CHAPTER - FIVE

MODEL PLAN FOR RESOURCE SHARING AND NETWORKING IN MADHYA PRADESH

51. PREREQUISITE CONDITION FOR RESOURCE SHARING AND NETWORKING

52. HARDWARE AND SOFTWARE FOR RESOURCE SHARING AND NETWORKING

53. NETWORK ARCHITECTURE

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CHAPTER - FIVE

MODEL PLAN FOR RESOURCE SHARING
AND NETWORKING IN MADHYA PRADESH.

After the detail study of Resources sharing and Networking we can easily carry out a plan for Resourse Sharing & Networking of Public Libraries of Madhya Pradesh. A systematic and foolproof plan we will be discuss in the following parts:-

51. Prerequisites condition for networking of public libraries of Madhya Pradesh

52. Hardware & Software for resourse sharing & networking

53. Network architecher

54. Comunication link

55. Bibliographic standard

56. Centralised & decentralised network
57. Governance

58. Model

51. **PREREQUISITES CONDITIONS FOR NETWORKING OF LIBRARIES OF MADHYA PRADESH:**

Certain conditions are essential for any network and these conditioned are supposed to be materialized before starting a wide Area Network of M.P. city libraries:

- To achieve proper network for M.P. and proper resource sharing in public libraries of M.P. should agree among themselves on some basic condition.

- Automation of all public libraries of M.P. would be necessary for library network so they must automated their libraries before a foolproof network.

- They should agree to share the material they have with other libraries terms and condition of sharing can be spelt out on manual basis.

- There should be agreement on division of all public libraries of M.P. of responsibilities on acquisition keeping in view the types of publication and subject areas.
- There should be an agreement on document description also in all public libraries in the system, agree to follow the same classification scheme and cataloging rules. Shared cataloging will be possible computerization will face less problems and computer-aided access to catalogue creates a case of operation.

- A part from these agreement may become necessary in respect of some details like loan period payment for less of materials etc.

- A financial plan should be prepared of chalk out of each library and complete network system.

52 HARDWARE AND SOFTWARE:

521 HARDWARE -

Library Computer hardware consists mainly of mainframe, mini-computers and micro computer. The difference lies in the capacity of their main and backup memories. The speed of processing data and the number of terminals they can accommodate at a time increase in clip, power is compressing computer size while increasing their power.

A GOOD HARDWARE - Library network hardware is getting reduced in size and cast at one time medium sized library needed a mainframes. Now a mini computers will do laser disk technologies have added on extra dimension. Large bibliographic data bases can now be
accessed even by micro computers and CD-ROM networks have become operational.

A good library network should have -

(a) Minimum hardware redundancy;

(b) Scope for upgradation;

(c) Provision for additional terminals

(d) High computing facilities;

(e) Capacity to get along with the best available software on library networking; and

(f) Compatibility with mini and micro computers to suit all types of libraries.

**Recommended Hardware** -

The hardware for network for Public libraries of Madhya Pradesh must be selected keeping in mind:

- Application Area

- Data Volumes

- Future Growth; and

- Information Processing needs
Network Requirements -

Hardware requirement depend on the function of a network management and maintenance of operations. The nature of participating libraries and distance between them.

Disk space Hinges on -


- On line data base search.

- Maintenance of essential non-bibliographic data bases like these of institution, specialists, projects and users.

- Electronic mail

- Inter Library loan requests

- Document delivery

- Professional contacts

Available Sources in various Libraries -

In selecting hardware and software of a library for network, library holdings play very important part because the major memory covered by the own database and less memory require for information
outflow on inflow routines. The holding of various public libraries of M.P. is given below:

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Name of Library</th>
<th>No. of Reading material (Approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>REGIONAL LIBRARY</strong></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Maulana Azad Regional Library, Bhopal</td>
<td>62438</td>
</tr>
<tr>
<td>2.</td>
<td>Govt.Regional Library, Jabalpur</td>
<td>75000</td>
</tr>
<tr>
<td>3.</td>
<td>Govt. Regional Library Laskar, Gwalior</td>
<td>109212</td>
</tr>
<tr>
<td>4.</td>
<td>Ahilya Kendriya Pustakalya, Indore</td>
<td>35756</td>
</tr>
<tr>
<td>5.</td>
<td>Govt.Regional Library, Rewa</td>
<td>65000</td>
</tr>
<tr>
<td></td>
<td><strong>DISTRICT LIBRARY</strong></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Govt. District Library, Raisen</td>
<td>23801</td>
</tr>
<tr>
<td>2.</td>
<td>Govt. District Library, Rajgarh</td>
<td>18018</td>
</tr>
<tr>
<td>3.</td>
<td>Govt. District Library, Sehore</td>
<td>18406</td>
</tr>
<tr>
<td>4.</td>
<td>Govt. District Library, Vidisha</td>
<td>5680</td>
</tr>
<tr>
<td>5.</td>
<td>Govt. District Library, Tulsinagar Bhopal</td>
<td>14497</td>
</tr>
<tr>
<td>6.</td>
<td>Govt. District Library, Hosangabad</td>
<td>21992</td>
</tr>
<tr>
<td>7.</td>
<td>Govt. District Library, Khandwa</td>
<td>22527</td>
</tr>
<tr>
<td></td>
<td>Govt. District Library, City</td>
<td>Location Code</td>
</tr>
<tr>
<td>---</td>
<td>-------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>8.</td>
<td>Govt. District Library, Betul</td>
<td>16078</td>
</tr>
<tr>
<td>9.</td>
<td>Govt. District Library, Seoni</td>
<td>8260</td>
</tr>
<tr>
<td>10.</td>
<td>Govt. District Library, Chhindwara</td>
<td>12497</td>
</tr>
<tr>
<td>11.</td>
<td>Govt. District Library, Narsinghpur</td>
<td>6134</td>
</tr>
<tr>
<td>12.</td>
<td>Govt. District Library, Balaghat</td>
<td>7580</td>
</tr>
<tr>
<td>13.</td>
<td>Govt. District Library, Mandala</td>
<td>8180</td>
</tr>
<tr>
<td>14.</td>
<td>Govt. District Library, Jabalpur</td>
<td>10790</td>
</tr>
<tr>
<td>15.</td>
<td>Govt. District Library, Sagar</td>
<td>17914</td>
</tr>
<tr>
<td>16.</td>
<td>Govt. District Library, Damoh</td>
<td>5990</td>
</tr>
<tr>
<td>17.</td>
<td>Govt. District Library, Panna</td>
<td>6134</td>
</tr>
<tr>
<td>18.</td>
<td>Govt. District Library, Chhattarpur</td>
<td>7692</td>
</tr>
<tr>
<td>19.</td>
<td>Govt. District Library, Tikamgarh</td>
<td>16906</td>
</tr>
<tr>
<td>20.</td>
<td>Govt. District Library, Raipur</td>
<td>49700</td>
</tr>
<tr>
<td>21.</td>
<td>Govt. District Library, Bilaspur</td>
<td>25263</td>
</tr>
<tr>
<td>22.</td>
<td>Govt. District Library, Raigarh</td>
<td>26430</td>
</tr>
<tr>
<td>23.</td>
<td>Govt. District Library, Bhind</td>
<td>4815</td>
</tr>
<tr>
<td>24.</td>
<td>Govt. District Library, Morena</td>
<td>6413</td>
</tr>
<tr>
<td>25.</td>
<td>Govt. District Library, Shivpuri</td>
<td>8203</td>
</tr>
<tr>
<td>No.</td>
<td>Library Name</td>
<td>Pincode</td>
</tr>
<tr>
<td>-----</td>
<td>--------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>26.</td>
<td>Govt. District Library, Guna</td>
<td>8211</td>
</tr>
<tr>
<td>27.</td>
<td>Govt. District Library, Datia</td>
<td>12549</td>
</tr>
<tr>
<td>28.</td>
<td>Govt. District Library Dabara (Gwalior)</td>
<td>8700</td>
</tr>
<tr>
<td>29.</td>
<td>Govt. District Library, Dewas</td>
<td>8796</td>
</tr>
<tr>
<td>30.</td>
<td>Govt. District Library, Dhar</td>
<td>19600</td>
</tr>
<tr>
<td>31.</td>
<td>Govt. District Library, Khargone</td>
<td>7833</td>
</tr>
<tr>
<td>32.</td>
<td>Govt. District Library, Jhabua</td>
<td>7698</td>
</tr>
<tr>
<td>33.</td>
<td>Govt. District Library, Ujjain</td>
<td>12076</td>
</tr>
<tr>
<td>34.</td>
<td>Govt. District Library, Ratlam</td>
<td>8600</td>
</tr>
<tr>
<td>35.</td>
<td>Govt. District Library, Mandsaur</td>
<td>13496</td>
</tr>
<tr>
<td>36.</td>
<td>Govt. District Library, Shajapur</td>
<td>5767</td>
</tr>
<tr>
<td>37.</td>
<td>Govt. District Library Satna</td>
<td>39680</td>
</tr>
<tr>
<td>38.</td>
<td>Govt. District Library, Sidhi</td>
<td>20333</td>
</tr>
<tr>
<td>39.</td>
<td>Shri Barmendra Govt. District Library, Nagod</td>
<td>1230</td>
</tr>
<tr>
<td></td>
<td>(Satna)</td>
<td></td>
</tr>
<tr>
<td>40.</td>
<td>Govt. District Library Shahdol</td>
<td>19413</td>
</tr>
<tr>
<td>41.</td>
<td>Govt. District Library, Durg</td>
<td>26627</td>
</tr>
<tr>
<td>42.</td>
<td>Govt. District Library, Rajnandgaon</td>
<td>24100</td>
</tr>
</tbody>
</table>
For suggesting a proper hardware and software for the various public Libraries of the M.P., we have to categoriesed the libraries on the basis of the collection, extent of clientele, staff strength, range of services and volume of use, this classification may be:

<table>
<thead>
<tr>
<th>CLASSIFICATION OF LIBRARIES</th>
<th>COLLECTION OF MATERIAL</th>
<th>NUMBER OF LIBRARIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMALL</td>
<td>below 25000</td>
<td>39</td>
</tr>
<tr>
<td>MEDIUM</td>
<td>25000 to 50000</td>
<td>06</td>
</tr>
<tr>
<td>BIG</td>
<td>Above 50000</td>
<td>04</td>
</tr>
</tbody>
</table>

As per above classification of the libraries the hardware and software requirement of the various libraries can be suggest as following:

<table>
<thead>
<tr>
<th>Recom. Hardware</th>
<th>Small</th>
<th>Medium</th>
<th>Big</th>
</tr>
</thead>
<tbody>
<tr>
<td>World length</td>
<td>16</td>
<td>32</td>
<td>32</td>
</tr>
<tr>
<td>Processor speed</td>
<td>-</td>
<td>1.5mips</td>
<td>2 mips</td>
</tr>
<tr>
<td>Memory</td>
<td>4-4.5mb</td>
<td>2mb</td>
<td>4mb</td>
</tr>
<tr>
<td>Disk Space</td>
<td>100-1400</td>
<td>200mb</td>
<td>600mb</td>
</tr>
<tr>
<td>-------------------</td>
<td>----------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>Terminals</td>
<td>(nill)(npl)</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>Dot Matrix Printer Letter Quality</td>
<td>2-3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Printer Cartridge tape</td>
<td>centronics</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Drive</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Telephone line IBM PC compatible</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Voltage stabilizer</td>
<td>PC-AT to mini</td>
<td>PC/XT2</td>
<td>PC-AT/XT4</td>
</tr>
<tr>
<td>Disk controller</td>
<td>SCSI/SMD for yes</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>No. of a synch</td>
<td>some libraries</td>
<td>-</td>
<td>yes</td>
</tr>
<tr>
<td>Floppy drive</td>
<td>Yes</td>
<td>Yes</td>
<td>SCSI/SMD</td>
</tr>
<tr>
<td>Separate earthing</td>
<td>-</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Satellite earth station</td>
<td>-</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Communication Interface</td>
<td>yes</td>
<td>yes</td>
<td>1</td>
</tr>
<tr>
<td>Fax</td>
<td>-</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
53. NETWORK ARCHITECTURE:

A network architecture is the pattern that network components make. It comprises the hardware architecture distributed applications architecture. Application integration architecture, communication architecture etc. Each architecture contributes to the development of an integrated environment. The placement of servers users, clients hosts and communications hardware in suitable patterns gives birth to a functional network architecture.

531. ENVIRONMENT AND ISSUES -

Library network function in that comprise participating institutions, users network service, growing technological sophistication, technical hardware and software manpower and communication facilities. There variables perform well. The network not only runs efficiently but also it becomes useful. According to Samuel Server a library network should have defined goals and managers should prepare a frame work based on a detailed list of specifications.

532. SUGGESTIONS -

- Take note of variations existing in every partnership.

- Allow inclusion of new partners without undue sham.

- Be able to meet new requirements without undue description.
- Be sure of the public the network is going to serve.

- Anticipate the services they will demand.

- Find out the extent to which they will advantage of the facilities/offerings.

- Devise way to keep the clientele satisfied.

- Since the members of library network are first participants and then clients assessments must be made of the contributions expected from users and whether the offerings will be of use to other members.

Besides the selection of institution the planning would involve preparation of a list of objectives to be achieved in phases. The levels of services to be offered staff training, creation of data base etc. The growth of a network even through slow should be measurable and reports should be made on perpetuating its growth.

54. **COMMUNICATION LINKS:**

Libraries and their resources scattered the worked over are coming closer by the day. Libraries in the past used to communicate with each other through mail or messengers, later the telephone and teleprinters brought them still closer. Communication hence taken a leap since. Networked libraries make use of electronic-mail. The files and data bases
searched by them can be searched mutually or transferred from one library to another.

For communication between one library computer and another located with cities of Madhya Pradesh. Electronic channels are necessary. These channels are governed by protocols languages and procedures for storage, communication and retrieval during the past three decades vanishes manufactures and institutions have created different kinds of protocols, languages and procedures. For compatibility there is a need for adhering to uniform technical standards.

541 IMPACT OF DISTANCE -

Distance between libraries their number and frequency of use of communication channels determine the speed of whole data are transmitted on the basis of distance. Libraries are classified into three categories; but here use only or applicable wide are network for Madhya Pradesh.

It may be important to get an override of the different transmission and receiving equipment that transform the spoken or written language or visual into electronic signals transmit them through telecommunication media and reconveret them into original form. The whole process is done in different stages. These comprise telephone, telefax, teleprinter, and modems. A telephone is a familiar equipment used for verbal communication as it transforms communications into electronic signals and on the receiving end. The ear piece of the telephone converts it
back into communication. A pair of wires used to connect two persons through a telephone exchange can also be used for banking teleprinters and telephones.

A telephone is used for sending or receiving messages. It can receive message in a standard script even when unattended.

Modems are used for converting digital data into the analog mode for transmission through telephone lines and for reconversion at the receiving end.

Modems are being increasingly used for data transmission. Since computers operate in the digital mode, modems are of two types:

(a) Synchronous

(b) Asynchronous

In Synchronous modems bits of information are transmitted continuously and used with Synchronous terminals while as in Asynchronous modems information is sent at random interval with start and stop bits for each batch of information. They are with Asynchronous terminals.

<table>
<thead>
<tr>
<th>DATA TRANSMISSION RATE</th>
<th>DATA RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISTANCE</td>
<td></td>
</tr>
<tr>
<td>LAN &lt; 10 KMS.</td>
<td>10 M Bps</td>
</tr>
</tbody>
</table>
MAN 10 - 100 KMS. | 1 M Bps
---|---
WAN 100 - 1000 KMS. | 100 K Bps

542. CHANNELS OF COMMUNICATIONS -

The following channels are being used for WAN:

Physical Wiring - Telephone cables, fiber optics or coaxial cable.

**Coaxial Cables** -

In a Coaxial Cable an insulated inner wire is covered by a conductor in a protecting sheath. It enables high frequency transmission of analog and digital signals that need a wide band.

**Optic Fibers** -

Optic Fibers are then flexible glass or a glass fiber through which light is transmitted. An optical fiber acts as a wave guide that changes electrical signals into light signals. At the receiving and a photodiode does the reconversion.

**Satellite Communication** -

A Satellite placed in a goes synchronous station at 22.300 miles above earth and fitted with an antenna covers the necessary area of
earth through a larger beam. The antenna at the earth station to be received at several point on earth. Transmission is clear and is of high grade. The transmission of message through this method in expected to become cheaper. The advantage digits or electronic journals, bulletin board, databases and remote tag in facilities.

543. SUGGESTIONS -

Presently all cities of Madhya Pradesh using DOTs specification for communication link for telephone. The same communication link may be used for library network. It is also proposed that a dial-up medium at each library with a synchronise part connection to it.

The communication system part of the proposed library management system which allows file transfer and E-mail facilities.

55. BIBLIOGRAPHIC STANDARD:

Bibliographic standard in machine-readable cataloguing have been the concern of library and information specialists for the last three decades. John B Thomas III describes standards as instruction for doing something uniformity. It cataloguing these instruction are a uniform way of describing a book (or other objects) and the uniform ways of retrieving the descriptive records cataloguing standards thus make for uniformity or relevancy and means of access points or names terms etc. association with the bibliography description that allows it to be retrieved.
551. **STANDARD HELP IN** -

- Identifying the heading of the library properties.
- Communicating a library holding.
- Bringing similar bibliography data available in several libraries or catalogues for effective communication.
- Aligning bibliographic data from one source with the bibliographic data on the host computer, and
- Exchanging data on-line in integrated library network.

552. **FORMAT** -

A format is a method for coding information regarding bibliographical details of holding and location to enable computer to process information for storage, exchange and retrieval. The structure of a record is divided into various fields, subfield and of-field and end of record. The identifies that have been developed make the feeding of data into a computer systematic of the satellite based network are:

- Reliability.
- Transmission at a higher bit-rate.
- Economy as distances do not matter.
- Availability of roof-top terminals makes use possible anywhere.

The selection of transmission method depends upon

- Speed needed.
- Cost of transmission.

With the help of satellite communication link a document can be sent at the rate of 1 MB per second to remote receiver only station anywhere in the world. To enable television dishes. Satellites could be used for data transmission during the nights.

553. ELECTRONIC MAIL -

Communication of mail from one computer to another through a modem and generally a telephone cables called electronic mail it could be from -

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

It supports the interchange or sharing of data. Electronic massaging and electronic filming.
Controlled and Automatic access

Archiving and

Retrieval by subject, keyword or index

E-Mail Software like X-400 maintains a collection of files and supports all forms of document transmission including the use of Fax. E-Mail is also used for producing "format can be divided into two aspects an agreement of the data on the tape and a set of codes for the identification of the data."

Bibliography (libraries) standard should have following characteristics.

Character sets have been looked at

Physical tape standards have been developed.

The record structures was agree in the 60s.

The codes for the identification of data have not been agreed to because there has been no agreement on data elements and organisation and system tend to have their own requirements for data elements. A number of bibliography formats have evolved over the last three decades -
US MARC
- UK MARC
- UNIMARC
- AACR-II

**554. SUGGESTIONS -**

For network of Madhya Pradesh the AACR-II can be used for Bibliographical Standard. The second edition of the Anglo-American cataloguing rules has played a major role in getting standard bibliographic records generated in machine-readable form.

AACR-II Rules, which provide guidance on elements to be included in a bibliographic records are based on ISBD (G) drawn up by the Jain Steering Committee for AACR and IFLA international office of UBC. AACR-II is used the world over for creating bibliographic records in machine-readable form. It is being revised regularly. Between 1979 and 1988 three sets were published. AACR-II has been translated, or is being translated into Arabic, Bhasa, Malayala, Chinese, Danish, French etc.

While Applying AACR-II several cataloguing principles become redundant for instance these are no main or added entries in the computerised bibliographic record. In a not be a unique identifier. In a computerized bibliographic record a unique identifier, identifies an entry and its tags identify the specific elements of an entry. Thus in a
computerized catalogue each field and sub-field are headings in themselves.

AACR-II server as an important guide to catalogues. It introduces some sort of standardization. If the tages in a format are complete maintenance of standards other becomes difficult. The main reason to suggests AACR-II is because most of the public libraries of M.P. presently following dictionary catalogue for keeping their reading material up-to-date, and it will be easy to adopt AACR-II specification.

56. CENTRALIZED OR DECENTRALIZED NETWORK:

561. CENTRALIZED NETWORK -

In this network one library should take the charge of all information inflow and outflow. It require a specific and sophisticated hardware which hold the information and disseminate as and when require, but in this type of network system is not feasible, because if the host computer get failure, then all process of network may be seized.

562. DECENTRALIZED NETWORK -

Decentralized network is also known as distributed network. In this type each library should take equal part means first each library should developed database and purchase their own hardware/software requirements and get connected through a network.
57. **GOVERNANCE**: 

The network governance depend on its functions. These functions grow as the network grow and become effective of the network is governed effectively. Following important function of a network :-

(a) Management function (in relation to network operation and financial accounting).

(b) Administrative function (to support coordination, resource allocation planning policy making and funding).

(c) Acquisition function (to procure package of information).

(d) Cataloguing and catalogue production function.

(e) Processing/preparation function.

(f) Information retrieval function

(g) Circulation function.

(h) Serials central function.

(i) Inter-library loan function.

(j) Delivery function (for transmission or transportation of a package of information).
(k) Storage function

(l) Referral function

(m) Communication function

(n) Education function.

(o) Standardisation function.

(p) Marketing function.

(q) System development and support.

The above functions exist in all networks and are therefore essential. Defines governance of a library network as "to governance is the set of processes through which an organisation confirms its goals, establishes policy, selects its leaders, and insures the necessary resources to carry out its purpose. Selection of leaders is likely to be the most important role of governance while insuring resources usually involves budgetary decision and fund raising."

Library and information systems become increasingly accessible to the public; the library user, scholar, researcher, educationists, and other users will increasingly dictate the form, content, structure, and times of both national and international library and scholarly networking.

A network of wide area networks in Madhya Pradesh Public libraries that could be considered functional should perform the above
activities in the best possible manner creating an ideal match between users need and resources appropriate for them.

571. SUGGESTIONS -

The M.P. wide area Library Network should also create a network service group in order to:-

(a) Maintain union catalogue and on-line services.
(b) Promote retro-conversion and related services.
(c) Arrange training in library automation; and
(d) Promote standardization of records.

(a) Operation Manager - The governing body of Madhya Pradesh library network comprising chairman and one expert in computer and library services.
(b) Operation supervisor
(c) Operator
(d) System software executive
(e) Assistant

It also provides for a coordinator to be assisted by one person and a cell of one person for planning and budgeting.
58. **MODEL** :

The above network will work with following standard:

Libraries and information scientists of Madhya Pradesh are quite familiar with the advantage of library cooperation, resources sharing, automation and networking but many of them lack the capacity of join hands with each other form mutual good. In order to make a beginning in this direction first each library should computerise their services and try to create a multi-purpose wide area network of public libraries in Madhya Pradesh.

**SUGGESTIONS** -

The selection of libraries joining a network should be based on the following criteria:

- Each library should be willing to buy its own hardware and at least have one telephone connection either a direction line.

- The library should have at least two professional staff with a degree in Library Science and familiarity with AACR-II rules.

- It should undertake to pay the admission and annual membership fee when the network becomes
The libraries specializing in any subject should be able to join a library network in a city.

581. HARDWARE & SOFTWARE

HARDWARE

The network should be able to recommended to participating libraries the type of H/W they need for their in-house functions and for networking purposes.

- It must to be noted that the use of micro-computers in networking is going to grow.

- The size of collection at a library should never be regarded as the form for hardware.

- One PC-AT with 4 MB RAM (Memory), 120 MB Disk Capacity, 2 terminals, 1.2 MB floppy drives.

- The Hardware of the each library may be up graded depending upon the speed with which participating libraries generate records and pool them into the central host.

- IBM or any recognised hardware should be used.
SOFTWARE -

- A Common Software must be used by all the participating libraries.

- Commercial Software that has not been internationally tested on large databases should not be used.

- The Software should be provided free of charge to participating libraries by the network.

- There so many ready-made software are available in the free market for smooth running of total functions of a library and that may also be used for network purpose these may by LIBSYS, CDS/ISIS, OASIS, SLIM, NALANDA etc.

582. NETWORK ARCHITECTURE -

- Each participating library should have at least one IBM compatible micro-computer (PC-AT 386) and a dial-up modem with any synchronous port connected to it.

- The software should facilitate use of file transfers electronic-mail and bulletin board in a batch mode.
FINANCE -

The finance may be collected from the following sources for smooth running the wide Area network of M.P. Public Libraries :-

Central Government, State Government -

- The network should get a recurring grant from
- The network should collect admission fees and annual membership fees from its members.
- The network could accept grant donations and use other legitimate means for raising funds.

583. COMMUNICATION LINKS -

- The network operation should be established on circuit switching principle.
- Packet switching data network should be used.
- Transactions between libraries could be in batch mode or on-line.
- The user in a network should be able to log in to the system in batch mode.
584. BIBLIOGRAPHIC STANDARDS -

- AACR-II should be used as the code for cataloguing. It will help in creation of standard records.

- A unit should be established for maintaining the authority and thesaurus data.

CLASSIFICATION -

- As libraries in Madhya Pradesh used mainly CCC & DDC for classification of books. It would not be within the means and worth the efforts to have one classification scheme in all participating libraries.

- Class number should be given in Machine-read able Bibliographic data.

- As search requests would mostly be by authors, titles, editors and subject descriptors. The network would offer a commendable service. For the few classification based search requests the network staff could make special searches using class numbers.

INTER-LIBRARY LOAN -

- The network should promote inter-library loan service.
- Sharing of foreign periodicals should be attempted as far as possible; exchange should be saved on available duplicate titles.

- A courier service should be established to support the sharing of resources.

**585. CENTRALISED & DECENTRALISED NETWORK**

decentralized topology may be preferred and in a state like M.P. or a mix of distributed cum centralised topology may be preferred.

- Efforts should be made to develop a central database of union Catalogue. The following topology may be adopted for proper networking of public libraries of M.P.

In above network topology we have followed the mixed topology, which includes centralised and decentralised topology both. In this at the top level from State library to Regional libraries it would follow centralised topology, but Regional to District library’s it would follow decentralised topology. The diagrammatic presentation of network topology will be:
In this topology for Madhya Pradesh the Maulana Azad Library will centralize all the communication as far as the communication between the two different Regional Libraries are concerned, and in each region regional Library will be the central of all the communication their own.

**STATE LIBRARY**

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586. **GOVERNANCE** -

- A local area network should be registered as a separate body.

- There should be sufficient participation of libraries in the governing board of a network.

- Objectives and functions as outlined in the chapter 4 may be framed for the effective of the network should be followed.
587. FUNCTIONAL NETWORK -

- The requirements as outlined for a functional network in transforming a Public Library network into a functional one.