In the Seminar on Inter-lending and Document Supply held in London in 1988, Hope E. A. Clement (Hope E.A. Clement) suggests these six combined models :

1. A totally centralized national lending collecting)
2. A central lending collection with backup libraries
3. A national lending center
4. A network of interlinked networks
5. Separate networks
6. unlinked and total decentralization

The detailed description of document distribution system models is as follows :

4.5.5 Totally Centralized Model

In such a model, a single center acts as a single source of service and delivery. In this, an institution specialized in specialized collection developed and such a plan is made to provide document distribution service in this library. It develops the necessary search tools to provide the service. This organization also acts as an International Pay-Order Center. The advantages of this model are as follows :

1. It is a simple process for inter-library loan and service exchange. Since it is the single source of solicitation and supply, more money is saved.
2. Costs are reduced in the settlement of grievances.
3. The speed of document delivery is high.
4. In this, the demand and distribution of documents can be analyzed and controlled effectively. This helps in building an effective collection.
5. With centralization, effective service can be provided.

The defects of this model are as follows :

1. The construction and maintenance of central collection is more in terms of collection, staff, equipment building, etc. If there is insufficient funds or staff, the service situation becomes pathetic.
2. This model has a good distribution of magazines but is not economical for monographs.
3. It does not use the current library collection. This leads to unnecessary repetition.

Note

4.5.6 Totally Decentralized Model

This model is based on the collection of a large number of libraries. In this, individual libraries develop collections in their specific area of study and try to provide information sources and systems.

They do that by obtaining loans from other libraries to meet the demands they cannot meet from their collections. There is no central point or coordination center for all types of activities. The advantages of this system are as follows :

1. Libraries to develop collections based on their local demand are independent.
2. They are not bound to participate in this cooperative activity.
3. They are not required to accrue additional sources.

The drawbacks of this system are as follows :

1. It takes more time to find the source of the loan.
2. Since the cooperation is on a voluntary basis. Therefore some libraries may refuse to hand over their documents to other libraries.
3. It does not have any central place to meet international demands.
4. There is no coordination in the creation of collections and unnecessary duplication takes place in the creation of collections.
5. In this system, mainly large libraries are overloaded.

4.5.7 Decentralized Model

In this system many libraries organize their collections in a planned manner according to their specialized area. Sources other than the central collection are acquired which are identified by the system to participate in collaborative work. In this a federation list is compiled, which familiarize each other with the resources of the libraries. The advantages of this model are as follows :

1. It saves time as requests for documents are sent directly.
2. Adequate collection can be developed to meet the needs of the entire nation.
3. In this system, there is no burden of document payables on any one of the collaborating libraries.

The following are the drawbacks of this model :

1. In this, libraries have to make extra efforts to provide effective inter-documents payable service along with normal functioning.
2. Libraries are obliged to acquire those additional resources, therefore it is a difficult task to effectively analyze and monitor the demand and distribution of documents.

4.5.8 Electronic Document Delivery Systems

The Encyclopaedia of Library and Information Science has defined electronic document distribution as : it is concerned with the use of electronic technology to support the inter-exchange activities of libraries. This includes the use of electronic methods by libraries for the transfer of solicitations and the physical transfer of full text documents.

Due to the ever-increasing demand of users and the development of new technologies of information and communication technology, today electronic mail or on-line systems are being used in document delivery service. Today the new electronic distribution system can serve the reader in a matter of minutes to hours. Use of new technologies in place of the traditional system in document delivery service being done. Today electronic document delivery service is being provided with the help of an on-line computer database. This service is based on Information Technology, Transliteration and Communication Technology. Today technology has changed the entire landscape of information collection, solicitation transfer and document delivery.

Today optical disc based systems are being used for information collection. In this system, the highest fine laser beams on the disc are decoded by the processor as digital or analog signals. Includes: Compact Disc, CD-ROM and DVD. The information stored on these is read by the CD-ROM drive and which can be done by the printer with the help of a computer. Along with this today on-line computer databases are also created. Under this the library has been stored. A huge collection of information has been collected from this repository, which is constantly revised and updated. Therefore, in electronic document distribution systems, with the help of optical disc systems and on-system computer databases, the desired document or information is distributed by the reader. On-line is a system in which computers located at different locations interact with other computers with the help of telephone lines and satellites. With this facility, the reader can search and view the desired information online through his computer sitting at his home as well as get its print. Electronic document delivery service publicity and dissemination is continuously increasing. And this service has become worldwide.

The information or documents requested by the user can be distributed in an electronic document delivery service. This service is economical, simple and convenient as well as safe. This service is economical, simple and convenient as well as safe. Today many libraries in the world and in India are providing electronic document distribution service.

Note

4.6 Translation Services

Translation is the process of converting printed, text or spoken words into another language. The source is the language into which the text is to be translated and the target language is the language into which the text is to be translated. For example, when Chinese information sources and systems translate a language document into English, the source language is Chinese and the target language is English. Quality translation providers establish processes to ensure accurate translations in the target language with the full meaning of the source material. In the translation process, content meaning, technical precision, and cultural acceptance are considered considerations. Translation has traditionally been a human activity. Although there have been attempts at computerized automation of the translation of natural language text.

4.6.1 Translation, Interpretation and Transliteration

Often the terms interpretation and translation are used synonymously. It is necessary to understand the difference between these two. Interpretation deals with the transfer of ideas expressed orally whereas translation involves the transfer of ideas between languages that are expressed in writing.

Interpretation can be considered as a subcategory of translation in relation to the analysis of the processes involved (translation studies), in practice the desired proficiency for these two activities is completely different. Translators and interpreters are trained in completely different ways. Translators take intensive practice of full-text, texts representing various subject areas, learn how to compile and organize dictionaries of related glossaries and related new documents (for example, word processors, desktop publishing systems and graphics or presentation software) and computer support. Acquire proficiency in the use of CAT Computer Assisted Translation software tools.

Interpreters for precise listening skills, memory and consistent interpretation in relatively difficult situations (in which the interpreter listens while the speaker speaks and takes in details and provides translations into another language after several phrases, not speaking at the same time) Description-taking techniques and simultaneous interpretation, in which the interpreter immediately listens and speaks, often at the moment the speaker's original speech is spoken, followed by a translated translation.) for in fragmented concentration.

In transliteration, we denote or represent features (or letters) of one language in another. This using the alphabet of the target language. Almost the same is done by doing the snatch. For example, the translation of the

Note

word Rupandar is 'translation from Hindi to English language' while the transliteration of the word in English would be "Rupandar". Transliteration is a major component of the effort towards universal textual control.

4.6.2 Need for Translation Services and Translation Tools

It is estimated that more than 40 percent of the scientific and technical literature desired by scientists, engineers and technologists is in languages other than the English language. The purpose of the fruits of scientific research is the collaboration of co-scientists and researchers across geographical, political or economic boundaries. Whereas language is a barrier for scientists in accessing texts published in a foreign language, or language barriers can be overcome by non-English speaking scientists learning as many languages as possible on their own. But a scientist's effort to learn more languages may waste his time and energy and hinder him from being an active researcher. The translation and translation related services provided by libraries can overcome the language barrier in various ways.

Libraries should acquire and maintain translation tools, regardless of whether the library is providing in-house translation services. These tools would be useful for the target users to verify or translate the bits of information they would need on an urgent basis. With the availability of internet based translation software users can get the text material in translated form. Still it would be useful to have some of these tools in different languages :

- Dictionary (Thesauri)
- Word Finders
- Glossaries
- Cultural Vocabularies
- Spell Checkers
- Grammar Characters
- Technical Glossaries
- Glossaries of Various Domains

Electronic Equipment

- Machine Readable Dictionaries
- Parsers
- Coppora
- E-Translators

Translation Teaching Software categorizes translations into Responsive and Anticipatory can be divided. Reactive translations are done on specific

Note

demand and some of them find no place in translation search tools foreshadowing. More effective is the bibliographic control of translations, which is done for foreseeable demand. Cover to Cover (Translation) of primary and secondary journals belongs to this category. Most of the magazines in the complete translated journals are from Russian to English language. Another type of foreshadowing translated journals includes selected articles from different journals.

Importance and Objectives of Translations Service

Translation service is one of the most responsive services of libraries and information centres. The spectacular growth in information technology, the widening reach of the internet, the expansion of trade globally and ever increasing scientific and cultural cooperation have undoubtrdly increased the demand for translation service. However, reduction in finding for information services has resulted in significant decline in translations made on adhoc bases. This perhaps may be one of the reasons which have led to the closure of International Translation centre as well as its prestigious publication world translation index.

Libraries can play an active role in meeting user's demands for translation. they should have information about translation pools, translation centres, professional associations, Government agencies, commerical publishers and their products, directories of translators and translating firms. The library should have these sources both published as well as online, on up-to-date basis and if should be able to assists the users in indetifying institutions holding the needed translations. If damands are very frequent, then library staff members or resource persons who are available when needed , should be able to either translate or abstract or provide summaries of the material needed to meet urgent need.

4.6.3 Role of Library in Translation Services

National level documentation centers and libraries such as NISCAR have translation facilities with qualified and experienced translators.

Those who do translation work of foreign languages documents into English or vice-versa. Whereas it is not practical to have translators in all libraries and information centers unless there is a large volume and regular demand for translators. So what role can libraries play in the absence of in-house translation services?

First, the library should be able to provide translations from any available national translation index or the library should be able to do the translation of documents. For this, library staff should maintain knowledge about translation related information such as translation pools and centres,

professional organizations, government agencies, commercial publications and their products (includes cover page to last page translation journals) and directories of translators and translation firms. needed. Libraries should maintain their published sources on an up-to-date basis and should be able to assist users in identifying entities holding requested translations that are not available to them. The library staff should also link the links of translation tools and sources etc. available on the website of libraries on the Internet also.

4.6.4 Handling Translation Requests

As a librarian or information scientist, it is important to know how the library should arrange the translation queries received from the users? As Ranganathan said, "It is hardly possible to produce a linguist cum-document-list." It is extremely disappointing that the library staff is well versed in linguistic knowledge and can translate. The librarian can arrange for the translation of the full text on request for translation.

1. By the provider of the information
2. By professional staff translator
3. By a Freelance Translator
4. By a translation agency
5. By machine translation

1. **Provider of information :** In many cases the provider of the information or the source of the information may also have a translated version of the information. The librarian should at first sight find out whether the source has the translated document.
2. **Professional staff :** Translator-Librarian should also assess the demand for foreign language translation. If there is a demand of more than 1000 pages in a language every year and the workflow is regular in nature. It would be economical to recruit a full-time translator staff for that language.
3. **Freelance translators :** Freelance translators are those who have sufficient ability and proficiency to translate but are not associated with any organization. Very often a translator may be a member of a professional translation agency or an organization as a translator may also be associated with. But the translator does translation work in free time or during weekends. Although one can get translation work done by these independent translators at a low cost, but till the time the credibility and capability of the translators is not well known, then there is a need to be careful about the quality of translation of independent translators. It is more advisable to contact independent

Note

translators through referrals rather than visiting the advertisements of independent translators on the website or other sources.

4. **Translation Agency :** The librarian should have a list of translation agencies available within the nation and outside the country. On receipt of translation requests, the librarian should try to get the translation done from a reputed translation agency.
5. **Machine Translation :** For smaller sections of the text, the librarian may also consider machine translation. If the demand is frequent, if the size of the text is small, the librarian can set up a machine translation facility. Machine translation is discussed separately in this unit. Scope of Technical Translation can be as follows :
   - Establishment of translation abstraction service
   - Provision of adequate responsive and predictive translation services
   - Maintenance of translation bank
   - Complete translation of selected magazines
   - In-service training to create a cadre of highly skilled specialized translators
   - Establishment of cooperation and coordination with international information systems.

Conclusion

In this chapter, we have studied how information is produced, as well as who are the people involved in producing information. In this chapter, we have also learned about document delivery service and translation service.

Important Terms

1. The scope of information is very wide and wide.
2. Information producers include writers, editors, libraries, documentation centers, information analysis centers, etc.
3. Documentation delivery service means providing the desired document by the readers.
4. Document Delivery—Services Satisfaction, Time Limit and Cost — These three characteristics are included.
5. Translation Service Conversion of printed text or spoken words into another language process to do.

Note

4.7 Bibliographic Services

Under the comprehensive term 'bibliographic services' are iiicluded bibliographies, indexing services, abstracting services, documentation lists, and literature search in bibliographic databases both in offline; and oilline mode. However, with tlze latest developnleilts and advancements ill tlie use of colnputers and inforination technology, the online search services are being used commonly for inforn~atioii retrieval.

4.7.1 Online Search Services

The concept of online searcl~ing was originally used to describe the process of directly interrogating computer systems to satisfy particular recluests for information. Now the term is used to denote searches that art: collducted by nleans of a local conlputer that colninunicates wit11 a reinote conlputer system containing data files. The search process is interactive and the user can make changes in the search statement 111ltil a satisfactoly result is obtained. There are four major components involved in online searching.

(i) Information providers or database producers who make available the database(s) to be accessed online.

(ii) A search service or host, which provides access to the database(s) and also provides software for conducting the search.

(iii) Cornlllunication links, which connect the user/with the host and the database(s) and

(iv) A local workstation tllrough which tlie user is linked to the service.

The following are some of the key issues in illallaging online searcll services :

Online bibliographic services are responsible for mounting databases on a computer and making the arrangements ilecessary for such databases to be searchable from a large number of remote user workstations. Online search services that provide access to a large number of databases convert the databases into a uniforln fornlat with sollle standardization in element names so that the basic coinn~ands and search techeniques apply across all the databases that are offered by a given vendor. The intending searcher needs some awareness of the range of search services that are available. Increasingly, any one database may be available from several search services. There are nutzlber of different types of search services :

(i) Traditional supernlarltet online search services that offer a range of 50 to 300 plus databases- on behalf of database producers based on the above types, one of the most widely used online bibliographic search services is DIALOG.

Note

(ii) Specialist onliile search services, such as DBE-link, which offers German language and other European databases and the search services offering access to business and financial databases.

(iii) Publishers as search services : A number of major publishers have entered the market place as search services. These publishers have perfornled alliances with other online sei-vice suppliers in order to be able to offer an integrated ii1forlnation solution, which embraces both bibliograpllic databases for locating information and full text databases for docuineilt delivery.

(iv) Platform-independent search services, which provide access to databases on CD-ROM, the web and client-server platforms possibly through a coinlnon user interface.

(v) Bibliographic utilities that offer access to a select range of databases for specific communities. Exainples of such services include OCLC, BLAISE (British Library Automated Information Service, London), ESA-JRS (Europeali Space Agency Infornlatioll Retrieval Service), ORBIT, Data star and so on.

These services were the pioneers in the information environment. Some of the services of more recent origin include Poiiltcast Individual Inc. and Desltol:, data.

4.7.2 Growth and Development of Online Search Services

The concept of online searching originanted in the sixties, when the US National Library of Medicine used computers in the production of the printed 'Index Medicus' and the MEDLARS (Medical Literature Analysis and Retrieval Systenz) database was created. I11 1964 the library began to offer batch searching of its MEDLARS system on demand, and the following year the Lockheed Missiles Corp. Systellzs Development Corp. (SDC) and the Cl~emical Abstracts Service began their compriterised search services. The first online dial-up service was MEDLINE, the online version of MEDLARS, followed by colnmercial Online Services from DIALOG (Lockheed) and ORBIT (SDC) in 1972. Since then many organizations have switched over to online databases and search services. By 2002, there were as many as 750 public access databases from a range of different vendors. Initially, the majority of online databases provided bibliographic references and thus these were called bibliographic or reference databases. But over the years, more and more databases are becoming available which retrieve the content of documents rather than mere bibliographic references and such databases are either full texts or databanks. The growth

Note

in the database industry can be interpreted in terms of number of vendors, database producers, databases, database records, and online searchers. There are a number of publications that regularly record the growth of online information retrieval and the most useft11 among those is the Gale Directory.

4.7.3 Online Bibliographic Service Providers

(i) **DIALOG :** Dialog is the worldwide leader in providiilg online-based inforlnation services to organizations seeltii~g comnpetitive advantages in such fields as business, science, engineering, finance and law. Its products and services such as Dialog, Profound. Datastar offers organizations the ability to precisely retrieve data for nlore than six billion pages of key information accessible via the internet or tl~rough delivery to enterprise intenlets. Over 600 iildustry databases engineered with state-of-the art indexing software are being retrieved through dialog, data star or profound brands.

(ii) **OCLC (Online Computer Library Centre, Ohio) :** OCLC offers an integrated suit of online, batch and contract services and software to help ill building and managing an electronic library based on the requirements, budget and goals. The Onlil~e bibliographic service offered by OCLC is the world's forei~iost bibliographic database ilallled World Cat. Since 1971, libraries have shared tlzeir catalogs electrollically to create the world's large database of bibliographic information - World Cat (the OCLC online Union Catalogue). Now World Cat offers over 43 illillion bibliographic records, over 600 million location listings and holdings information, vital for collection development, cataloguing, autl~prity coiltrol and conversion services (l~ttp://wv\v. worldcat [oclc-services of databases], htm).

(iii) **BLAISE :** The British Library Automated Infornlation Service now offers world wide web access to the major British'Library catalogues and other iinportailt UK bibliographic databases such as the British National Bibliography, (British Books in (and out 00 Print), SIGLE (System for Information 011 Grey Literature 011 Europe) and Her Majesty's Stationary Office, (HMSO). With Blaise Web, one can exploit World Wide Web search technology for cost-effective access to 22 databases containing 17 million bibliographic records representing material in every printed language, ranging from tile earliest European printed books to the most recent scientific papers.

Note

(iv) **ESA-IRS :** The European Space Agency Inforination Retrieval Services provides comprehensive scientific and tech~lical aerospace information online. Users including companies, research centres and uiliversities can take advantage of a broad range of online information services froin national centres and ESA-IRS offices in 13 European Countries. The collectioil of databases offered covers a diverse scope of information. ESA-IRS has particular strength in the field of aerospace and its applications such as earth observation and microgravity. Nunlerical databases concerning metals, metallurgy, inaterials science and mechanical engineering include e.g., Metals, Datafile, Hydrogen Data alnong many others are available. Bibliographic databases covered, are Metadex, Engineered Materials Abstracts, Compendex plus, NASA. Search. languages and interface include colllrnon command, menu-driven and a MS-Windows based search interface.

4.7.4 Functions of Bibliography

Bibliography generally serves the following functions :

(a) It provides list of prior record of civilization.

(b) A bibliography helps in locating the material or book in terms of place of publication, location in the library on point of purchase.

(c) It also preserve documents.

(d) A bibliography helps in book slelection *i.e.,* which book should be consulted for a given purpose.

(e) It is a guide to the literature of a subject.

(f) A bibliography enables one to find out what has already been written on his subject and allows him to keep himself well informed and up to date. This avoids duplications in research, saving him both time and money.

Exercises

Very Short Type Questions

1. What is the need for a document delivery service?
2. What are the areas of translation service?
3. What do you understand about information generation?

Short Type Questions

1. Explain the methods of information generation.
2. Write about the features of document delivery service.
3. Write a short note on—Electronic Document Distribution System.

Long Type Questions

1. Write a detailed note on translation service.
2. Write a detailed note on information generation.

Note

Information System and Network Organization

5.1 Introduction

In this chapter, we will study about information networks and also learn about Agris and Nisat. Will also study library networks in India. Will also study Nisat and Medlars.

5.2 Information Network : Concept and Objectives

The term network is being used to denote the expression and systems of many related but different entities. Due to the other achievements of computer-assisted reference services, cataloguing, abstracting, indexing, information retrieval and registration, the system of libraries and services and principles have changed significantly. Is this concept of network was given the name of information network by Kartz. In which there is a plan to organize computer based functional programs according to the technological capability and efficiency and through the medium. When the process of regulation was adopted by the libraries, it paved the way for the establishment of a network. The process of libraries helping and serving each other started the network. Many scientists have defined library networks as :

1. According to Trezza

"A kind of formal arrangement and organization in libraries for sharing and co-operation of resources in which the whole group is arranged in sub-groups in which most of the needs of a library of which it is a member, is satisfied."

2. According to Swank

"The concept of cooperative systems of libraries on the basis of geographical subject or any other kind of basis is called library network."

3. According to Katz

"When two or several libraries decide to establish a sharing of their resources, develop a program of mutual acquisition and focus their experiences or other objects together with the objects together. If it is, then it is the establishment of a kind of cooperative."

The library network has the following objectives :

1. Maximize the use of resources of libraries through inter-library exchange with the help of networking.
2. To provide assistance to the member libraries in cataloging of books, books and periodicals.
3. To prepare online federated lists of books, non-book textbooks and periodicals.
4. To computerize the facility of supply of documents.
5. For faster transmission of information.

5.2.1 Development of Library Network in India

For the last four decades, keeping in view the usefulness of library services, cooperation of libraries, sharing of resources and establishment of networks was encouraged in India. In 1958, the Government of India formulated the Scientific Policy Resolution and in 1983, more emphasis was placed on technology information in implementing the Technology Policy Statement.

In 1986, more emphasis was laid on the implementation of the following policies which are as follows :

1. New National Policy on Education was announced. Under this, emphasis was laid on upgrading libraries and library services across the nation.
2. Similarly Prof. D.P. Chattopadhyay presented his report on the National Policy on Library and Information System. The Sanskrit Department of the Government of India constituted a committee under the chairmanship of Chattopadhyay. This limited emphasized the following points which are :
   (i) To develop a system of information in all areas of national activities.

Note

(ii) The cultural wealth and pride of the nation should be protected in many services and forms.

(iii) To provide fast paced training of catalog dissemination programs to enable and enable libraries and information personnel.

(iv) To provide appropriate encouragement and support to individual efforts for the acquisition and dissemination of knowledge and discovery of new knowledge in the field of intellectual freedom.

In 1988, a seminar on sharing and networking of library resources was organized by the India International Center in New Delhi. As a result of this, DELNET was established in Delhi.

The Information and Library Network (INFLIBNET) was established by the University Grants Commission, which is a national level network. Here the details of three networks are being presented which are as follows :

1. INDONET
2. NICNET
3. INFLIBNET

In this networking, the work of linking the records is done by only one library, which saves valuable manpower and repetition. Due to the high cost of hardware, this collaboration reduces its cost to a great extent.

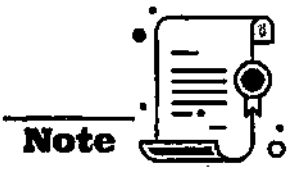
AGRIS : International Information System for Agricultural Science and Technology

At present, agriculture has got the status of an important industry on which most of the human beings of the world depend. Therefore, the need for an information system of this subject was felt and for this purpose the Food and Agricultural Organization under the United Nations Organization (AGRIS : International Information).

5.2.2 Need of AGRIS

As a result of the research done in the field of agricultural science, information has developed in such a large quantity that the desired information can be available at the right time for any nation or institution to its scientists at the right time.

Agricultural science is such a broad interdisciplinary and multidisciplinary subject that covers many subjects which are as follows : Geography of crops and many types, and climatic conditions, atmosphere, soil, types of seeds, vegetative nature of plants, diseases causing damage to crops, chemicals, irrigation and its means, agricultural engineering and extension services etc.



In agricultural science research, scientists consider the information important of Agris. In 1969, the Director General of the Food and Agriculture Organization constituted a team of experts and after deliberating in it, in 1970, Agris was established, which had the following activities :

1. Collection and creation of a wide and comprehensive database of materials in the field of agricultural science so that Current Awareness Services (CAS) can be organized.
2. Coordinating the specific types of information services, systems and active centers available and organized in the region so as to make the services broadly useful and avoid unnecessary duplications.

5.2.3 Characteristic Features of AGRIS

1. It is an international cooperative agricultural science information system based on voluntary cooperation, cooperation and contribution from various countries, nations and international institutions and organizations.
2. It is a computerized information collection and retrieval system.
3. The collection and selection of information materials to be included in this system is done at the local level by the National or Regional Input Centers.
4. This information system publishes the monthly Indexing Periodical.
5. AGRIS is a mission oriented system.
6. Synonymous Thesaurus synonym used for subject indexing.
7. This information system provides a selective information dissemination service and a Respective Information Search Service.
8. This information is made available on magnetic tape CD Rom etc. for machine reading.
9. Suitable standards, formats and manuals have been developed for inputting information in this information system. following which various centers to establish uniformity and recognition.
10. AGRIS organizes training programs from time to time for libraries, documentarians and information scientists working in partner countries and institutions.

The activities of AGRIS are known as two levels, which are :

1. AGRIS Level-I
2. AGRIS Level-II

5.2.4 AGRIS Level-I

This level of service was organized after 6 years of deliberation and started

Note

from 1975. Under this international information system, established with the mutual cooperation of the Food and Agriculture Organization and several nations, comprehensive and comprehensive lists of bibliographic information related to agricultural science and technology are compiled and prepared.

For this purpose, related text materials published from different countries and regions are collected and selected by national and regional investment centers, cataloged and classified in a standard format.

To facilitate the service of this information system, 128 National Centers and 17 International Centers are regularly providing support in investment works. The materials of this input are considered to be Magnetic Tapes, Punched Paper Tapes, optical in nature. Floppy Disc, these are sent in the form of investment papers etc. All these investments are sent to the AGRIS Processing Unit, Vienna, Austria. With the help of a computer, all the materials are put together and classified, after which they are prepared in databases in the form of magnetic tapes. Agris provides the following services with the help of these databases as follows :

1. **AGRINDEX :** Agrindex is a monthly indexing magazine, each issue of which contains approximately 11,000 references from more than 7,000 periodicals and documents in 50 languages. Document entries in these indexing journals are grouped into 17 main subject headings. and under each subject heading. They are arranged according to geographical area or object and on the basis of numerical code.

   In each entry, the details of the entry number, the language of the report, the name of the authors, the first author's short address, current account, volume, issue publication, year page number of publication and publication place indicating the receipt of the document, etc. are given. Four indexes have been given at the end of this indexing journal, which are as follows :

   1. Individual Author Index
   2. Aggregation Author Index
   3. Report Number Index
   4. Subject Index

   Agris has its own glossary list for subject indexing called the AGROVOC Thesaurus. More than 1 lakh references are included in the AGRIS database every year and as of 1986 13 lakh references have been datailed in it.

2. **AGRIS on Magnetic Tape:** Machine legible forms of agris base material can be obtained in the form of magnetic tape. The information printed on it is similar to the image of agrindex. All investment centers and organizations interested in this can obtain these magnetic tapes from Agris' Processing Center Vienna. The information on these tapes is recorded according to the international standard format ISO-2709 and can be processed with the help of a computer. Many types of information are provided to field scientists and researchers by obtaining these magnetic bands by national centers, such as : Selective Information Dissemination Service (SDI), Timely Recognition Service (IAS) and Retrospective Document Search Service etc. It is published in the form of a national bibliography by publishing all the information invested by a nation.

3. **AGRIS Online Service :** Online service is also provided by Agris and with the help of this Agris Aadhaar material can be searched even from remote places. Such services are available on major computers and with the help of international telecommunication systems such as telex, telephone and packet switching networks, timely and retrospective information can be obtained from them :

   1. International Atomic Energy Agency, Vienna
   2. Higher Medical Documents and Institutes Germany
   3. Dialog America.

4. **AGRIS on CD-ROM :** There are some limitations to the magnetic tape services and online services provided by Agris. To search the information stored on the magnetic tape, the local computer needs a lot of memory and the information source and system takes a lot of time to find the information.

Similarly, information can be obtained quickly through online service, but due to lack of proper development of telecommunication media, especially in developing countries, it is very difficult to establish a connection with the computer installed at a remote place and this service is also very expensive.

Due to the development of optical storage medium with the help of laser technology, the above problems can be solved. It was developed in 1985, which is similar to the audio surface saucer called Compact Disc, is spherical in diameter of 4.7 and in form is similar to Audio Compact Discs. It can store enough detailed information.

Note

CD Rom Drive can be viewed and searched for complete information with the help of a microcomputer. Therefore, Agris CD ROM can be easily used to get the desired information from any library and documentation centers in Agris base material.

Despite the above achievements, AGRIS has not been able to achieve the objectives so far. After surveying its service, it has been found that 50 percent of the content stored in Agris' database and magnetic tapes is in English and 70 percent in only four European languages. The total investment in non-conventional documents is less than 20%.

5.2.5 AGRIS LEVEL-II

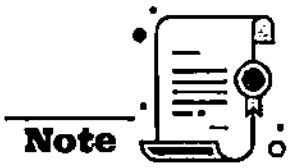
At the time of the establishment of AGRIs, teams of experts had proposed the Director of Food and Agriculture Organization to function at two levels. In which the information needs of different levels of users can be met. The first level has been to provide Timely Recognition Service (IAS) at the earliest and the second level has been to provide specialized services, information centres, information analysis centres, files of Aadhaar material as a coordinated system in which centres, files of Aadhaar material are integrated has been to provide the form of Services can fulfill the following obligations :

1. To develop the base material by selecting and collecting all the useful study material related to your field of work.
2. Indexing and summarizing each and every article included in these base materials.
3. Proper organization of Selected Information Dissemination Service (SDI), Foreground Search Service and Information Analysis Service etc.

To start the second level programs of AGRIs, subjects like Veterinary Science, Forestry, Tropical Agriculture etc. were selected and their trial study teams were formed, which have no result so far, could not be received.

At present, from the point of view of information analysis, the following centers are playing their role in the analysis of specific types of agricultural science information, which are as follows :

1. Cassava Information Center
2. Tropical Grain Legumes Information Center, Nigeria
3. International Irrigation Information Center,
4. Coconut Information Centre, Sri Lanka
5. International Buffalo Information Center, Thailand
6. Semi-arid Tropical Crops Information Center, India.



Over the years, these centers are increasing their capacity by use of the latest information technology and many of these centers are functioning as Agris Investment Centers. These are considered as Nodal Centers of Agris Level-I.

5.2.6 India's Contribution to the AGRIS-2

The Ministry of Agriculture, Government of India had decided in 1974 that India's cooperation in the activities of AGRIs would always be available as a member nation. In order to fulfill this objective, the Indian Council of Agricultural Research.

Under Research, the Agricultural Research Information Center was established in 1975. This information center is investigating all published literature related to agricultural science and technology through the AGRIS system. As of 1984, it has sent 30,000 references for investment in the Agris Information System and about 3500 references are sent every year. India accounts for about 4 percent of the databases prepared by Agris. Agris Agriculture for the last 20 years. It is playing its successful role in meeting the information needs of scientists and researchers. As a result, Agris has its own importance as a specialized information system in the field of practical and theoretical and technology of agricultural science. Information scientists, librarians, documentation experts, etc. received adequate guidance and benefits in the information training organized by AGRIS.

5.3 MEDLARS : Medical Literature Analysis and Retrieval System

Database Bibliographical database is considered the largest bibliographical database of international standard to index its world-class materials. The tradition is useful not only for medical science experts but also for other scientists, sociologists, political science experts and business and business people.

Index Medicus, an internationally recognized index of documents on medical science and related subjects, has gained popularity. Since 1880 it has been published in various formats by the National Library of Medicine of America and since 1960 it is known as Index Medicus.

In 1968, Medlars evolved into Online Searching and since 1972 it is known as Medline. Initially, the scope of Medline was not extensive, but after 1977 its area became wider and wider. With the help of Index Medicus and Medline, any type of information can be easily obtained.

Medline search yields four instances of citations to documents, which makes the difference clear. Under the Index Medicus, three out of every four citations of abbreviations of magazine reports become clear and the

Note

fourth cannot be found from what is found through online search. Medlars are divided into the following parts :

1. **Input :** Under this index, a bibliographic list of reviews of medical science is presented according to the subject-author part and subject and author. In its January issue, a standard subject authority list, also known as medical subject headings, is given. Apart from this, the journals whose articles are indexed in this. Their full table is also given. Subject headings are selected in the standard table of medical subject headings. For which a dictionary of 8 thousand index terms has been prepared. It is revised every year and an average of 12 subject topics are provided to each article.

   Under this, it takes 15 minutes to index any article and in this period all the selected posts are marked in the printed 'data' shape. After that it is inspected and verified. The Medler's dataform is passed to the keypunch operator, which records the material to a computer magnetic tape or disc.

2. **Data Manipulation :** In this the errors are rectified, which is accomplished through video display. It also includes the skill of printing citations under subject headings, authors and classifications etc. In addition, there are a number of processes, which ultimately depend on the printed and machine-readable formats.

3. **Output :** When the materials are entered in the computer, the work of mechanization starts. Computer documents are arranged to produce two magnetic tapes in each month, a tape really high speed. The shaded typesetting method is input and the second is the Compressed Citation File, which is sent to the cooperative library network and distribution for search purposes.

   In this, information can be obtained directly from those libraries as compared to the National Library of Medicine. In this way, the end result of doing index analysis of journals is of two types :

   1. Preparation of printed copies of Index Medicus.
   2. Preparation of Magnetic Tapes.

   By this, production is prepared in many formats, the main ones being the following :

   1. Preparation of type setting with the help of a computer.
   2. Computer generated microfilm is the same microfilm of computer tape that the study uses.
   3. High Speed Non-impact Printer where data base tapes are combined.

4. **Print out :** Additional learning of citations is achieved by searching and using it with the help of computer. Its second important function is to print quotations. Users have to make copies of each quote by painstakingly searching by hand, which is costly in terms of time and effort. Medline is the most widely used of all databases. Because its benefits and facilities are more than magazines read by other machines. Medline accesses materials from the database in accordance with the author's instructions for reporting, summaries and any adjustments to the information.
5. **Document Delivery :** Medline does not distribute documents. Rather, it presents the distribution of citations of the documents. This work is done efficiently and quickly. The National Library of Medicine combines Medline with a facility for inter-library exchange.

5.4 National Information System in Science and Technology (NISSAT)

Considering the importance of dissemination and dissemination of information in the field of science and technology, the National Committee on Science and Technology (NCST) urged the Council of Scientific and Industrial Research (CSIR) to formulate an information activity programme. To assist CSIR in this work, UNESCO appointed Dr. Peter Ledger. Various suggestions given by Dr. Ledger were discussed at many levels, as a result of which the National Information System in Science and Technology was established in 1975. This program completely started in 1977 under the Department of Science and Technology (DST) of India.

Objectives of Nissat : The following are the objectives of the NISSAT program :

1. Advancement and enhancement of information services in the field of science and technology.
2. To coordinate the various scientific information sources, information services and information systems.
3. To find out the defects of various information sources, information services and information tools of the country and to carry out research work to remove them.
4. To meet the information needs of different strata of society and experts in an efficient and effective manner.
5. Establishing standards for exchange of information at the national and international level.
6. Establishment of an effective information system in the field of science and technology.

Note

7. To arrange for the availability of a copy of every scientific literature to be published in the country.
8. To organize training, seminars, conferences, workshops etc. to keep the subject experts and scientists updated.
9. Publishing various journals in the field of science and technology.
10. To provide assistance in research and development work in the country.

Under the NISSAT program, various centers are functioning at the following levels :

1. **National Information Centers :** All the information centers which provide information services at the national level are said to be the apex organs of this programme. The following are such national information centers - SENDOC, NASSDOC, INSDOC, DESIDOC, BARC, etc.
2. **Regional Information Centers :** RCS has been established to provide information services in different regional parts of the country. All these regional centers fulfill all the information requirements related to their area. Under this information, various services provide union list making, documentation service, translation service, reprography service etc. Such centers are IIT Kanpur, Institute of Experimental Medicine, etc.
3. **Branch Information Centers :** Branch Information Centers are of the third level. These centers provide specific types of industry oriented information. The main function of these information centers is to collect documents and contact foreign centers. CDRI, CFTRI, CBRI are similar information centers.
4. **Local Information Centers :** Such information centers are based on their parent institutions and basically provide information to the scientists of the parent institutions. These information centers are at the last level of the NISSAT service. There are about 1,000 such centers functioning in India.

5.4.1 Various Activities and Services of NISSAT

By providing important activities and services in the field of science and technology which are as following :

1. **Collection of Literature :** One of the major activities of NISSAT is to collect all the scientific literature published in the nation which is necessary and important for the subject experts and scientists.

Note

NISSAT is to establish coordination between acquisition and distribution of documents in various information centers and to prevent duplication of collection. takes important steps.

2. **Providing CAS :** CAS service is provided by NISSAT for development of current information services. This service is provided to specific types of users, so as to keep them up-to-date with the latest information tools and technologies.
3. **Selected Delivery Information Service (SDI Service) :** Selected information distribution service has been started for scientists and subject experts under the NISSAT program. This service was first started by INS DOC as an experiment through computers in IIT Madras in 1976. It is an important service, in which pure update service can be provided to the users quickly.
4. **Construction of Union Catalog :** Preparation of the Union List of literature and documents available in various information centers is a major activity of NISSAT. Through this union list, coordination is established between various information centers. Scientists use the union list to get the desired results related to their subject.
5. **Providing Information for Industries:** Industries play an important role in the development of the country, so providing information about new research and development in the field of science and technology of various small and big industries of the country is the main activity of NISSAT. In this regard, the SIET organization is mainly providing information.
6. **National Science Information Policy :** National Scientific Information Policy has been established in the nation by NISSAT. Through this information policy, various research and development works being done in the country are promoted and encouraged.
7. **International Contribution :** India through NISSAT in the field of science and technology at the international level. providing cooperation. For this India is participating in many programs with FID, INIS, UNESCO, AGRIS, etc.
8. **Research Program in Information Science :** Research work is important in any subject. In view of this importance, with the help of INSDOC, many research works are being done in information science by NISSAT.
9. **Training Programs :** In the era of modern information revolution, information systems are continuously developing. As a result, in view of the development taking place in the use of computers in various

Note

subjects, NISS has started a computer training program. This training program has been started. These training programs are organized annually.

Various Sectoral Centers of NISSAT

1. Leather Technology (NICLAI)- Central Leather Research Institute, (CLRI), Chennai.
2. Food Technology (NICFOS)-Central Food Technological Research Institute (CFTRI), Mysore.
3. Copyright Bulletin;
4. Directory Educational, Documentation and Information Services;
5. Word Guide to Library School and Training Courses in Documentation.

UNESCO to advise its member states on the planning of documentation libraries and archival services at the international, national and regional levels. At the same time it is also providing special technical assistance to the body of these services and also motivating the member states to overcome the difficulties in the development of these services.

5.5 VINITI (All-Russian Institute of Scientific and Technical Information)

Introduction : At present, the progress of any country and society is dependent on the intensity of the pace of research work of the scientists of that country. Plans made for the purpose of work of scientists and progress of the country depend on the receipt of information related to these subjects. If the work of searching for information related to their subject areas is done by the scientist himself or planning, then there is a possibility of spending more time in this work unnecessarily. Keeping in view the difficulties of scientists and understanding the need for information, national documentation and information centers were established in different countries to help scientists and researchers. VINITI is a Russian word which means "Scientific or Technical Information Centre". The full name of Viniti is All Union Institute for Scientific and Technical. Russia gave more importance to the subjects of information and documentation and placed them first in the list of priority. There is also a separate library for this subject, so that through the committee, problems and their solutions can be obtained and maximum and updated information can be obtained in the field of information. Along with this, this organization also collects information about the progress being made in foreign countries besides its own country.

After 1950, Russia paid attention to its economic development and started progressing at the fastest rate. Its politicians had understood that unless science would not get importance in the scientific and technical field, the economic condition could not be improved. Its indirect purpose was that there should be no duplication of inventions and research happening in the scientific field because the time of scientists is wasted in double repetition.

Viniti has a huge office building in Moscow. In its beginning there were 1500 workers and at present it has increased to 23 thousand. In which information specialists, abstractors, translators and subject-specific experts and many other employees are included.

Information Systems : National Systems Programs and Institutions.

The scope of Viniti is mainly concerned with processing scientific, technical literature published in the Soviet Union and abroad. receive such publications. And on their basis abstraction services developed and consequently magazines on abstraction started to be produced.

Under Viniti, 22 thousand narratives and about 8 thousand books of scientific and technical research journals and serial publications of about 65 languages of 115 countries are collected and the information is descriptive data.

The letters received are presented in the form of indexes. When the card index is prepared, then by arranging them according to different subjects, natural science, technology and other materials are published together by Viniti in the form of abstract magazine. With its service, scientists and experts make research work easy by providing them with the desired information about their subject.

Objectives of VINITI : There are many objectives of Viniti, among them the main objectives are as follows :

(i) Publishing the latest research informative materials of natural and applied sciences in the form of abstract journals, but the materials of architecture, building equipment and agriculture have not been included in this.

(ii) To organize information activities for research at the national level and increase their coordination and retrieval of scientific information, mechanical methods.

(iii) To make available information to all kinds of experts and scientists and technologists.

(iv) To make the scientists aware of the research objectives of the Russian organizations.

Note

(v) To combine scientific and practical work relating to the collection and provision of information to the users through publications, magnetic traps etc. or through a network of specified institutions.

(vi) To promote scientific research and cooperate in its editing to overcome the difficulties arising in the field of scientific information.

(vii) To arrange training for the enhancement of knowledge of experts related to scientific and technological information systems.

Following are the main functions of Viniti :

(i) Complete and systematic collection of world literature in the field of natural science and technology.

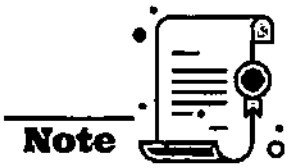
(ii) Observation and publication of bibliography, reference service and abstracting magazine helpful in providing specialized service on various subjects related to subjects of social interest.

(iii) To organize and conduct research projects to bring about excellence in the methods and equipment involved in the work of scientific information.

Different Organizations of VINITI : For the purpose of smooth and successful completion of the works of Viniti, it has been divided into the following departments :

- Receipt Department
- Technology Department
- Bibliography Department
- Abstraction Department
- Translation Department
- Publication Department
- Instruction Department
- Context and Service Department

The Abstracting Service Department : Viniti has been engaged in continuous abstraction service since 1953. In 1960, 12 thousand magazines in 92 countries and 65 languages of the world were abstracted. In 1961, Vineeti published one million abstracts of abstract magazines in 16 series. Viniti also includes documents, books, reviews and standards of research journals under abstraction. At present, Vineeti publishes the contents of 22 thousand scientific and technical journals and 8 thousand research level books in 65 languages of 115 countries of the world in Saar Patrika. It publishes over one lakh abstracts annually. Its 16 series of services are published for the purpose of providing information material to science and other subjects.



Features of Abstract

(i) Summary or explanatory statement is presented according to the nature and characteristics of the document in the entries of the summary.

(ii) Abstract journals mainly include research journals, reviews, monographs, original works, reference sources, etc. documents in the areas of natural science and technology.

(iii) Abstracts contain an average of 350 words and a maximum of 1000 words which includes the purposes of the documents, the methods used on the theoretical basis, the results, statistical facts and the author's point of view are printed

(iv) 120 words are allotted to explain the abstract.

For example, in the abstract of chemistry, the index has been divided into five parts.

1. Author Index
2. Subject Index
3. Formula Index
4. Patent Index
5. Reaction Index

1. **Acquisitior and Collection Department :** The main function of this department is to organize the collection, acquisition, accession, registration of magazines used in abstraction and other bibliographic publications. It has about 500 publications in 61 countries by more than 1084 organizations and institutions. A hand book is also prepared for Saar Patrika by Viniti. In the journals used in the abstract, 40 percent of the journals are in English and after access they are classified by the Universal Classification Method (UDC).
2. **Bibliography Department :** From time to time publication of Wangmay Lists is also done. In which a tabular index of the works of five to ten subjects is prepared. of this department. It also includes a review service. This is called the science-progress series. In the field of mathematics, physics, chemistry, metallurgy, biology, geology, geography, etc., such eloquent service is provided to scientists. Viniti also provides service by doing critical work on these topics.
3. **Translation Service Department :** Translation service is provided extensively by Viniti. The translation service is made available by Vineeti upon request of the organizations and users,the articles that

Note

are translated. A Scientific Bulletin is published for tables to their titles. Viniti prepares definitions, glossaries and corpus of terms to make translation work easier. These are presented on leaflets because of the abundance of terminology. From time to time Viniti publishes a Bilingual Dictionary. The Soviet Union is the leading country in the work of terrorism. Any important text or document of the world is translated here immediately. Any translation is completed by Viniti in a period of one month. The help of instruments is also taken here for translation.

4. **Technical Department :** Under this department, Viniti solves all the technical problems of its information system. Profitable methods are adopted by researching the latest arguments in information service, so that information can be obtained quickly. Under this department there is also the Department of 'Automatic Reference Information System for Science and Technology' which is an important organization of Viniti. It is technical.

6. **Publication Department :** Through VINITI related abstract services, subject experts can get information about their respective fields, such as a magazine called Mechanics, which provides complete information about the research happening under mechanics. The major publications of Vineeti are as follows :

   (i) **Referativnyi Zhurnal :** This is an abstract magazine whose publication was started in 1953. This magazine is the most authentic and basic publication providing timely accessibility service (CAS) and retrospective information. After 1960, in addition to natural science and technological science, the following subjects were also included in this magazine, which are as follows, Astrology and geo-mathematics; Biology, Biological Chemistry; Geography; Geology; Mining GeoPhysics; Mathematics; Physics; Chemistry; Economics.

   There was a great demand for this magazine by scientists of many countries of the world, due to which the form of this journal was broadened from 1963 and its new name given as Scientific and Technical Information. In this, articles related to various fields are published related to documentary sources of scientific information, their types, methods of collection and dissemination, copying and techniques, fast methods of document printing, technical means of information work, use of information material, etc.

Note

This magazine was published in 1967 by F.I.D. (International Federation of Documentation) began to be published in the English language. Viniti collects published literature on various subjects of science in 65 languages of 115 countries of the world, of which 29 languages are Russian, then divides that literature into specific subject areas and publishes the abstract in several parts. To make the information work more accessible, the author and subject index is published at the end of each issue and then at the end of each section also this index is published. Apart from this, it also has classified subject formulas and patent indexes as per the requirement. Any information in this magazine is published in a period of three to four months after it is published in the first source.

(ii) **Express Information :** In this magazine those are published which are related to the subjects in the field of science and technology. 48 issues of this magazine are published in a year. In which there is annotation and bibliographical information along with articles, patents and other documents. The magazine is divided into 69 subject categories. These categories are mainly related to major industries like - Minings, Railway Transport, Radio Engineering, Textile Industry, Inorganic Chemistry etc. Industries are related. After reading the article of this magazine, its importance has increased even more. Any information in this journal is published one month after it was published in the primary source.

(iii) **ISGNL Information Bulletin :** This journal is published in 12 issues in a year along with an annual index of authorship of bibliographic information classified in the subject areas of Physics, Chemistry and Technology. This magazine has been published since 1966 in Russian, English-German and French languages.

(iv) **Pilot Information :** This magazine publishes the latest information on science and technology subjects. After publication in the primary sources of any information, this information gets published first in it. Which is a significant achievement of the magazine. In this way, this magazine helps in meeting the library and its demand and two issues of this magazine are published in a month.

(v) **Itogi Nauki (Results of Science) :** Through this journal, it is published in order to generalize the research work done in

Note

different branches in the field of science and technology. In this, information about the progress made by scientists in their related subjects is easily available. In this journal, bibliographic information and reviews of related subjects are also published and it was started in 1962 on the basis of information from the referential journal.

(vi) **Scientific and Technical Information :** In this journal, translation and review of original articles published in foreign journals are published. The articles published in it are mainly related to the theory of information, methods of information exploration, organization of information. Information related to development in the national economic structure is also published in this magazine.

(vii) **Advances in Science :** Advances are published by Vineeti in the form of their review on the basis of abstracts published in the Refractive Journal. 74 such advances have been published on various subjects in the fields of science and technology. Including Astronomy, Radio Electronics, Biology, Chemistry and Geophysics are the main ones.

[(ASSISTENT System : Automated Reference Information System for Science and Technology.

This assistent system of Viniti is the main organization of information transmission. It is more related to technical departments. Initially this concept of other countries of the world remained. It was believed that Viniti does only the work of gathering information. In order to remove the misconception of those countries, Viniti improved its information system by making changes in 1969 and complete information transmission, the latest equipment was used and the entire information system was mechanized, as a result of this the difficulties faced in the work of abstraction, sequencing, translation service and document presentation etc. were automatically removed. To mobilize appropriate planning of information service. An integrated information system was established in it by Viniti and the same is known as Assistent.

Due to its strong structure, industrial production and research work in this area. Much progress has been made. By this, in the field of reference service such as selected information dissemination service. Finding out the areas of forward-looking research, making the online facts available again and providing a copy of the articles published in the broadcast service magazine, etc. Revolutionary changes took place in the improvement of the works.

Patents Information

Patent Information Policy is a specialized organization that is an integral part of the Science and Technology Information Service. The following functions were developed through the Patent Information System :

1. To prepare the patent file for effective use.
2. To disseminate information about the latest patents accepted in Russia and other countries.
3. To provide reference service on patent information to Russia and abroad.
4. To broadcast patent information in the country.

Weekly Bulletin on Patent Notice including Annual Issue is published.

Computerized Information Service : Russia develops information systems by computer for the advancement of science and technology in its country. It provides information service in the following ways :

1. Retrieval of facts and figures related to science and technology;
2. To provide computer information of all materials available in the Centre;
3. Providing selected information dissemination service;
4. Prospective search and service delivery;
5. Providing information in machine readable format.

Conclusion

The working method of Viniti, despite being very complex, seems to be simple because a scientific method has been adopted for the methods of working in it. In this, scientific and technological fields are benefited by providing latest information to the country and abroad with new equipment as well as mechanized information systems and computerized service in it. Its functions are divided into different groups which are efficiently performing the responsibility of their respective areas. Vineeti also provides information to its readers and scientists of member countries through the Inter-Library Loan.

5.6 (OCLC Inter-Library Loan System)

OCLC The Inter-Library Loan (ILL: Inter - Library Loan) system of (OCLC Online Computer Library Center) is the world's largest inter-library loan system, which is used by more than 5,400 libraries worldwide. Establishment of an on-line library network, OCLC was done in 1969 in USA. The purpose of its establishment is computer based interactive cataloging. Over time, the number of participating libraries increased, and its online federal catalog (OLUC: On-line Union Catalog) grew exponentially.

Note

As the online union catalog grew, it introduced the ILL Sub-system in January 1979, combining its bibliographic records and library collections. Currently O. C. L. C. Libraries using the subsystem have on-line access to 35 million (35 million) documents held in 23,000 libraries in 63 countries in the world. In the last 17 years Libraries affiliated to O.C.L.C. have exchanged 67 million (6 crore 70 lakh) e-records of documents using its inter-library loan system. 6 million (60 lakh) inter-library loan requests are handled by this system in a year.

OCLC is a for-profit library computerized network. The main objective of this system is to reduce the information cost and make access to the information easier. Today 11000 libraries in 41 countries are connected in this network. OCLC was established in 1967. The term was previously used for the Ohio College Library Center. Originally it was an automated cooperative listing undertaking. today. In this one crore ten lakh records have been added and 25000 records are being added per week. This database is available online, on which information is available from International Network system. Today OCLC's Interlibrary Loan (ILL) system receives 3.5 million inter-library loan messages per year. It takes 4 days to complete this service. The Inter-Library Loan System is an on-line communication mechanism. In which the solicitations are executed on their own. More than 3500 organizations are actively using this system all over the world. OCLC collaborates with some other National Credit Centers to provide the service. These institutions are the British Library Document Distribution Center

OCLC collaborates with some other National Credit Centers to provide the service. These institutions are the British Library Document Distribution Center, Document Supply Centre; The Staatsbibliothek, Denmark; Federal Republic of Germany: Center de pt France etc.)

Other libraries which provide inter library loan service through OCLC network are :

1. Chemical Abstract Service
2. The Library of Congress
3. National Technical Information Service, Canada etc. The National Technical Information Services in Canada etc.)

OCLC's Inter-Library Loan Service is a worldwide network that facilitates the exchange of textual materials between OCLC member libraries and other institutions. This is the world's largest online federation list. British Library Document supply Center (BLDSC) Bostan spa. this. The center was established in 1973. It is a major document supply center in the world. 30 lakh requests are received every year in this center. In this, requests can be made by post, fax, telephone and on-line database. Its collection

is very wide. Its compilation includes 2,28,000 journal titles, 30,00,000 reports, 5,00,000 dissertations, 30,00,000 treatises, 3,00,000 conference proceedings. In addition, it takes the help of 17 backup libraries to satisfy the documentation requirements of its readers.

5.7 ENVIS (Environment Information System)

Envis is a decentralised computerized network data base system consisting of the focal point located in the ministry and a chain of network parteners known as ENVIS centres located in the potential organizations/institutions throughout the country. In order to develop ENVIS network as a comprehensive distributed environmental information system, the ambit of ENVIS was extended to cover all the states of the country.

Objectives of ENVIS

The objectives of ENVIS are classified into two broad categories—long term and short term objectives.

The short term objectives of ENVIS are as follows :

1. To promote exchange of information amongst the developing countries.
2. To build up storage, retrieval and dissemination capabilities with the ultimate objectives of disseminating information speedily to the users.

The long-term objectives of ENVIS are as follows :

1. To support and promote research, development and innovation in environment information technology.
2. To build up a repository and dissemination centre in Environmental science and engineering.

Environmental Information System (ENVIS) is a closed, web enabled and comprehensive portal that provides information on environment and related subject areas to researchers, academicians, policy planners, environmentalists, scientists, engineers and the general public. It is a decentralized network of databases in operation since 1982-83 (Sixth Plan) and run by the Ministry of Environment, Forest and Climate Change.

As of October 2016, the network consists of 70 union territories housed in reputed institutions. Out of which 30 centers are related to the state of 'environment and related issues. There are 38 such environmental subjects, of which ENVIS is the center. ENVIS centers work for information collection, collocation, storage, retrieval and dissemination points on specific subject areas and for the State/UT as a whole.

Note

The output of ENVIS is presented in a user-friendly manner through the State-level Basic Environmental Information Database of India with the help of Geographic Information System (GIS). It provides for charting and tabular presentation of data. The information is disseminated to all stakeholders and national and international users. Query response, documentation and referral services to individual NGOs are also provided by ENVIS.

5.8 NASSDOC

National Social Science Documentation Centre (NASSDOC) a constituent unit of the Indian Council of Social Science Research, was established in 1969. NASSDOC aims to provide library and information support services to social researchers. NASSDOC provides different services :

1. Library and Reference Service
2. Nassdoc Database / Publications
3. Current Awareness Service
4. Acquisition of Research
5. Document Delivery

The NASSDOC library is a collection of reference sources. Provides books on subjects like bibliography, encyclopedias, doctoral theses, research project reports, etc. The collection has been bound from time to time including publications of Indian/foreign journals and other abstracts and indexing journals in social sciences, newspapers and annual reports of organizations. Government reports and institutional publications are also acquired.

5.8.1 NASSDOC Databases/Publications

One of the major activities of NASSDOC is the creation of databases and locating tools. The products of NASSDOC include Library Databases, Directories, Indian Social Science Periodicals Literature (INSSPEL), Union Catalogues, Bibliographies and Journals. Some of these are :

(i) **Database of Research Project Reports :** This database covers bibliographic details like author, title, subject, etc. of over 3000 Research Project Reports funded by ICSSR as well as by other organisations. It is available both in print and digital form.

(ii) **Database of Ph.D. Dissertations :** The database covers bibliographic details like name of the researcher, topic of dissertation, year of award of Ph.D. degree, etc. of about 5000 dissertations acquired by NASSDOC. The database is available both in print and digital form.

(iii) **Directory of Social Science Libraries and Information Centres in India :** The Directory gives information of 447 social science and allied disciplines, libraries and information centres attached to government agencies, research and training institutes under various ministries, universities and autonomous bodies, banks, industry and trade, etc. Information about libraries having independent name, is given by references provided by their parent institutions. Each entry contains address of the library, e-mail, strength of the staff, type of collection, budget, subject coverage, computerisation details, facilities and services provided like photocopying, bibliography services, inter-library loan, online databases, literature search, translation, etc. The data given in the directory may enhance cooperation and resource sharing among Indian libraries and information centres.

(iv) **Directory of Social Science Research and Training Institutions in India :** This directory given comprehensive list of about 450 social science institutions engaged in research and training in India. It provides details on areas of research, major achievements, special facilities, current research projects, publications, type of staff, library collection and services, relations with national and international organisations, and complete postal address with telephone, telex, fax and e-mail. The Subject Information Sources, Systems and Programmes Index and Location Indexes are appended in the directory to provide multiple access points. The directory was last updated in 1996.

(v) **Directory of Asian Social Science Research and Training Institutes/Organisations in India :** This directory provides information of about 42 teaching and research institutes on Asian Studies in India. Each entry contains information about the name, address of the institution, type of organisation, type of staff, aims and objectives, activities, parent organisation, publications, name and level of training courses, library collection and services and facilities provided by the institution. Also appended are Subject Index and Location Index.

(vi) **Union Catalogue of Social Science Periodicals and Serials in India :** Since 1970, the compilation of the Union Catalogue of Social Science Periodicals and Serials is being undertaken by NASSDOC. The complete database was published in 32 volumes, having details of 31,125 journals in 550 libraries, in 17 states and two union territories, having a separate volume of the National Library, Kolkata.

Note

Union Catalogue of Periodicals in Chennai, Mumbai and Hyderabad libraries have been updated till the year 2000. The periodical details in Chennai cover location of 867 journals in 12 libraries, Union Catalogue of Periodicals in Hyderabad provides location of 4,455 titles in 25 libraries, whereas, Union Catalogue of Periodicals in Mumbai covers 2,928 journals available in 16 libraries. All the three Union Catalogues are available in machine-readable format also.

(vii) **Union Catalogue of CD-ROM Databases in Social Science Libraries in India :** This catalogue covers information about 132 CD-ROM databases available in 40 major social science libraries and information centres in India. It provides information about the title of CD-ROM database, frequency, brief annotation, information about the producer/vendor and library symbols along with holdings of the respective CDROM databases.

(viii) **Bibliography on India in 2000 A.D. :** This bibliography has a record of 647 select books and articles appearing in journals, published and unpublished research reports and seminar papers, etc. on India in English language covering the period up to the first half of 1987. It also includes articles on Asia and the world with some bearing on India.

Objectives of NASSDOC

The objetives of NASSDOC are as follows :

1. It provide financial assistance for documentation and bibliographic projects.
2. It make-available study grants to doctoral students for collection of research material from libraries located in various parts of the country.
3. It disseminate information about developments in social science research.
4. It provide library and information support services to the researcher in the field of social science.
5. It provide guidance to the libraries of ICSSR Regional centres and ICSSR maintained research institutions.
6. It conduct short term training courses for social scientists, research scholars, librarians and IT professionals.