country like- NICMET, INDONET, I-NET, SIRNET, ERNET etc. This has revolutionized not only the information needs of the users but also the role of the library professionals. Librarians are working towards maximum utilization of resources available and in this context we are thinking of networking all the academic libraries of Orissa. The purposes are-

- Facilitating users to have better access to library holdings or services.
- Positive effects on library budget in term of cost, or more services at lesser cost.
- Exchanging of resources for more utilization.
- Enable the users to be more aware regarding the resources not available in their own library.
- For speedy delivery of document to the needful users.
For better cooperation among libraries.
For computerized union database.
For maximizing user satisfaction.
Linking with other library system and services.

5.1 FACTORS INFLUENCING NETWORKING THE LIBRARIES OF ORISSA

The effectiveness of library services depends on the ability of librarians to provide quick delivery of documents requested by users either from physical stock or through networks. The electronics resource sharing is often mentioned, as effective way for meeting the users demand. In order to make the most effective use of the library and information resources, the nature, extent interrelationship and location of the resources must be clearly identified by the users. Libraries of the autonomous colleges and universities of Orissa do not exist in an information vacuum, but are part of a growing information network. The major findings from the evaluation of the libraries under the present study envisage that the need for cooperation in view of the inadequate and uneven availability of library resources among these libraries can be possible, according to Seth & Others (1997). Findings of the present study also indicate that there is an interest in library cooperation among the academic libraries of Orissa. It is also felt that the development of a need-based centralized library information network system among the libraries of the autonomous colleges and universities of the state is essential for the overall development of the academic community of Orissa. A Conference on Information Technology (IT) was held at Utkal University, Vanivihar from December 21st to 23rd, 1998 for development of IT in Orissa and took an important decisions for formation of a IT society called 'Orissa Information Technology Society' (OITS) to facilitate growth and development of IT activity in Orissa. Various IT professionals of OSA suggested for helping some institutions to update their information base in IT. However, we consider the IT scenario of Orissa now is most appropriate to make the libraries fully automated for the development of education and different information needs. In this regard government of Orissa has adopted Orissa Information Technology Policies (ITP) in educational sector as stated by Parida (2000). We are also supporting for the following bases-
1. One of the nicest things that have happened regarding IT training in Orissa is the establishment of 'Orissa Centre for IBM Software' by IBM in collaboration with OSEDC. They offer a number of very structured courses with faculty training, instruction methodology as well as certification being decided by IBM. The original course materials are developed by IBM, IIT Kanpur, Lotus Corporation and Catapult Inc. and they shall update the same when needed. The infrastructure facilities including Library, Software, Internet access or Computer hardware and networking will be the same as anywhere else, and much better than whatever can be available elsewhere in Bhubaneswar in the field of IT.

2. The programme of Government of Orissa to have IIIT by the help of IIIT at Hyderabad is being processed. This will need an investment of about ten times of what was needed for item above, but the attitude of Government of Orissa is very positive regarding the same. Government has planned to open honours in Computer Science in automated colleges at the B.Sc. level from the next session. These are Khallikot, BJB, Rama Devi, Ravenshaw, Rourkela, and GM College. The faculties are getting trained by OCAC. OCAC has been giving training to Computer users or professionals from time to time as the need arises, depending on its available resources.

3. Different Computer courses/trainings are also expanding in Orissa by Private computer farms. However almost all these institutions are trying to do the best they can, because of heavy competition, and are making their own arrangements to get experts as well as get their own people trained. Silicon, SATYAM, and INFOSYS, are high-end company of computer professionals with social awareness programmes, has now a branch at Bhubaneswar with export market mostly outside India. They are often running various programmes on computer learning for the students.

4. At present there are different Internet Service Providers in Orissa working successfully like; NIC, OCAC, VSNL and STPI. STPI provides this facility to software entrepreneurs as well as research establishments. Infosys, Institute of Physics and RRL are using Internet connection from them. NIC (National Informatics Centre) at Bhubaneswar is primarily meant for Government
organisations. However, it also extends service for Internet to Universities and educational and engineering establishments, as well as semi-Government organisations. It has the advantage of there being about sixteen-antenna spread all over Orissa, so that with local telephone linkage one can subscribe to Internet services at the district level. OCAC provides Internet service (shell account with TCP/IP) under ERNET. It also has some antennae outside Bhubaneswar, and hopes to expand its activities. Now VSNL in Bhubaneswar is going ahead of all in this regard by DOE and DOT of Government of India.

Thus, in order to permit the libraries to join together to share their library and information resources for the growing demands and requirements of the present time, government of Orissa and department of education should come forward.

5.2 WHY NETWORKING IN ACADEMIC LIBRARIES OF ORISSA

Orissa is a backward state among the other states of the county. It has various limitations for its overall developments. It can't effort special budget for higher academic libraries. The findings of the study suggested that that there are various problems with the educational institutions of Orissa (chapter-III &IV), which needs self sufficient in there own sphere, therefore, there is a growing demand for the followings-

➢ To create awareness among and draw cooperation from the authorities.
➢ To reduce or stagnate the budget provisions.
➢ To increase reliance or demands on information.
➢ To promote resources sharing among the academic libraries of Orissa by collecting storing disseminating various information for the user.
➢ To coordinate efforts for suitable collection development and reduce duplicating of document in the academic institutes of Orissa.
➢ To enable the user to acquire the needful material not available in there own library from other libraries.
➢ To establish a referral center for maintaining a central on-line union catalogue of the participating libraries.
➢ To develop a bibliographic databases of libraries collections of all the academic libraries for search and accessing
➢ To possess and maintain e-library or automated library for easy and fast communication of information.

➢ To evolve standards and uniform guidelines in techniques, methods, procedures, and services among coordinating libraries.

➢ To establish communication linkages at national and international levels among the various libraries for exchange of information.

➢ To create a database of projects, specialists, consultants and institutes for providing online information services.

➢ To ensure effective bibliographic control of the literature in the areas.

➢ To maximize user satisfaction.

➢ To take initiative for promotion of academic research, development and innovation of information technology in educational field.

The other factors influencing networking the libraries of Orissa could be:

➢ For making the libraries to look at alternative ways of improving and extending library resources.

➢ For combating existing barriers on cooperative library & information network.

➢ For making the existing library resources readily accessible among the members and other interested parties.

➢ For delivery of documents at a cheaper rate and faster speed.

➢ For standardizing the activities of libraries among academic institution in Orissa.

➢ For reducing duplicating of collection building.

➢ For innovation and to modernize traditional library operations.

➢ For increasing reliance or demands on information.

➢ For more user-friendly ways of accessing information.

➢ For assigning new managerial roles to libraries and information centers.

➢ For supply of information in bibliographic, textual form and multi-media form.
5.3 WHAT ARE THE REQUIREMENTS

On the basis of the above need dimensions, it is highly necessitated to have a network based academic library system in the state. The below mentioned are essential for networking of academic libraries in Orissa.

- Firstly, to discuss with the government authority about the project in briefly.
- Financial and moral support from State Government, UGC, INFLIBNET and other external agencies
- Participant libraries (node) should have willingness and commitment to share their data.
- Participant libraries to have standardized computer hardware and software with telecommunication facilities.
- Selection of proper networking hardware and software with servicing guarantee/warrantee from the reputed vender/suppliers within the local areas, keeping in mind with future change/development of the network
- Installation, loading and configuring of the software and hardware may be done with experts from the branded suppliers/engineers.
- Proper training of own staff members and end user for effective use of electronics media.
- Provision for adequate photocopying, scanners, barcode and other electronics equipments for effective document delivery.
- A computerized database of bibliographical records of library materials is to be created in each of the participating libraries.
- A computerized union catalogue is also to be developed to provide a broad perspective about information resources available in various libraries in the network.
- A set of bibliographical standards for the participating libraries is required to ensure compatibility.
- Creation of bibliographical records in network environment requires the adoption of uniform standards by participating libraries.
- Cooperative acquisition and collection development
- Lending codes and coordination policies to be formulated among libraries.
- Online updating of collection and interaction.
Above all, a commitment from the management to provide such facilities and appropriate budget allocation for installation and operation expenses.

5.4 THE PROPOSED NETWORK

The proposed network model (fig.5.2) is a part of centralized co-coordinative information network among the academic libraries, with decentralized services in the state of Orissa. The objective is to eliminate duplication in acquisitions to the extent it is possible. Further, the member libraries undertake to give services such as information access and document delivery. This model leads to the concept of centralized development of collection and also to decentralized system of giving services. The individual libraries, participating in the programme, determine their level of support to the programme for building the shared resources. The higher their budget, the higher is their support. The geographical area of co-operation could confine to the state of Orissa.

Before proceeding further regarding the network model, it is better to review different types of network models, working in local, national and international basis. A Network in twin city of Orissa was proposed by Parida (2002) to orient the existing library professionals in computer application in different library operations. A proposed network of libraries in Bhubaneswar was proposed by Seth & Others (1997). Some popular types of network models are given below:

Model Type 1. Centralized Collection Development and Services at National, or Regional Level Resources: acquired centrally and stored at a single site. Funding: Contribution by Participating libraries. Grants are also sought from government and private agencies. E.g. National Lending Library, UK

Model Type 2. Centralized Collection Development and Services By Subject Resources: Subjects specific collection of documentary resources. Acquired centrally and stored at a single site City, region, or country may limit the geographic distribution of libraries. Funding: Marketing of services and grants from the government and private agencies. E.g. National Science Library at INSDOC, New Delhi
Model Type 3. Centralized Collection Development at Organizational Level Resources:
Libraries belonging to a single bigger organization collaborate. The shared collection is acquired centrally at a single site. Funding: Organization backing the Library provides funds. The participating libraries may also contribute towards the central funds CSIR, DRDO, DOE, and ISRO etc.

Model Type 4. Coordinated Collection Development at Institutional Level Resources:
Eliminates duplications. Serves at the level of participating libraries. The geographical area of cooperation could confine to a city, region, a state or country. Funding: The individual libraries determine their level of support. The higher their budget the higher their support. User libraries pay for the services they avail of. DELNET, BONET, MALIBNET and INFLIBNET etc.

Among the above types of model, type -4 is most popular and fit for coordinated collection development at academic institutional level. A brief review of this type of the latest trend on the national network needs to be brought in order. Before proceeding for it we need the help of following national networks like :INFLIBNET, UGCNET and ERNET. Therefore, it is essential to clarify their objectives and functions.

ERNET India, an autonomous society under Ministry of Information Technology, is providing Internet access to education and research community in the country for over 10 years. ERNET is a nationwide terrestrial and satellite network with points of presence located in major cities. ERNET backbone is being upgraded to cater for growing bandwidth requirements and the satellite network is being expanded to offer Internet access in remote area. R&D and training are also integral parts of ERNET activities. In fact the recently started UGCNET is the brainchild of the older ERNET India.

UGCNET features an open IP platform deploying technologies like IP based multicast and IP spoofing and internet technologies that provide interactive education on PC or TV enabling online response through open systems internet architecture for variety of applications carrying real time audio, video and data.
INFLIBNET is a major programme of the UGC initiated in 1991 with its Head quarters located at Gujarat Univ. campus, Ahmedabad. The programme is directed towards modernization of libraries and information centers, and establishment of a mechanism for information transfer and access, to support scholarship, learning and academic pursuits. It is also aimed at establishing a national network of libraries and information centers in Universities, institutions of higher learning and R&D institutions in India. It is basically a cooperative endeavor in resource development, sharing and utilization at national level. Its major activities include library automation, software development, standardization, digitalization, human resource development and nonetheless the development of union databases. Till now, 142 universities have been given grants for the automation purpose. As a part of essential requirement of skilled human resources at each university certain training programmes have been initiated like Computer Applications to Libraries and Information Services (CALIS), Workshop on Automation and Networking of University Libraries under INFLIBNET Programme (WANLIP), Regional training programme in library automation (IRTPL) and Convention for Automation of Libraries in Education and Research Institute (CALIBER).

Thus, as per the above national networks standard, Orissa shall form one of the regions or zones for its linking with them. Accordingly, a High Level Committee (HLC) will be formed by authorities from UGC, INFLIBNET, ERNET, Dept. of IT, NIC Regional Centre, Minister of Education and SC/ST Welfare Dept., Directorate of Higher Education and Network Administrator of the proposed network. All the heads of college and universities libraries of Orissa proposed under this network will represent the core committee to aid and advice, activate, implement and review the network policy of its own. A coordinator may be appointed to serve as the chief administrative and planning officers for inter library cooperative programmes at Bhubaneswar (HQ). The Central Management Committee (CMC) may also consist of all the districts collector, regional directors of education - Baleswar, Bhadrak, Cuttack, Dhenkanal, Gajapati, Ganjam, Jajpur, Khorda, Maurabhanja, Puri and Sambalpur and institute head, chief librarian of concerned institute, Govt. nominee, not below the rank of deputy secretary. Minister of education, Govt. of Orissa or minister of SC/ST may be the chairman of the committee. The CMC may select the coordinator and Local Committee, who should be responsible
for the implementation of all its activities. There may be various special committees on special purposes. The network coordinator is to serve as network administrator/coordinator of the CMC and perform the following duties:

- To implement specific programmes under the direction of the CMC.
- To develop and present recommendations to the CMC for additional cooperative programmes and modifications.
- To maintain adequate communications with the members of the network.
- To represent the network to the various professional communities.
- To collect compile and present statistical information and to prepare annual budgets, annual reports.

5.5 DIFFERENT ANGLES OF THE PROPOSED NETWORK

The execution of any action requires careful planning. Effective sharing require willingness to cooperate by all institution involve in the group. The proposed network should function in such a way that all the universities and colleges of the state would act as local operating centers (nodes) or information gateway. The information gateways may often be accessible as menu driven basis in an online catalog. Catalogs and other electronics links should reflect the diverse needs of libraries and users and should be accessible from remote locations via the INTERNET. The proposed network will be work with the funds and facilities support from UGC New Delhi, and education department government of Orissa, and act as a vital link between the union government and state government with its various institutions in three different stages:

Stage-I- Inter-linking between National & International Institute/University/Organisation in the field of Education. INFLIBNET will to act as a central (Hub) co-coordinator for all networking activities including ERNET, UGC NET and the proposed OALNET. Central Operating Hub of the proposed OALNET will be remain under Dept. of Education Govt. of Orissa, and supposed to get all information from the INFLIBNET (National Hub).

Stage-II- The Central Operating Hub (Operating Center) accumulates all the information of local, regional, national and international level and disseminated to its
Local Node at different Districts of Orissa and will act as the gateway of all communications. The different colleges and universities in the district will receive their links from district nodes from directly or indirectly through Central Hub. Then, this links can be extended further up to Village institutions or club or post offices, but the decision will be taken by the CSP. To make this process of information dissemination more effective and useful, the two-way communication should be encouraged.

Stage-III- After the networking with international, national, regional colleges/university, situated at regional level will disseminate information at the local level institutions, which also includes Non-Govt. Organization (private). The research library resources systems should play a leadership role, on behalf of libraries and diverse scientists and library users, in negotiating and developing agreement for licenses to access databases of OALNET. In this stage the network will be linked with other technical institutions in the state and private colleges existing at other district headquarters, subsequently at the fourth stage, they will be linked with other sub divisional headquarter and Village level educational institutes in the state. However, colleges in the state of Orissa are basically funded by state govt. will be brought under the larger national interest of UGC facilitated ERNET and INFLIBNET. The various information gateways in OALNET will be act under the aid and advice of different committees: High Level Committee (HLC), Central Management Committee (CMC), and Local Committees at Institution (LCI) and Committees for Special Purpose (CSP). The brief objective and functions of different committees are given in Table No-5.1.

Two to three years after the implementation of the proposed network plan, the Central Management Committee shall take appropriate feedback from the member libraries and other allied library systems to review and evaluate the administrative and technological progress made, based upon this plan and to decide upon the appropriate step needed to continue to extend nationwide library technology planning in respect of other allied institutions. Every year there will be at least two meetings of the CMC one at January and other on July.

In order to create a viable framework for the activities of the network, it is proposed that a written agreement or by laws should be drafted and signed by the participating libraries. A written agreement simply may list the activities while bylaws
may contain more detail, stating the purpose of the network and enumerating the roles and functions of the officers and rules for membership. Various working committees on cooperative services should be established and made responsible for planning and presenting proposals for cooperative action in the specific functional areas. It is expected that the proposed organizational structure will be an efficient and effective model for the academic libraries of the state as well as nation.

Table –5.1: Different Committees with their Functions

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<th>Levels</th>
<th>Different Committees and its Organisations</th>
<th>Objectives</th>
<th>Function</th>
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| National     | **HIGH LEVEL COMMITTEE**                  | The overall development in connection with resource sharing through networking | ➤ Co-ordinate
                                                   | 1. Chairman/VC-UGC                                                       | ➤ Development               |
                                                   | 2. Chairman/VC- INFLIBNET                                                   | ➤ Fund Rising                |
                                                   | 3. CMD/MD-INFLIBNET                                                        | ➤ Supervise                  |
                                                   | 4. Director, Depts. IT, Govt. of India                                      | ➤ Administrate               |
                                                   | 5. CMD/MD-ERNET                                                            |                              |
                                                   | 6. Minister of Education                                                    |                              |
                                                   | 7. Director of Higher Education                                             |                              |
                                                   | 8. CMD-OALNET                                                              |                              |
                                                   | 9. Network Administrator                                                   |                              |
| State        | **CENTRAL MANAGEMENT COMMITTEE**         | To carry out the effective development and function of the OALNET           | ➤ Planning/Co-ordinate
                                                   | 1. Minister of Education                                                   | ➤ Budgeting/Fund rising      |
                                                   | 2. Director of Higher Education                                             | ➤ Developing                |
                                                   | 3. CMD-OALNET                                                              | ➤ Supervise                  |
                                                   | 4. Network Administrator                                                   | ➤ Administrate /Maintain     |
                                                   | 5. SCST Development Department                                              | ➤ Police Making              |
                                                   | 6. Director-SCSTR&TI                                                        | ➤ Database                   |
                                                   | 7. Concerned District Collectors                                            | ➤ Making                     |
                                                   | 8. Institution Head/Authority                                               |                              |
                                                   | 9. Chief Librarian of Concerned Lib.                                       |                              |
| Institutional| **LOCAL COMMITTEE AT INSTITUTION**       | To fulfill the larger interest of the institution as well as resource sharing. | ➤ Cooperating/Sharing
                                                   | 1. Institution Head/Authority                                               | ➤ Planning/Co-coordinating   |
                                                   | 2. All the Department Heads                                                | ➤ Collection                 |
                                                   | 3. Chief Librarian                                                         | ➤ Developing                 |
                                                   | 4. Network Manager/Engr                                                    | ➤ Man Power Training         |
                                                   |                                                                          | ➤ Users Education             |
                                                   |                                                                          | ➤ Electronics Publishing     |
                                                   |                                                                          | ➤ Administrate/Maintain       |
                                                   |                                                                          | ➤ Inter Lib. Loan/ DD Service  |


5.5.1 Objectives

A Network in the first instance is envisaged as a physical structure of links among the libraries established by means of computer and telecommunication links. The primary purpose of OALNET is to foster more effective inter-institutional cooperation in the state, through sharing of resources and information, providing a forum for the exchange of ideas on issues related to libraries/information centers and facilitating and supporting leadership in our profession.

Resources sharing are based on the concept that the collective strength and effectiveness of group of libraries is greater than that of its member taken individually and then added up. The major objectives of the proposed network are as follows:

- To promote the sharing of the resources of the membership through traditional and non-traditional library activities as well as other activities deemed appropriate by the CMC.
- To encourage the development of library and information services and research at member institutions.
- To disseminate current knowledge about library and information sciences resources and other technological advancements.
- To seek solutions to mutual problems.
- To cooperate with other networks and similar organizations, as appropriate.
- To pursue grant, gift, and other funding sources to further support the OALNET services.
- To welcome additional academic library members as appropriate.
❖ To have motivation and clear aims to provide efficient services to the users of their institutions as well as other users.
❖ To establish communication linkages according to certain rules or network protocols at local, national and international levels among the libraries. By which the sender, transmitter and recipient are clearly identified with the actual content of the message.
❖ To ensure effective bibliographic control of the literature in the areas.
❖ To facilitate and promote document delivery and library lending services.
❖ To permit and share the library resources with other institutional members reciprocally.
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❖ To facilitate and promote document delivery and library lending services.
❖ To permit and share the library resources with other institutional members reciprocally.
❖ To maximize the utilization of existing information resources by sharing.
❖ To maximize user satisfaction.
❖ To share database services like: bibliographic (catalogue), textual (abstract, index), full text (complete article, books) and conceptual (directory etc).
❖ To collect, store, organize and retrieve information on all aspects of academic requirements of the user.

### 5.5.2 Membership

There shall be two classes of membership: A. Classes (Full) and B. Classes (Affiliate) members.

1 Full membership shall be limited to the libraries of the all-autonomous colleges and universities of Orissa. Representatives of these libraries shall be entitled to participate fully in policy-making decisions of the CMC.
2 Affiliate membership shall be open to other academic libraries that share the stated objectives. Representatives of these libraries shall not participate in making decisions of the CMC. Members of affiliate libraries may participate fully in the programs, activities and ad hoc committees of the OALNET.
3 Applications for membership shall be made in a form and on such terms as determined by the CMC.
4 Requests for changes in classes of membership shall be given due consideration by the CMC, when received in writing by the January meeting and shall become effective on July 1.
5 Requests for membership withdrawal shall be given due consideration by the CMC, when received in writing by the January meeting and shall become effective on 1st July.

5.5.3 Important Features

On the basis of the above objectives some most important features of the proposed need based information network model is presented below:

5.5.3.1 New Dimensions to be undertaken

The concept of library network now became easy to transmit required information to any part of the world almost simultaneously, at a very low cost without any difficulty and that also without parting with the documents physically. It is for these reasons that computerized networking continues to attract the attention of libraries and information center. Now, the conventional method in the libraries cannot be continued in future due to its cost, growth, space, time and labour, because, most of the document are published in electronics form and can be accessible through network. Through electronic means the user also get a vast area of interest in his subject field. Therefore, considering the existing infrastructure facilities, financial recourses, manpower and technical aspects the implementation of the proposed network model can be made by introducing computer culture in the academic libraries and setting up of networking infrastructure in the libraries for the proposed model and users. In order to build the network effective and efficient the following points should be undertaken:

- Team spirit
- Design and develop appropriate networking service field
- To maintain network standard
- Data processing and database building:
- Cooperative acquisition of resources
- Centralized Union Cataloguing Decentralized service
- Inter-library lone and document delivery services
- Users need satisfaction
- Online interaction
5.5.3.2 Cooperative Acquisition & Collection Development

Since, the participating libraries are coming under the network system, the first priority is to make a cooperative acquisition policy statement for various activities of purchasing and building library collections. Which can be serving as guidance for the network. Under the policy of cooperative acquisition, a scheme of combined acquisition should be adopted by participating libraries with the objective in view that all the participating libraries should have access to all the material that is acquired under the scheme. The second priority is to formulate a written collection development policy for the need based library and information system as a tool, which should enable the librarians of participating libraries:

- To work with greater consistency towards achieving a target collections within a limited funds with more wisely.
- To communicate the users, authorities and other as to the scope and nature of existing collections and future plans.
- To define the library's goal, objectives and its various needs with limitations of the existing resources.
- Knowing the users and their needs of present and future.
- Careful analysis of the existing collection and determining its strength and weakness.

5.5.3.3 Database of Union Catalogue

The exchange of bibliographic data or information can occur in a number of ways, one of which is participation in a union catalogue. So, the union catalogs should be most comprehensive and standardize. This catalogues form one of the main building block for the resource sharing among the libraries to study the resources available, which can make convenient for interlibrary loan, cooperative cataloguing, cooperative preservation and collection development activities. All the participating libraries should maintain a uniform code of conduct or standard and provide access to their other bibliographic records for users from both inside and outside the library.

The inclusion of all records and holding of the library in the union catalogs is necessary to maximize the benefits of resource sharing for library users and among the
participating libraries. Libraries that are just getting started with retrospective conversion should develop plans to complete this process in a timely fashion. Cataloguing of library materials is a very time-consuming and arduous process for any library, therefore centralized cataloguing is very important for each library. It eliminate duplicating new documents and puts the document on the shelve sooner. It is proposed that at its mature stage of the implementation of the model each member library should first compile their own list of holdings under the leadership of their respective local operating center. The local operating center should take the advantage of this union catalogue and also cooperate in updating the union catalogue.

5.5.3.4 Inter Library Loan (ILL) and Document Delivery (DD)

The activity of inter library loan include borrowing and lending books and other materials between libraries and permitting faculties and students to use the library of other. The finding of the survey reveals that in higher academic libraries there is no inter library loan system, even through this activity was recognized as a device of conventional resource sharing. This is due to lack of clear guidelines or state library act or lack of any cooperative agreement for inters library loan system. But, this can be more effectively possible by the proposed network. The effectiveness of ILL depends on:

- Commitment to share
- Linking with other automated libraries or networks
- Computerized union databases of the library
- Electronics publishing
- A clear-cut ILL code

To provide efficient ILL service and reduce the processing cost, the libraries should regularly examine ILL policies and delivery mechanisms in light of expanded availability of electronics information. The network system should be informed about the ILL protocol, to understand the benefit it can provide and should have ILL protocol compliant software for its feasibility and feedback. The protocol should be internationally approved for Internet browsing. Generally the protocol is based on client/server technology, in which the architecture is the requesting machine and the server is the supplying machine. The client and server are connected with one another via
a Local Area Networked (LAN) or Wide Area Network (WAN). The client contains the user interface and may perform some or all of the application processing while the server stores information and responds to queries from the client.

There should be ILL code agreed by the participant libraries. Each library will assume responsibility for borrowed material subscribing to borrowing privileges established by the inter library loan code. The inter library loan code is very important because it would be made possible to know, the types of materials to be included and excluded for the same. For any types of irregularity or violation of the clientele to be served, the core committee will take decisions. The following pre-requisites are necessary for formulation of an ILL Code.

- A uniform code applicable for all the member libraries should be adapted faithfully.
- In each university and autonomous colleges there should be a Local Lending Centre (LLC), where all the Govt./Private colleges within 50 KM can have the facilities
- The LLC should also be responsible for compilation of union databases.
- All the SC/ST student, researchers and faculties within the area can gate high preference for the same.
- The LLC should have sufficient trained professionals, sufficient infrastructure in all respects.
- It should have photocopying machine
- A standard request forms should be followed in all libraries and LLC.

5.5.3.5 Manpower Training

The achievement of the objective of the network, every library becomes a center of technology, information for its community of users is important to the overall success of the proposed network. However, sophisticated networks and electronic resources are no value unless people know how to use them. Training is required in order to use, and benefit fully from, services provided by electronic doorway libraries. For many years library personnel and users could peruse the card catalog and find books and information. But with the introduction of technology and the Internet, access to library information is undergoing dramatic changes. These changes, while improving and
expanding access to information, alter the procedures that library personnel and users traditionally have followed to find resources. Libraries need to provide the training required for people to work in and use electronically sophisticated libraries. Training will vary based upon the needs of the individual library. Factors that will influence needs are the library’s mission, diversity of its users, and size of staff and collection. Although there is no definitive training program that will meet the needs of all libraries. Certain elements should be part of every library-training plan. At a minimum, these include:

- Decide training objectives
- Identification of trainees
- Descriptions of training and its cost.

Libraries and library systems should regularly assess library personnel and user training needs. Assessments of training needs should take into account library personnel and users who are from diverse cultures, use different learning styles, and or are visually or physically challenged. There are various training programs on computer application to library: computer hardware or software, tale-communication library, library automation, networking, Internet browsing, training on different library software etc., but the local committee will decide for this. Once the Library personnel have been trained, the electronics libraries should also provide training for its user regarding the various services, its operation, limitations etc. As is the case of training of library personnel, training of users should focus on how to obtain needed information and resources including use of the Internet.

5.5.3.6 Educating/Publicizing the Information Access

The success and the aim of any resource-sharing project via network depend upon its proper implementation and wide publicization among the users. It should be the duty of any library professionals to publicize its different services available and benefit obtained from it. The trained manpower in the library should educate its other subordinate and also to the users on various angles of the electronics machinery and its different applications, limitations etc. Whenever users contact the library personally or through remote access they may interact with any or all the formats in the library while seeking information. They may also encounter library staff to satisfy their information needs and way to find from the electronics means. Therefore, the user must know which
source (print or electronics) to access and how to access. It should be clearly publicized in a simple and convenient step-by-step process. The information access process assumes an interaction cycle consisting of query specification, receipt and examination of retrieved result, and then either stopping or reformulating the query until a desired result is abstained. The library staff, also highlight that the user’s information need is static and the information seeking process refines until the query retrieves the documents relevant to the original information need. Further, they should describe a sample and popular interaction model for the entire information access process.

5.5.3.7 Online Network

The success of any cooperative network system depends on effective communication system. Mail, Telephone, telegraphs, teleprompt, telex, and facsimile transmission, satellite and computer technology are various means for transmission. Generally, it is pointed out that mail service is too slow, telegraph is too expensive, telephone message can be misinterpreted and must be supplemented by written records, and teletype/telex information transmits information rapidly and eliminates possible errors. Facsimile transmissions the rapid transmission of printed pages from one points to another using electronic devices. Computer communication via modern connections has the greatest impact on inter lending system. However, recent developments in communication technology and computer technology have made the libraries easier to extend cooperation among them. Now, every library can provide access via the internet both to its own information resources in a local online catalog and/or union or virtual catalog and to the cast array of information resources available elsewhere on the Internet. Internet is an international network of networks connected by TCP/IP protocols. The Internet may be used for remote login, electronic mail, news, file transfer, and other services. Use of the internet has increased dramatically in recent years due to the widespread availability of graphical user interfaces (CUIs) and the World Wide Web (WWW).

In view of the rapidly changing face of the Indian telecommunication industry in respect of the existing telephone, telegraphs and telex services as well as the introduction of digital technology in switching and transmission systems among these libraries should undertake to evolve a computerized networking system that would be connected through satellite links, microwave links etc., on the similar lines of DELNET, CALIBNET,
MAUOBNET, BONET HYLIBNET and other existing proposed library and information networks in the country etc. The UGS through its INFLIBENT AND ERNET of Ministry of information Technology should play a leadership role to help for coordinate digitization among libraries and other institutions in order to: broad access, digitized records, avoid duplications and much better information services.

5.6 BARRIERS TO RESOURCE SHARING NETWORK

Hybrid media is going to be fashion of libraries of future, yet there is uncertainty with this every time. For a long times print media has been tested and verified for its access and stability in the world and replaced by electronics media, but numbers of books published in the world is not going to down these days also. Thus, both have their positive and negative aspects of use. However, most of the developed countries are using electronics information through networking themselves, in India these trends are also continuing in the metropolitan cities since last two decade. It is common assumption that larger libraries can be net lender and smaller libraries can be net borrower. Among the obstacles that have been inhibiting smooth networking are: infrastructure cost, feeling of self-sufficiency, skilled manpower, loss of autonomy, traditional/institutional barriers, lack of institutional support, lack of determination and dedication among librarians and proper cooperation among different libraries are major problems on the way to resource sharing. These problems can be overcome, if we can judge its benefit aspects.

5.7 CONCLUDING OBSERVATIONS

The researcher is an user of information technology in the profession of library and information field, since last 15 years, but always find pleasure in what other more competent and responsible people in IT achieve. I strongly feel that IT development in Orissa can be fast; for this purpose we should do what we can individually, and get together for a few things when we feel it necessary, and not a waste of our own or other people's time. I feel here Govt. of Orissa and different authority of the concerned institute libraries may have a very positive role to play. The other non -government institute may join with this cooperative network immediately if they so desire. They may watch and wait for its implementation and effectiveness. A Conference on Information Technology was held at Utkal University, Vanivihar from December 21st to December
23rd, 1998 for development of IT in Orissa and took an important decisions for formation of a IT society called 'Orissa Information Technology Society' (OITS) to facilitate growth and development of IT activity in Orissa. IT professionals of OSA also given words for helping some institutions to update their information base in IT.

It can be concluded that in a backword state like Orissa, steps are being taken to disseminate knowledge in various ways. Like passing of Orissa Public Library Act – 2001, application of IT in the field of education, introducing computers in the academic libraries and formation of Orissa Information Technology Society, availability of different library software and hardware in the open market etc. The capacity is being built up with the help of Government of Orissa, UGC and international funding agencies for this purpose. With the explosion of knowledge and constraints on the financial resources in the state, the resource sharing networking has emerged as an important alternative for the department of education government of Orissa. The information technology has facilitated the resource sharing among the institutions located in different districts of the state. It enables the participating libraries to obtain material from each others may be the list of books, indexes and abstracts of required articles, facsimile copies of required pages or documents, charts, figures, graphs, drawings by using computer terminals attached to a large or very large network system and data bases coupled with visual display units (VDUs) and attached with printing facility. Information can be scanned first on the screen, and if required, relevant information can be obtained in the print form.

Access to information infrastructure, the ability to produce and consume are the determinants of individual 's economic success and social mobility, he may be any kinds of user or may the poorest of the poor in the remote village. There is no limit to gain any types of information any where of the globe by pressing a networked computer key. It is also very interesting, acceptable, easy to use and also convenient among the student, researcher and faculties in the educational institutions of Orissa. Therefore, the proposed network system is the right path in a right time for the state government, the department of education and SC/ST development department to implement conveniently for reducing the illiteracy among SC/ST communities and more helpful to the higher level educational system in Orissa.
Fig. 5.1: DISTRICT WISE LATEST MAP OF ORISSA IN INDIA

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<td>29. Sonapur</td>
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<td>30. Sundergarh</td>
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![District Wise Map of Orissa in India](image-url)
Fig. 5.2: PROPOSED OALNET MODEL

Network Activities

Cooperative Acquisition & Collection Development, Union Catalogue, ILL/DD, Education & Training, and Online Information

Centralised Control, Decentralised Monitoring and Disseminations, Standardisation, Library Automation and HRD