

Annual Report

April 1, 2010 to March 31, 2011



Information and Library Network Centre

(An Autonomous Inter-University Centre of UGC)

INFLIBNET

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(An Autonomous Inter-University Centre of UGC)

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Dr Jagdish Arora
Director



I am pleased to present the Annual Report of the INFLIBNET Centre for the Financial Year 2010-2011. It is an opportunity for us to reflect upon our accomplishments and shortcomings during the year. It was a highly successful year for the Centre as our existing programmes were rejuvenated and new projects that were launched during the past years began to show results and establish their credibility and acceptability amongst educational institutions in India.

A number of important developments took place in our flagship programme on union databases of books, serials and theses. The maintaining and updating union catalogues is a tedious task that requires a great deal of standardization of bibliographic records contributed by a large number of institutions in diverse formats. As such, a robust and intuitive platform is essential to support the task of error detection, correction, duplicate detection, standardization and merging of records in the union databases. Beta version of the Union Catalogue Management System ver. 2 (UCMS 2.0) was released during the year under report to handle bibliographic records in MARC 21 format as well as to provide additional search capabilities for updating the bibliographical records. The UCMS 2.0, a web-based union catalogue management platform, caters to all functional jobs that are carried out by the Database Development Team on the bibliographic records contributed to the union database of books. Likewise, independent record management platforms were also developed for effective and efficient management of serials and theses databases. Besides, a new interface called "Online Copy Catalogue System (OCS)" was developed that facilitates participating libraries to interact with union catalogue of books and either catalogue their new acquisitions online or download selected records from union database directly into SOUL 2.0. The interface was made available to 13 university libraries that are using SOUL 2.0 for extensive testing and experimentation. The initial results of testing are quite encouraging. The OCS, once fully implemented for all the LMS software, would potentially eliminate the requirement of collecting bibliographic records from member universities and merging them in union database.

The SOUL 2.0, launched in January 2009, grew in terms of its market share as well as features and functionalities that were added to it. Several new patches, incorporating new features and functionalities, were developed and were made available to users free-of-cost. A number of software customisation tasks were undertaken to tailor-made the software to meet specific requirements of user's institutions. With larger interest of promoting wider use of SOUL software, SOUL Query Management System (SQMS) was developed to provide better after-sales support to the SOUL users and to handle their queries more effectively and efficiently. The software has been tested successfully and is being implemented. The total number of installations of SOUL software grew to 2,321 by the end of March 31, 2011.

One of the major achievements during the period under report is development of Subject Gateway Management System (SGMS). The SGMS is designed to facilitate building up of a subject portal consisting of Internet resources that are available in open access. The SGMS facilitates subject wise classification of Internet resources, free-text and alphabetical search, resource type search and "search cloud". The software was populated with more than 1,000 resources for testing purposes. The subject gateway covering selected Indian resources using SGMS is now ready for release.

With multitude to programmes and projects that the Centre now handles, it is imperative to implement technologies that facilitate hosting of multiple applications and interfaces on a limited number of servers. Cloud computing and other virtualization technologies offer a new route to access and optimally utilize available computational infrastructure. The virtualisation technology was applied in the Centre to create multiple execution environment and to host multiple interfaces and applications on a single server. As such, Parichay: Federated Access Management System, Shodhganga, Shodhgangotri and Institutional Repository @ INFLIBNET are hosted on a single virtual server. The virtual server has been implemented successfully at the INFLIBNET with effective portioning of CPU, RAM, secondary storage and Network Interface Card.

The Centre had launched two important open access initiatives, namely Shodhganga and Open Journal Access System (OJAS). Both the initiatives have taken a definite shape and are doing well. While twenty universities have signed MoU with the INFLIBNET Centre, students from more than 16 universities have started submitting electronic version of their theses into Shodhganga as on 31st March 2011. Total number of theses submitted into the repository has grown to 1,600. The OJAS has grown both in terms of number of journals as well as number of users in open access environment. The OJAS now hosts six journals and several new requests are pouring in for uploading new journals on OJAS.

The Centre takes pride in the fact that the task of enhancing the Internet connectivity to 10 Mbps (1:1) for more than 165 universities was accomplished within a short span of 1 to 4 months with switching over of Internet Service Provider from ERNET to BSNL. Moreover, the UGC-INFONET Connectivity Programme paved the way for early commissioning of NKN/NME-ICT connectivity given the fact that the fibre optic cables laid for the UGC-Infonet Connectivity Programme was used for providing greater bandwidth (one Gbps) to universities under the NME-ICT/NKN programme. As such, more than 90 universities migrate to NME-ICT/NKN scheme from the UGC-Infonet by end of March 31, 2011. I am happy that the INFLIBNET Centre has also been accepted as a beneficiary institution for NKN connectivity.

The UGC-Infonet Digital Library Consortium continued to thrive during the year under report. The number of journals offered under Consortium grew to 7,500 with inclusion of Science Direct (10 subject collections, 1036 journals) and Wiley InterScience (907 journals). These were the two resources that were most sought after and most universities were pressing hard to get these resources through the Consortium. Moreover, the Centre took the initiative of include all universities covered under 12 (B) and 2(f) Sections of the UGC Act under the ambit of UGC-Infonet Digital Library Consortium. All eligible universities, not yet covered under the Consortium, were requested to apply for the membership of the Consortium and avail access to e-resources. The usage of e-resources provided through the Consortium also grew both in terms of number of downloads as well as number of searches conducted. There is an overall 22.76% increase in number of downloads from 2009 to 2010. Moreover, average cost of article downloaded from the journals accessible through the Consortium came down to Rs. 55.94. More than 25,000 articles were supplied by the INFLIBNET Centre and its 22 ILL Centres to other universities using JCCC that provides content level access to all articles covered in journals subscribed by the Consortium as well as by 22 ILL Centres. Associate Membership Programme of the UGC-Infonet Digital Library Consortium enrolled 76 members including private universities and other organizations. These institutions pay their own subscription for getting access to e-resources through the Consortium.

Important developments were made in configuring Shibboleth, an open source software tools that facilitates off-campus access to e-resources to the authorised users. The Shibboleth system was customised and interfaced with MySQL database (instead of LDAP/Kerberos) database to suit local environment created for implementing EZproxy @ INFLIBNET. The Centre has induced Shibboleth into EZproxy by overriding native authentication mechanism of EZproxy. As such, EZproxy hands-off authentication task to Shibboleth, if the resource is Shibboleth-compliant, and non-Shibboleth compliant resources are proxied through EZ Proxy in the usual course. The system is now ready for implementation.

The 8th International CALIBER 2011 was organised at Goa University, Goa from 2nd to 4th March, 2011 on the theme “Towards Building a Knowledge Society: Library as Catalyst for Knowledge Discovery and Management”, in collaboration with the Goa University, Goa. More than 400 delegates participated in the Convention including delegates from Sri Lanka, Canada, UK, US and Singapore. 62 papers were selected for presentation in the convention and 120 papers were selected for poster sessions from amongst 220 submissions. Prof. Arun Nigavekar, former Chairman, UGC inaugurated the convention and Prof. Ajith Kembhavi, Chairman, NSC, UGC-Infonet Digital Library Consortium, delivered the keynote address. The convention was highly successful both in terms of participation of large number of stakeholders as well as detailed discussions that the participants had on the theme of the convention.

The “National Library and Information Services Infrastructure for Scholarly Content” (N-LIST), jointly executed by the INFLIBNET Centre and IIT Delhi with financial support from the MHRD under its National Mission on Education through ICT, was formally launched by the Honourable Union Minister of Human Resource Development, Shri Kapil Sibal on 4th May, 2010. The N-LIST Programme provides online access to more than 2,100 electronic journals and 51,000 e-books to colleges covered under 12 (B) and 2(f) Sections of the UGC Act. The number of colleges covered under the programme grew to 1,236 and number of registered users from these colleges grew to more than 1,30,000 by the end of March 31, 2011. I am proud to inform that the N-LIST Programme was awarded the Jury Choice e-INDIA 2010 Award in the Category Digital Learning through ICT in Higher Education Institute for the year 2010 and Manthan South Asia Award 2010 in Digital Learning Category for the year 2010.

The construction work of Academic and Administrative Blocks of the Institutional Building is progressing well in Infocity, Gandhinagar on the land allotted to the Centre by Government of Gujarat, free-of-cost. As on 31st March, 2011, the excavation and foundation PCC work for the basement under the entire portion of Academic and Administrative block of the building was completed including erection of RCC walls on all sides of the basement. While the Administrative Block of the building has been raised up to the 4th floor, Academic Block, including auditorium, has been raised up to 2nd floor, remaining three floors of Administrative Block and five floors of Academic Block are under construction. It is expected that the civil construction work of the building will be completed by the end of 2011. I am pleased to inform that the UGC has sanctioned funds required for construction of residential Block of the Institute Building also.

I am sure, the user community in institutions of higher learning would enjoy going through the report and take note of our accomplishments and value-added services during the year under review.



(Jagdish Arora)

INFLIBNET Centre, Ahmedabad
24th October, 2011

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1. Introduction

The Information and Library Network (INFLIBNET) Centre is an autonomous Inter-University Centre (IUC) of the University Grants Commission (UGC) located at the Gujarat University Campus, Ahmedabad. Major activities and services of the Centre are geared towards modernization of academic libraries and information centres, to promote information transfer and access, to support scholarship, learning and academic pursuits. The Centre acts as a nodal agency for networking of libraries and information centres in universities, institutions of higher learning and R & D institutions in India. The Centre was established as an independent autonomous Inter-University Centre of the UGC in May 1996 and set out to be a major player for promoting scholarly communication among academicians and researchers across the country.

The technology being a driving force in the contemporary education system, the Centre, on behalf of the UGC, has taken-up a number of initiatives for the benefit of the academic community. These initiatives include i) UGC-Infonet Connectivity Programme that provides for networking of university campuses and Internet connectivity; ii) UGC-Infonet Digital Library Consortium that extends access to selected scholarly electronic journals and databases to the universities in different disciplines; iii) Shodhganga: A Reservoir of Indian Electronic Theses and Dissertations, that enables online submission of theses and dissertations by research scholars in digital repository set-up at the INFLIBNET Centre; iv) Open Journals Access System (OJAS) @ INFLIBNET that facilitates faculty and researchers in Indian universities to launch their open access journals on OJAS platform offered by INFLIBNET Centre; and v) Access management technologies that would facilitate users to access e-resources irrespective of their physical location. Besides, the Centre has recently launched a project entitled “National Library and Information Services Infrastructure for Scholarly Content” (N-LIST) that provides access to electronic journals and electronic books to eligible colleges.

2. Mission and Vision

- ▶▶ Leveraging on the latest technology, create a virtual network of people and resources in academic institutions with an aim to provide effective and efficient access to knowledge through perseverance, innovation and collaboration;
- ▶▶ Provide seamless, reliable and ubiquitous access to scholarly, peer-reviewed electronic resources to the academic community in all educational institutions with a focus on services and tools, processes and practices that support its effective use and increase value of this information;
- ▶▶ Build and strengthen ICT infrastructure in educational institutions with value-added services;
- ▶▶ Develop tools, techniques and procedures for secure and convenient access management enabling users to access information in electronic format from anywhere, anytime;
- ▶▶ Develop resource selection guides and online tutorials for effective delivery and usage of e-resources; and
- ▶▶ Facilitate creation of open access digital repositories in every educational institution for hosting educational and research content created by these institutions.

3. Aims and Objectives

The objectives of the Centre, as per the Memorandum of Association (MoA), are as follows:

- a. to promote and establish communication facilities to improve capability in information transfer and access that provide support to scholarship, learning, research and academic pursuits through cooperation and involvement of concerned agencies;

- b. to establish information and library network - a computer communication network for linking libraries and information centres in universities, deemed to be universities, colleges, UGC information centres, institutions of national importance and R&D institutions, etc. avoiding duplication of efforts;
- ▶ to promote and implement computerization of operations and services in the libraries and information centres of the country, following uniform standards;
 - ▶ to evolve standards and uniform guidelines in techniques, methods, procedures, computer hardware and software, services and promote their adoption in actual practice by all libraries, in order to facilitate pooling, sharing and exchange of information towards optimal use of resources and facilities;
 - ▶ to evolve a national network interconnecting various libraries and information centres in the country and to improve capability in information handling and services;
 - ▶ to provide reliable access to document collection of libraries by creating on-line union catalogue of serials, theses / dissertations, books, monographs and non-book materials (manuscripts, audio-visuals, computer data, multimedia, etc.) in various libraries in India;
 - ▶ to provide access to bibliographic information sources with citations, abstracts, etc. through indigenously created databases of the Sectoral Information Centres of NISSAT, UGC Information Centres, City Networks and such others and by establishing gateways for online accessing of national and international databases held by the national and international information networks and centres, respectively;
 - ▶ to develop new methods and techniques for archiving of valuable information available as manuscripts and information documents in different Indian languages, in the form of digital images using high density storage media;
 - ▶ to optimize information resource utilization through shared cataloguing, inter-library loan service, catalogue production, collection development and thus avoiding duplication in acquisition to the extent possible;
 - ▶ to enable the users dispersed all over the country, irrespective of location and distance, to have access to information regarding serials, theses/dissertation, books, monographic and non-book materials by locating the sources wherever available and to obtain it through the facilities of the INFLIBNET and union catalogues of documents;
 - ▶ to create databases of projects, institutions, specialists, etc. for providing online information services;
 - ▶ to encourage co-operation among libraries, documentation centres and information centres in the country, so that the resources can be pooled for the benefit of helping the weaker resource centres by stronger ones; and
 - ▶ to train and develop human resources in the field of computerized library operations and networking to establish, manage and sustain INFLIBNET;
- c. to facilitate academic communication amongst scientists, engineers, social scientists, academicians, faculty, researchers and students through electronic mail, file transfer, computer/audio/video conferencing, etc;
- d. to undertake system design and studies in the field of communications, computer networking, information handling and data management;

- e. to establish appropriate control and monitoring system for the communication network and organize maintenance;
- f. to collaborate with institutions, libraries, information centres and other organizations in India and abroad in the field relevant to the objectives of the Centre;
- g. to promote R&D and develop necessary facilities and to create technical positions for realizing the objectives of the Centre;
- h. to generate revenue by providing consultancies and information services; and
- i. to do all other such things as may be necessary, incidental or conducive to the attainment of all or any of the above mentioned objectives.

4. Physical Infrastructure

The Centre is constructing its Institutional Building on land measuring 10,000 sq. mtrs (approx. 2.5 acres) allotted to the Centre by the Govt. of Gujarat free-of-cost. The land is located in the Infocity, Gandhinagar amidst reputed educational institutions such as NID, DAIIT and NIFT. The Centre has hired services of M/s Vastu Shilpa Consultants as its Architect for designing and constructing the building; M/s. Katira Construction, civil contractor for constructing the building and M/s. Ananjiwala Consultants, Project Management Consultants for quality control and for supervising the construction activity. The construction of the Institutional building was started soon after the Bhoomi Pooja on 27th October 2009. The Foundation Stone for the Building was laid by the then Hon'ble Chairman, UGC and President, INFLIBNET Council, Prof. Sukhadeo Thorat on 27th January, 2010.



Fig. 1: INFLIBNET Centre's Building under Construction

The building of the Centre is designed by internationally acclaimed architect and renowned academician Dr Balkrishna V Doshi of Vastu Shilpa in consultation with other experts in the field of sustainable, eco-friendly and energy-efficient building. The project is being executed on a turn-key basis from concept to completion

within a period of two years. In the first phase, total built-up area of 1,20,000 sq. mtrs is being constructed that include Academic and Research Blocks, Administration, Library, Auditorium and Lecture Halls at a cost of around Rs. 22 Crores. In the second phase, 65,000 sq. ft. built-up area will be undertaken with an estimated cost of Rs. 8.00 Crores which would include Hostels, Guest House, Staff Quarters, Director's Residence, etc. Fig. 1 depicts INFLIBNET Centre's Building under construction.

As on 31st March, 2011, the excavation and foundation PCC work for the basement under the entire portion of academic and administrative block of the building has been completed including erection of RCC walls on all sides of the basement and construction of 62 columns. While the Administrative Block of the building has been raised up to the 4th floor (21.00 Mtrs. H), Academic Block, including auditorium, has been raised up to 2nd floor, remaining three floors of Administrative Block and five floors of Academic Block are under construction. Construction of the main stair-case of the building has been completed up to the third floor i.e. Plaza level. The total concreting work done till March 31, 2011 is about 4,500 Cubic Mtrs. It is expected that the civil construction work of the building will be completed by July 2011.

Progress made in the construction of the building is being reviewed in the weekly meetings convened at the site office with representatives of Vastu Shilpa, M/s. Katira Construction, M/s. Anandjiwala Technical Services and INFLIBNET Centre and reported to the Building Committee. The current composition of the Building committee is given in Appendix I.

5. Governance

The Centre is governed by its Governing Board and Governing Council. The Finance Committee, a subcommittee of the Governing Board, looks after the financial aspects of the Centre. Constitution and major responsibilities of these three committees are described below:

5.1. Governing Council

Governing Council (GC) is an apex body of the Centre chaired by its President, ex-officio Chairman of the UGC. The Council has seven ex-officio members and three nominated members. The members of the Governing Board are also members of the Council, as such, total number of members of the Council is 21. The nominated members of the Council serve for a term of 3 years. The Director, INFLIBNET is the Member-Secretary of the Council. The Council meets once in a year. The present members of the Governing Council are listed in Appendix II.

5.2. Governing Board

Governing Board (GB) manages, administers, directs and controls the affairs of the Centre as per Rules and Bye-laws of the Centre. The Governing Board is headed by a Chairperson, who is an eminent academician in the areas of relevance to the Centre and is appointed by the President of the Council. The Governing Board has six ex-officio members and seven nominated members who are nominated by the Chairman, UGC. The Director, INFLIBNET is the Member-Secretary of the Board. The Governing Board meets at least twice a year. The current members of the Governing Board are listed in Appendix III.

5.3. Finance Committee

The Finance Committee (FC) is a sub-committee of the Governing Board and consists of eight members. It has seven ex-officio members and one nominated member. The Chairman of the Governing Board is also the Chairman of the Finance Committee. The Administrative / Accounts Officer of the Centre is the Non-member Secretary of the Committee. The Finance Committee makes recommendations to the Governing Board on

- i) Budget proposals of the Centre;
- ii) Scrutiny of the Audited Accounts and replies to the annual Audited Report;
- iii) Approval of sanctioned and additional positions; and
- iv) any other matter on which the Board seeks its recommendations. The Finance Committee meets at least once a year. The minutes of the Committee, after approval by the Governing Board are forwarded to the UGC for examination, approval and release of grants to the Centre. The members of the current Finance Committee are listed in Appendix IV.

6. Human Resources

The Centre employs administrative, scientific and technical personnel for achieving its defined objectives. The technical personnel are mostly qualified in library, information and computer sciences. A list of technical, administrative and supporting staff of the Centre is given in Appendix V.

7. Research and Development Activities

The scientific and technical manpower available in the Centre are organised into a number of working groups based on functional requirement of the Centre. Major R&D and human resource development activities undertaken by the various working group in the Centre during the year under report are given below:

7.1. Database Management R & D Group

The Centre, since its inception, has a mandate to build and maintain union databases of library resources available in Indian university libraries. The Centre has developed "IndCat: Online Union Catalogue of Indian Universities" that contains bibliographic records of books, serials and theses contributed by participating universities in all disciplines. The IndCat consists of bibliographic records that are collected, collated and merged from 142 participating universities in different bibliographic formats. These records are converted into one common format and merged into IndCat with records having holding information for each participating universities. The IndCat is available in open access through in-house developed web interface at <http://indcat.inflibnet.ac.in>. Apart from the databases of books, serials and theses available through IndCat, the Centre also has other non-bibliographic databases developed for benefit of the academic community. The major union databases and number of records in each database are listed below in Table 1.

Name of the Database	No. of Records	No. of Institutions
Books	1,19,13,637	123
GujCat	11,01,233	15
NERCat	2,10,361	8
Theses	2,37,200	238
Current Serials	35,209	213
Serials (Holdings)	50,164	210
CEC's Video Database	15,000	18*
Subject Experts	16,405	524
Subject Experts (NISSAT)	24,164	715
Research Project	13,701	UGC, CSIR, ICAR,
DST, etc		

* CEC and its 17 media Centres

Table 1: Number of Records in IndCat and Other Databases

The Database Management R & D Group comprises of personnel with background in computer and library science. The personnel with background in library and information science are responsible for obtaining bibliographic records from different universities in different formats and converting them into one common prescribed standard format. They are also responsible for merging new records into the union database after due authentication. The personnel with computer science background are responsible for developing software tools for data conversion, data authentication and web-based search interface for the union catalogue. Union Catalogue Management System (UCMS) and IndCat have been developed in-house to address the requirements of the Database Management R & D Group as mentioned above.

7.1.1. IndCat: The Union catalogue of Books, Journals, Theses and Videos

A brief description of union catalogues of books, journals and theses maintained by the Centre, the screenshot (Figure 2) given below is displayed.

7.1.1.1. Union Catalogue of Books

Shri Abhishek Kumar, Scientist B (CS)

Mrs. Vaishali Shah, STO (LS)

Shri Dharmesh Shah, Sr. Project Associate (CS)

Ms. Reshma S Panchal, Project Assistant (LS)

Ms. Seema Chavda, Project Assistant (LS)

7.1.1.1.1. Process for Building Union Database of Books

Process of building union catalogue of books commences with creation of bibliographic records in participating university libraries and their receipt at the INFLIBNET Centre. Steps involved in building of union database of books are as follows:

Step 1. Universities create bibliographic records of books purchased by them using their local Library Management System (LMS). These bibliographic records are exported in standards formats and sent to the INFLIBNET Centre as per the terms of MoU signed between INFLIBNET Centre and universities. The Centre receives bibliographic records from different universities in different formats, such as MS-Excel, MS-Access, Dbase/Foxpro, CDS/ISIS, WINISIS, MS-SQL Backup, CCF, Libsys backup, MARC and its variants.

Step 2. Records received in different formats from different universities are converted into MARC21 & CCF by using tag mapping features of the CDS/ISIS Software.

Step 3. All records undergo the process of authentication, using UCMS so as to correct typographical errors in different fields such as place, publisher, edition, year of publication, etc, duplicate data checking and merging of new records into union catalogue of books.

Step 4. New records, merged into IndCat, are made searchable through a web-based interface.

Search can be performed on title, words in title, author, subject, ISBN, location, place and publisher in the union database of books through IndCat interface. The IndCat interface provides for restricting the search to collections available within an individual university as well as for expanding the search to universities in a given state. By default, the interface searches all bibliographic records available in IndCat for all the participating universities. The search results retrieved from the IndCat can be displayed in following two formats:

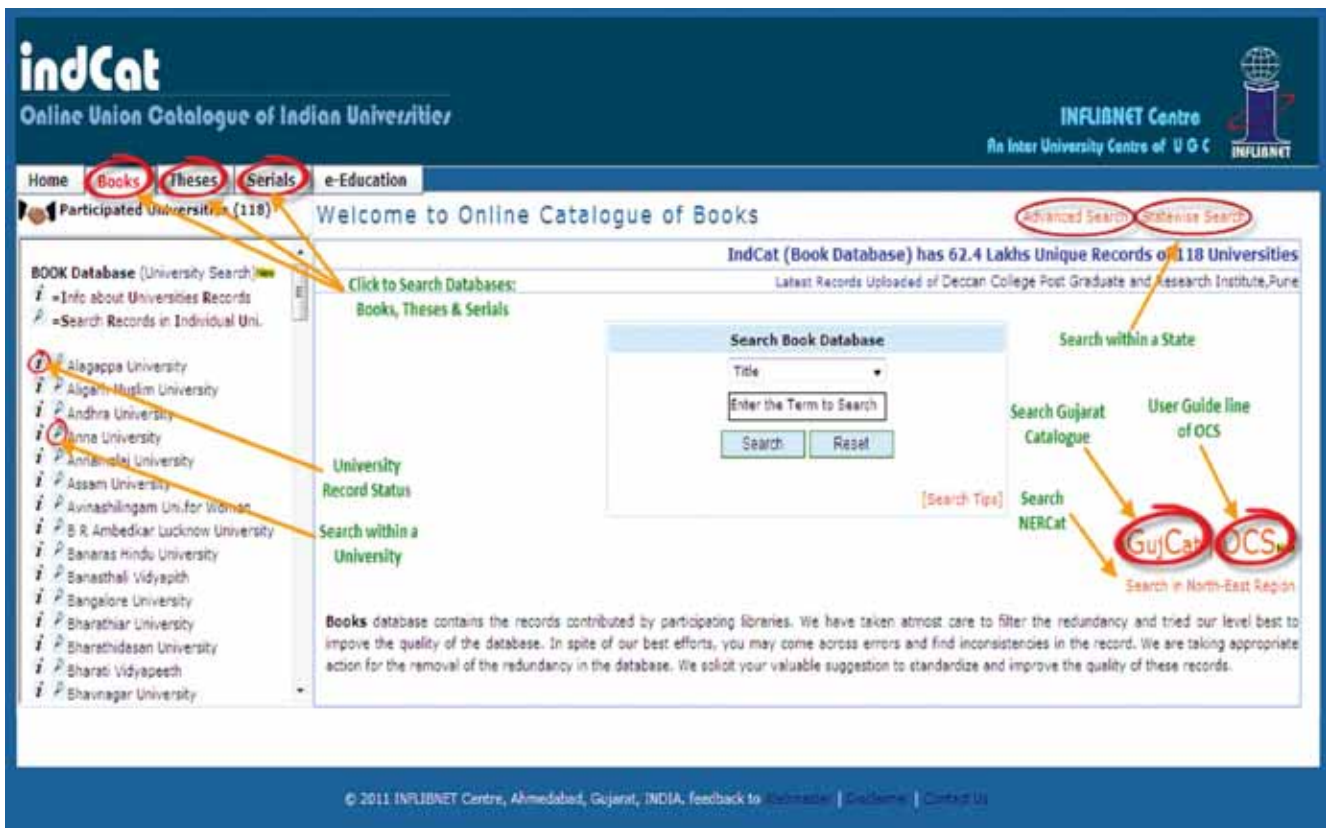


Fig. 2: Search Interface for Books, Theses, Serials and Video

- ▶ **Brief:** By default, retrieved records are displayed in brief when search results are displayed. A brief bibliographic record contains title, author, place, publisher and year of publication.
- ▶ **Descriptive:** A detailed descriptive record contains complete bibliographic details of a book including its location. It is a second-level display that appears when a user clicks at the brief record. The descriptive record also provides option for ILL request. Figure 3 depicts Bibliographic details of Searched Records.



Fig. 3: Bibliographic Details of Searched Records

7.1.1.1.2. Functions and Features of IndCat

i) Restrict Search within a University / State

User can restrict their search to the records available within their own university on different search parameters, like Title, Subject, Author, Place, Publisher, etc.

State wise Search: User can search the book database within a State by Title, Author, ISBN etc.; and Advanced search: Advanced Search provides the facility of Boolean search, i.e. using AND, OR, NOT operators with different search parameters i.e. Title, Author, Corporate Body, Place & Publisher, Year, Subject, Note, ISBN.

ii) Copy Cataloguing

The copy cataloguing feature of the IndCat facilitates downloading of bibliographic records in MARC21, CCF or ASCII format. The downloaded bibliographic records can be imported to any library management software compliant to MARC21 bibliographic format including SOUL 2.0. Effectively, librarians / cataloguers can copy-catalogue bibliographic records of books instead of creating a new record which is a time-consuming and cost-intensive process.

iii) Union Catalogue of Books: Subsets

The union catalogue of books has two subsets namely GujCat and NERCat that are separately designed on demand of the concerned regions:

▶▶ The **GujCat**, a subset of IndCat, is unified online library catalogue of books available in major college/institute/university libraries within Gujarat state. GujCat contains bibliographic description, location and holdings information of books available in libraries in Gujarat. A separate dedicated web-based interface is designed to provide easy-access to the merged catalogues of libraries in Gujarat. GujCat is a major source of bibliographic information that can be used for inter-library loan, collection development as well as for copy cataloguing and retro-conversion of bibliographic records within Gujarat. As on 31st March 2011, the GujCat provides access to 11,01,233 bibliographic records from 15 Universities/Colleges/Institutes in Gujarat. Figure 4 depicts search interface for GujCat.

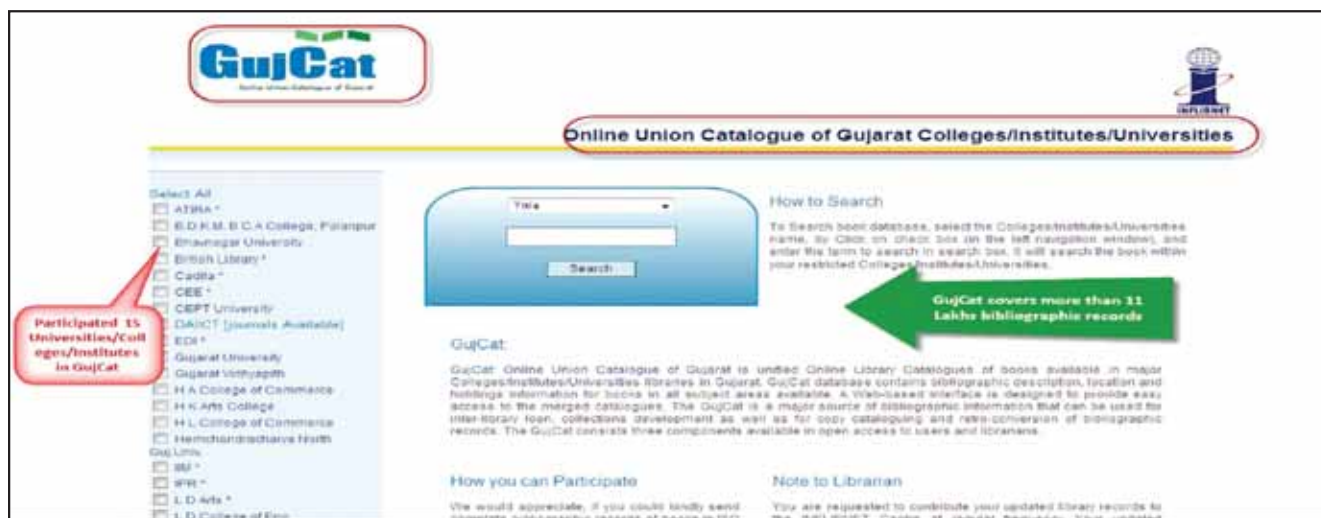


Fig. 4: Search Interface of GujCat

- » The **NERCat**, an online catalogue of books in universities in North-Eastern Region, is another subset of IndCat. NERCat is designed and implemented to restrict searching of bibliographic records to 8 university libraries in North-eastern region so as to promote resource sharing amongst North-eastern universities. As on 31st March 2011, the Centre has received 2,10,361 bibliographic records from 8 university libraries in North-Eastern region. Figure 5 depicts search interface for NERCat.

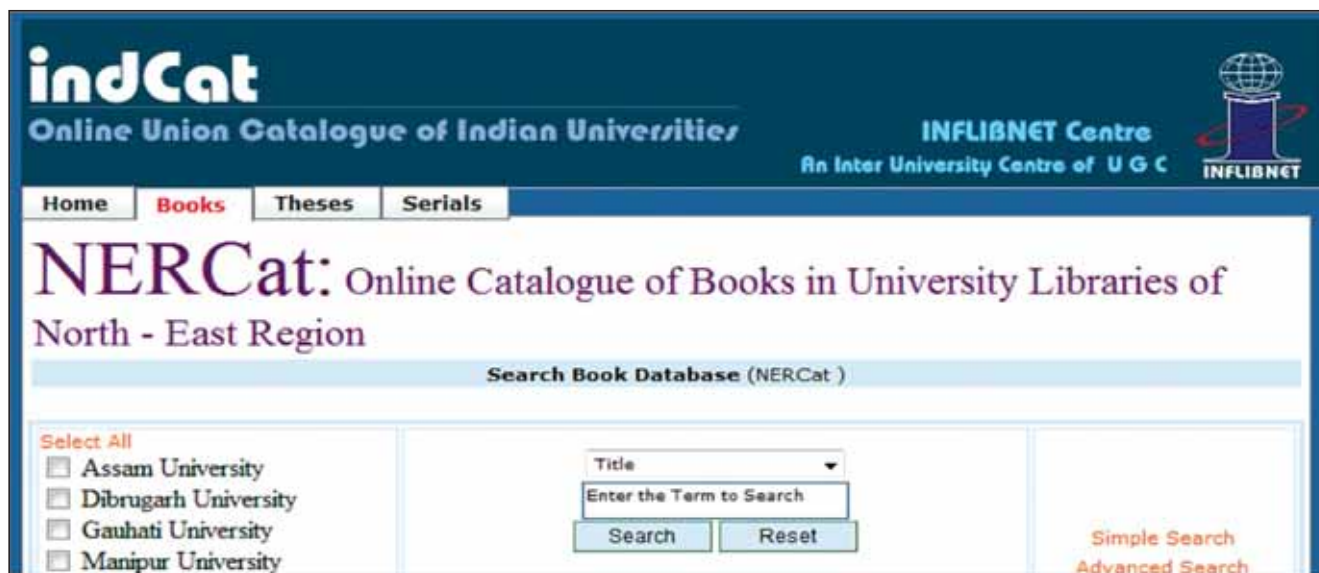


Fig. 5: NERCat: Online Catalogue for North-Eastern Universities

7.1.1.1.3. Bibliographical Records for Books added during Year 2010-2011

The Centre has merged bibliographic records from nine universities in IndCat as per the details given in Table 2 with all bibliographical details after the process of conversion of data from different formats to one common format i.e. CCF, as well as after correcting typographical errors, duplicate checking within a university and matched records checking.

Sr. No.	University Name	Received Records	*Duplicate Records	#Matched Records	+ Merged to IndCat	Data Format
1	Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur	202803	5157	15572	181994	ISO
2	Guru Nanak Dev University, Amritsar	122302	8388	30406	83468	ISO
3	Jai Narayan Vyas University, Jodhpur	4822	61	154	4607	SOUL Backup
4	Jamia Milia Islamia University, New Delhi	64771	3853	12571	39339	ISO
5	Kurukshetra University, Kurukshetra	198304	11030	8106	179168	
6	Mizoram University, Aizwal	19585	15	1941	17296	ISO
7	Ranchi University, Ranchi	60554	2277	7815	48686	ISO

8	Avinashilingam University for Women, Coimbatore	30309	6940	3350	66298	ISO
9	Deccan College Post Graduate and Research Institute Pune	136200	34063	4423	97714	MS-Excel
	Total Records	839650	71784	84338	718570	

*Records already exist in same university i.e. multiple copies;

#University's records already exist in IndCat Database, only holding information is updated;

+Merged records are added to IndCat Database i.e. unique records

Table 2: Details of Merged Bibliographic Records in IndCat using UCMS Software

The Centre has uploaded bibliographic records from four universities in UCMS software as per the details given in Table-3 with all bibliographic details after the process of conversion of data from different formats to one common format i.e. CCF as well as after correcting typographical errors, duplicate checking within a university and matched records checking.

Sr.	University Name	Total Records Uploaded	Data Format
1	Jawaharlal Nehru University, New Delhi	161205	MARC
2	M. S. University, Baroda	293155	Soul 1.0 Backup
3	Veer Narmad South Gujarat University, Surat	161000	Soul 2.0 Backup
4	Mohanlal Sukhadia University, Udaipur	106954	Soul 2.0 Backup
	Total Records	722314	

Table 3: Details of Bibliographic Records Uploaded in UCMS Software after Authentication and after Mapping the Tag according to CCF (Common Communication Format)

The Centre has already received updated data for five universities in different format as per the details given in Table 4 below.

Sr.	University Name	Received Records	Data Format
1	Hemchandracharya North Gujarat University, Patan	60397	Soul 2.0 Backup
2	Veer Narmad South Gujarat University, Surat	161000	Soul 2.0 Backup
3	M. S. University, Baroda	429722	Soul 1.0 Backup
4	Mohanlal Sukhadia University, Udaipur	107621	Soul 2.0 Backup
5	S. P. University, Vallabh Vidhyanagar	222240	Soul 2.0 Backup
	Total Records	980980	

Table 4: Updated Bibliographic Records Received from 5 Universities

Table 5, lists of defaulter universities i.e. universities who were given funds for library automation but did not contribute their bibliographic records as per the terms of MoU signed by them with INFLIBNET Centre.

Sr.	University Name
1	Awadhesh Pratap Singh University, Rewa (MP)
2	Babasaheb Bhimrao Ambedkar Bihar University, Muzaffarnagar (Bihar)
3	Barkatullah Vishwavidyalaya, Bhopal (MP)
4	Berhampur University, Berhampur (Orissa)
5	Birla Institute of Technology, Ranchi (Jharkhand)
6	Central Institute of Higher Tibetan Studies, Varanasi (UP)

7	Chaudhry Charan Singh University, Merut (UP)
8	Dr. Harisingh Gour Vishwavidyalaya, Sagar (MP)
9	Dr. Ram Manohar Lohia Awadh, Faizabad (UP)
10	H N B Garhwal University, Srinagar (Uttarkhand)
11	Jawaharlal Nehru Technological University, Hyderabad (AP)
12	Maharshi Dayanand University, Rohtak (Hariyana)
13	Mahatma Gandhi Kashi Vidyapeeth, Varanasi (UP)
14	National Law School of India University, Bangalore (Karanataka)
15	Patna University, Patna (Bihar)
16	Rajasthan University, Jaipur (Rajasthan)
17	Rajasthan Vidyapeeth, Udaipur (Rajasthan)
18	Sri Chandrasekharendra Saraswati Vishwavidyalaya, Kanchipuram (Tamilnadu)
19	Sri Lal Bahadur Shastri Rashtriya Sanskrit Vidyalaya, New Delhi
20	Tripura University, Agartala (Tripura)
21	University of Lucknow (UP)
22	Utkal University, Bhubaneswar (Orissa)
23	Vikram University, Ujjain (MP)

Table 5: Defaulter Universities that did not Contributed their Bibliographic Records to IndCat

Table 6 given below provides no. of unique and duplicate records (holding) added to the Union Database of Books during in year under report.

Sr. No.	Details	Before April 2010	From April 2010 to March 2011	No. of Records added During the year 2010-2011
1	Unique Records	55,51,849	62,39,174	6,87,325
2	Holding Records	59,17,922	66,91,426	7,73,504

Table 6: Bibliographic Records Authenticated and Merged in Union Database (IndCat)

7.1.1.1.4. Growth of Union Catalogue of Books

Building and maintaining a union catalogue is an ongoing activity involving collaboration of all participating libraries. The Indian Catalogue of Books is essentially an outcome of financial and logistic support that was extended to the participating universities by the Centre for creating bibliographic records of their library collections. With initial financial incentives backed-up with logistic support in terms of training on integrated library management software including SOUL, the Indian Catalogue of Books has witnessed a rapid growth. The union catalogue of books has grown from 6.5 lakh records in 1999 to 119 lakh records in 2011 as depicted in Figure 6 given below. List of universities and number of records contributed by them are listed in Appendix VI.

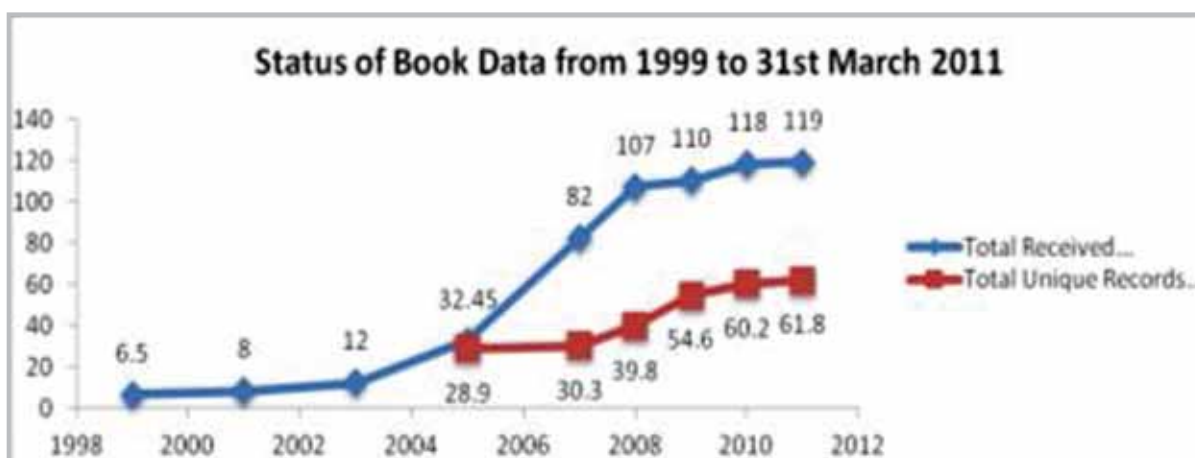


Fig. 6: Growth of Union Catalogue of Books

7.1.1.1.5 Online Copy-Catalogue System (OCS)

The Centre has developed an application software called “Online Copy-Catalogue System (OCS) to promote co-operative cataloguing and avoid duplication of efforts. The interfaced called “Online Copy Catalogue System (OCS)” is a Window-based application that facilitates libraries to interact with the Union Catalogue of Books (IndCat) and catalogue their new acquisitions online. The OCS, on one hand, facilitates libraries to search and browse bibliographic records of documents available in IndCat and download selected records directly into SOUL 2.0 or any MARC21 compliant software. The holding information for the bibliographic record being downloaded from in the IndCat gets updated automatically in the process. On the other hand, the interface facilitates creation of a new record for a document that is not available in the IndCat. This new record gets saved into local integrated LMS as well as into the IndCat. Besides, online cataloguing and copy cataloguing, the interface also facilitates bulk uploading and downloading of bibliographic records of books. More details are available at website: http://indcat.inflibnet.ac.in/indcat/includes/UserGuide_OCS.pdf

Objectives of OCS

- ▶▶ Copy records of documents available in IndCat (62,39,173 unique bibliographic record of books are available in IndCat) into the SOUL 2.0 software directly. This process updates the holding information for the bibliographic record being downloaded into the IndCat;
- ▶▶ Create new record for a document that is not available in the IndCat. (The new record is saved in SOUL 2.0 software at user’s end as well as INFLIBNET’s IndCat); and
- ▶▶ Upload & download the bulk record, to & from IndCat server respectively.

Major Features of OCS

- ▶▶ Window based application, that communicates with IndCat;
- ▶▶ Facilitate search browse and downloading of bibliographic record of books from IndCat;
- ▶▶ Import downloaded records in Soul 2.0;
- ▶▶ Create new catalogue of book and save it into Soul 2.0;
- ▶▶ Supports multiple accession no. entry;
- ▶▶ Support multilingual feature;

- » Upload new records to IndCat server; and
- » Supports de-duplicate of records and merging new records into IndCat.

Testing Phase

The Centre has sent letters to the following 13 universities as mentioned in Table 7 that are using SOUL 2.0 with a request to start cataloguing their new acquisitions using Online Copy Catalogue System (OCS). So far, three universities have started using OCS. Figure 7 depicts use of OCS by three universities for different activities.

Sr.	University Name
1	Bhavnagar University, Bhavnagar (Gujarat)
2	Burdwan University, Burdwan (West Bengal)
3	Dibrugarh University, Dibrugarh (Assam)
4	Gauhati University, Guwahati (Guwahati)
5	Gujarat University, Ahmedabad (Gujarat)
6	Hemchandracharya North Gujarat University, Patan (Gujarat)
7	Jain Vishva Bharti University, Ladnun (Rajasthan)
8	Manipur University, Imphal (Manipur)
9	Mohanlal Sukhadia University, Udaipur (Rajasthan)
10	Sardar Patel University, V V Nagar (Gujarat)
11	Saurashtra University, Rajkot (Gujarat)
12	University of Mumbai, Mumbai (Maharashtra)
13	Veer Narmad South Gujarat University, Surat (Gujarat)

Table 7: 13 Universities that are invited to Test Online Copy Catalogue System

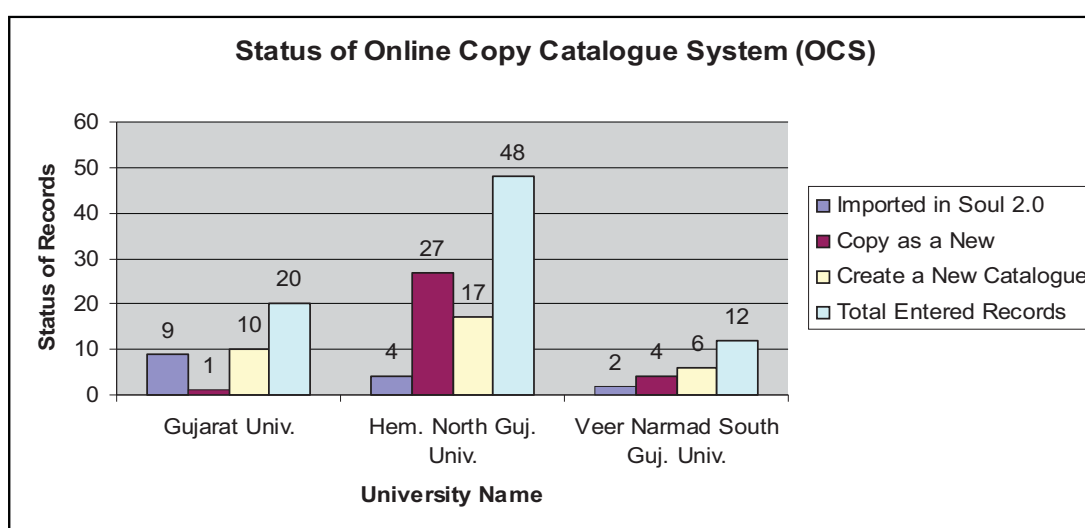


Fig. 7: OCS Tested by Three Universities for Different Activities

7.1.1.1.6 Major Achievements during Financial Year 2010-11

- » Bibliographic data of books for nine universities was merge after editing into union database (IndCat);
- » Updated bibliographic data was received from four universities in second phase.;

- ▶▶ More than a million records have been migrated from CCF to CSV and CSV to MARCXML after editing 28 fields using CDS/ISIS software;
- ▶▶ Follow-up communications were sent to universities that has not contributed their data to INFLIBNET Centre as well as to all university for updated records;
- ▶▶ 33 Universities that have not received the non-recurring and recurring grant during IX plan period for library automation activities were asked to apply for grant for library automation. The Centre has received the response from 24 universities and sent reminder to remaining 9 universities on 12th August 2010;
- ▶▶ The Centre has received 1101233 bibliographic records from 15 universities, colleges and institutes across Gujarat for GujCat;
- ▶▶ Features and functionality of UCMS were further enhanced. Significant improvement was made in the process of merging of bibliographic data into union database; and
- ▶▶ Developed new application software called Online Copy Catalogue System (OCS).

7.1.1.2. Union Catalogue of Serials

Shri Rajesh Chandrakar, Scientist B (LS)

Ms. Kanchan Chavda, Project Assistant (LS)

Two separate union databases on serials, namely Serials Holdings and Current Serials, are maintained by the Centre. While “Serials Holdings” provides data on library holdings, i.e. back files of journals, whereas, the “Current Serials” provides titles of the serials that are: i) currently subscribed by the participating universities in print and electronic formats; ii) Journals subscribed under the UGC-Infonet Digital Library Consortium in electronic format; and iii) serials available in open access mode.

7.1.1.2.1. Serials Holdings

The Serials Holdings includes bibliographic information of serials (including journals, periodicals, annuals, serials) available in more than 210 universities / Institute libraries along with its holdings information (includes available and missing volumes of the journals) in participating libraries. The holdings database has over 16,842 unique titles with 57,523 holdings information for 210 universities. Each bibliographic records for a serials contains title, publisher, frequency, year of publication and subject headings along with holdings details and names of the universities. After the launch of UGC-Infonet Digital Library Consortium that provides access to current as well as back volumes of a large number of journals in the electronic format, most of the university libraries have stopped maintaining the holding databases of their serials. For better utilisation of this holdings database, the Centre has signed up an agreement with the Informatics, Inc, Bengaluru for providing links to journals available in “Serials Holding” database through JCCC interface.

7.1.1.2.2. Current Serials

The Union Database of Current Serials (including journals, periodicals, annuals and serials) consists of 35,209 unique bibliographic records subscribed by 213 university / institute libraries that include serials currently subscribed by the participating universities in print and electronic formats. Table 8 given below shows the growth of current serials database in terms of a number of records from 1995 to March 2011 and Figure 9 is a pictorial depiction of the same.

During the year under report, 288 universities / institutions were requested to send the list of the current serials being subscribed by them and its holdings for the databases. 12 universities and institutions responded and submitted list of their current serials so far.

Year	No. of Universities/ Institutions	No. of Serials
1995	30	7000
1996	80	8500
1997	120	9000
1998	130	9500
1999	140	10000
2000	150	10500
2001	170	10800
2002	180	11192
2003	190	11892
2004	201	12081
2008	201	22146
2009	205	22242
2010	213	22471
2011	213	35209

Table 8: Growth in Number of Records in Current Serials Database: 1995 – 2011

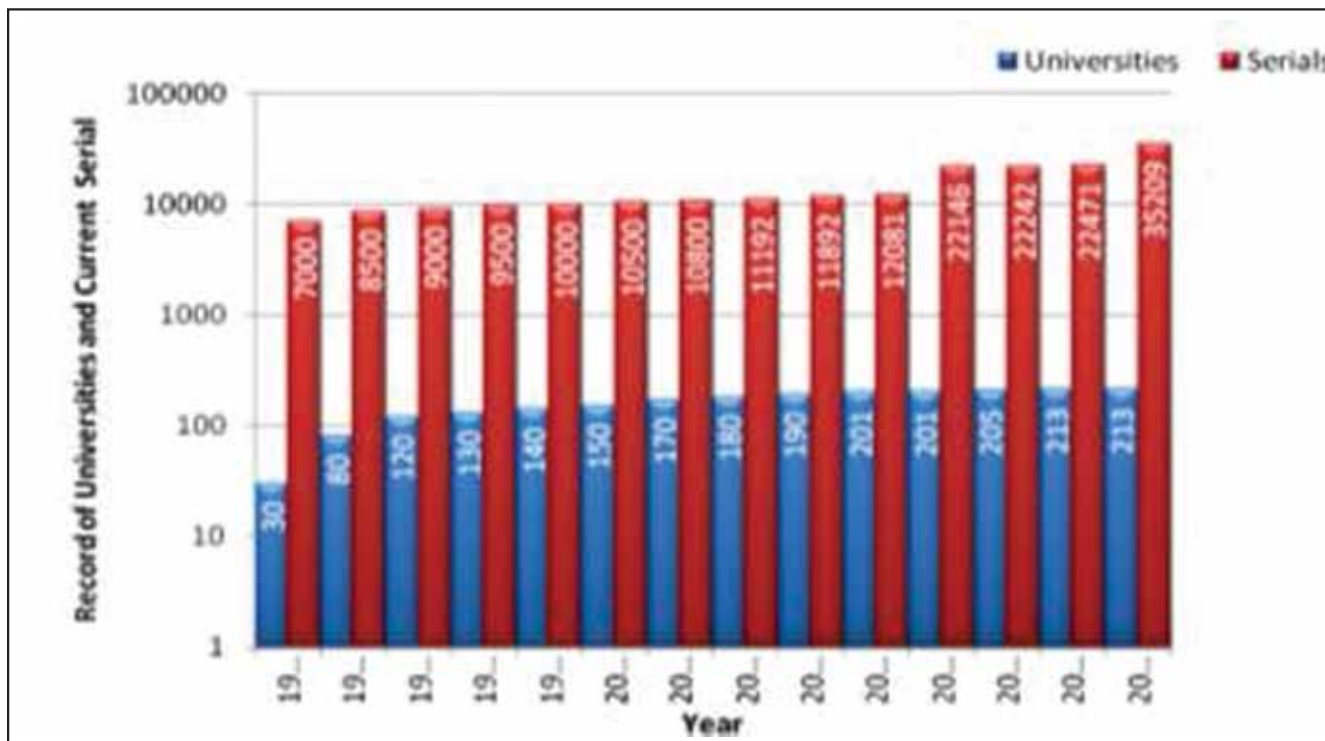


Fig. 9: Year-wise Growth of the Current Serials Database

7.1.1.2.2.1 Interface for Adding New Serials & Update Records

Shri Abhishek Kumar, Scientist B (CS)

Shri Dharmesh Shah, Sr. Project Associate (CS)

The Centre developed a new application to facilitate maintenance of the Serial Database. The interface facilitates creation of new serial records at different bibliographical level, update existing serial records and also update the university and subscription year of selected records as shown in Figure 10.

The screenshot shows a web interface for adding and updating serial records. At the top right, there is a red-bordered button labeled "Add New Serial". The form contains several input fields: "Key Title *" with the value "aBiochemistry and Cell Biology", "Coden" with "BCBIEQ", "Publisher" with "Ottawa BN R C Research Press cCN", and "Library Holding *" with "Avinashilingam Institute for Home Science & Higher Education for Women". Below these are fields for "Edition Statement" (value: null) and "Bibliographical Level (Database)" (value: Current Serials). An "Update Record" button is located below the Bibliographical Level field. A section titled "Choose the university Name with subscription Year:" contains a "Select University" dropdown menu, a "Select Year" dropdown menu, and an "Update University" button. Below this section is a table titled "List of the universities with the subscription Year:" with the following data:

Select	No.	University/Institute	Subscription Year
<input type="checkbox"/>	9	Periyar University	2008
<input type="checkbox"/>	10	Sanjay Gandhi Postgraduate Institute of Medical Sciences	null

A "Remove" button is located below the table. A red arrow points from a box labeled "update University" to the "Select University" dropdown menu.

Fig. 10: Interface for Maintenance of Serials Database

Features

- » Search and Browse the Serial Records;
- » Add New Serial Record;
- » Update Serials records; and
- » Remove the invalid records as well as holding records for a given university.

Technologies: Java, JSP, Tomcat, MS-SQL, Javascript

7.1.1.3. Union Catalogue of Theses

Shri Rajesh Chandrakar, Scientist B (LS)

Shri Imran Mansuri, Project Assistant (LS)

Ms. Archita Muchhedha, Project Assistant (LS)

The Union Catalogue of theses consists of bibliographic records of doctoral theses submitted to 245 universities / institutions in India. It contains 2,37,393 unique bibliographic records of the theses awarded since 1906 in all

Year	No. of Universities	No. of Records
1995	82	52,000
1996	95	65,000
1997	110	72,000
1998	134	90,000
1999	149	1,15,000
2000	160	1,28,000
2001	172	1,35,000
2002	189	1,42,000
2003	198	1,48,000
2004	209	1,52,000
2005	211	1,71,176
2006	213	1,75,206
2007	213	1,75,206
2008	237	2,20,206
2009	237	2,20,206
2010	237	2,38,475
2011	245	2,37,393

Table 9: Growth in Number of Records in Theses Database: 1995 – 2011

disciplines. The bibliographic records of theses are contributed by participating universities; besides, records of theses have also been collected from other reliable sources such as notification from universities, University News and records submitted by the individual researchers.

The compilation of Union Catalogue of Theses commenced in 1995 with 52,000 records from 82 universities. The database has grown to 2,37,393 records as on March 2011 from 245 universities over a period of 16 years. 14,500 records were deleted from the database during the period under report including 13,500 records of M.Phil dissertations and 1,000 duplicate records.

The Centre receives a copy of notification on award of Ph.D. theses from more than 42 universities. Letters were written to 154 universities requesting them to send a copy of notification on awards of Ph.D. these. Table 9 and Figure 11, given below, depict growth of theses database from 1995 to March 2011.

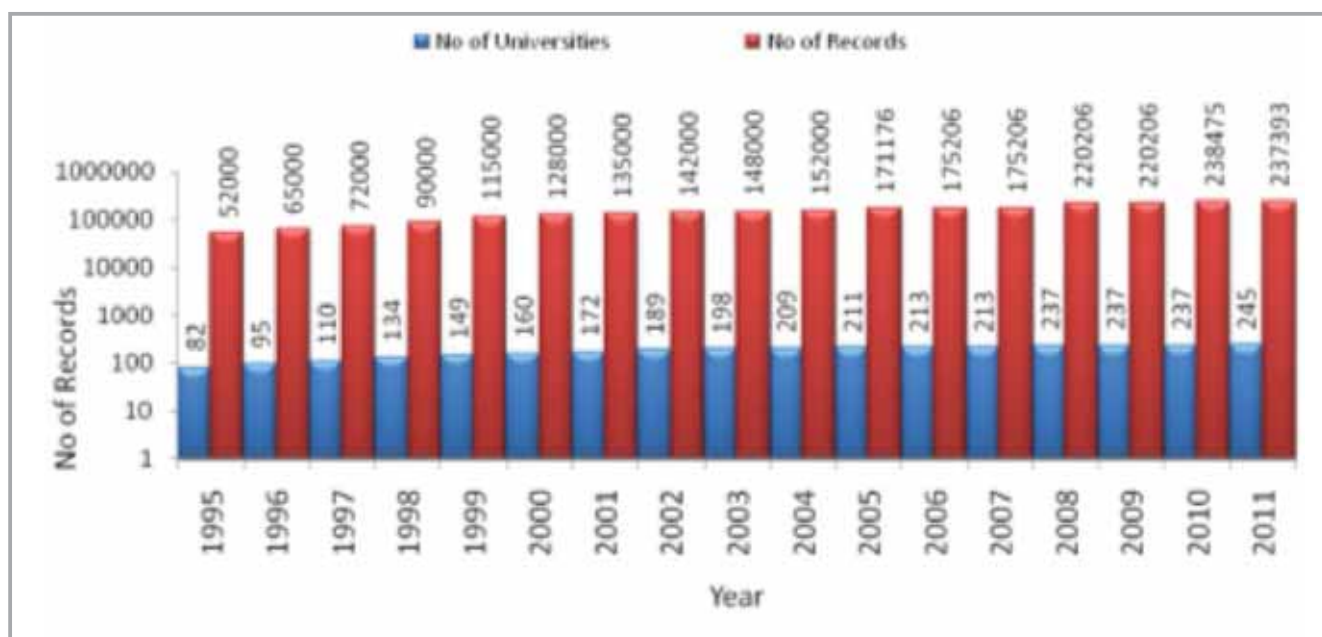


Fig. 11: Year-wise Growth of Theses Database

Theses database can be searched through IndCat interface by title, researcher, research supervisor, university, department, year of submission, subject terms, etc. Bibliographic records of the theses are linked to full-text records in “Shodhganga” if availability. Names of Universities and the number of records contributed by them to the union catalogue of theses are given in the Appendix VI.

7.1.1.3.1 Theses Record Management System

Shri Abhishek Kumar, Scientist B (CS)

Shri Dharmesh Shah, Sr. Project Associate (CS)

Theses Record Management system is developed to manage records of theses, before these records are uploaded to IndCat interface as shown in Figure 12. The interface is used by the staff members of INFLIBNET Centre responsible for maintaining these databases.

Features

- » Search and browse thesis records;
- » Add new theses record;
- » Update theses records;
- » Remove duplicate and invalid records; and
- » Add new universities.

Technologies: ASP.NET, C#, MS-SQL, Webservice

IndCat:Theses Database			
Welcome:- Imran		Search	Create new
		Add University	Log out
Location (020)	Mahatma Gandhi University ▾ MGND_686560		
Date_of_entry (022)	2011-04-29 10:04:44		
Language (040)	eng ▾ *		
Physical_medium (050)	010		
Type_of_material (060)	110		
Title (200)	Studies on blends of natural rubber and ethylene-vinyl acetate with special referenc ▾		
Parallel_title (210)			
Other_title (230)	Title	Type	Language
Name_of_researcher (300)	Surname Koshy	Forename Alex T	
Name_of_guide (350)	Surname 1) Thomas 2) 3) 4)	Forename Sabu	
Name_of_corporate_body (310)	Department Department of Chemistry	University Mahatma Gandhi University ▾	Place Kottayam

Fig. 12: Theses Records Management System

7.1.1.4 CEC's Video Database: An INFLIBNET-CEC Collaborative Endeavour

The INFLIBNET Centre and Consortium for Educational Communication (CEC), in its endeavour to reach out to the unreached, are collaborating for dissemination of textual and visual resources through use and application of ICT. The INFLIBNET Centre and CEC, two Inter-university Centre of the UGC, provide information support for education and research to colleges and universities through their services and facilities. The INFLIBNET specialises in textual-based information retrieval services through its union databases and by facilitating access to full-text and bibliographic e-resources through consortium arrangements. The CEC concentrates on creation and dissemination of multimedia-based learning e-resources. Both the organizations make intensive use of Internet, Web and other communication technology to develop and disseminate their services. While both the institutions work primarily for the same goal, albeit separately, two institutions, in their endeavour to cooperate, coordinate and collaborate in the process of creation, development and dissemination of their resources and services, has recently launched Web-based interface to the CEC Video Database consisting of 15,000 bibliographical records of educational video programmes produced by the CEC and its 17 EMMRCs. Figure 13 depicts e-Education: An INFLIBNET-CEC Collaborative Endeavour.

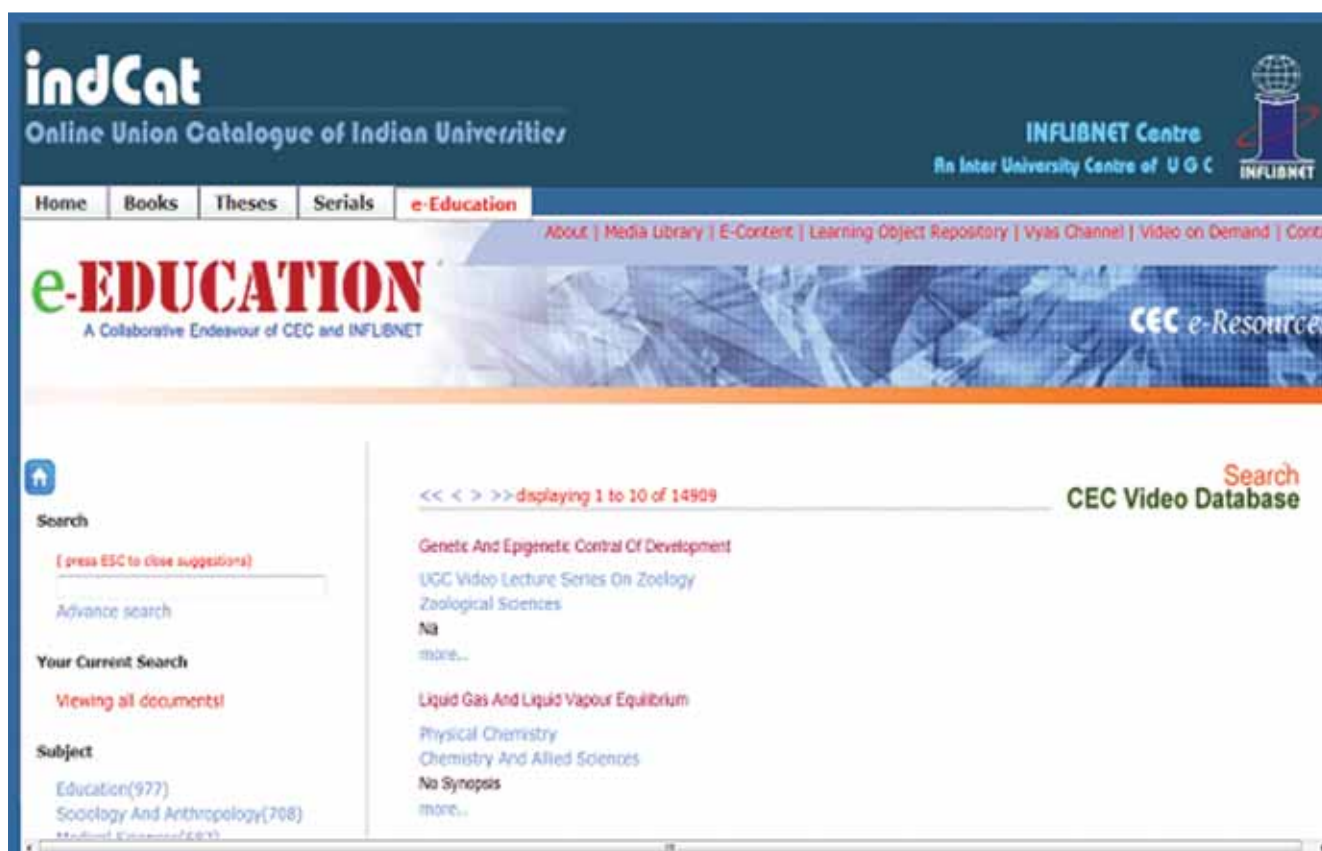


Fig. 13: e-Education: An INFLIBNET-CEC Collaborative Endeavour

The Lucene-based search interface designed to facilitate users to interact with CEC Video Database, browse, search and retrieve records from it. This interface is totally based on MARCXML. Video information are stored in MARCXML format which was originally provided in MS Access Format. After converting to MARCXML, Lucene is being used for creating Index of stored MARCXML data by different field and stored into system as a flat file. Apache Solr is being used to run search query using Solr Js and Jsp is being used to display results. The interface was formally launched by Prof. S.K. Thorat, the then Chairman, UGC on 4th Dec., 2010.

7.1.1.5. Software Tools Used for Building, Maintenance and Searching of Union Catalogue

Software R&D Group of the Centre has developed software tool namely UCMS 2.0 and IndCat to support building, maintaining and searching of Union catalogue.

7.1.1.5.1. UCMS 2.0

Shri Yatrik Patel, Scientist C (CS)

Shri Abhishek Kumar, Scientist B (CS)

Shri Dharmesh Shah, Sr. Project Associate (CS)

Shri Dinesh Rayka, Project Officer (CS)

UCMS 2.0 is basically web based UCMS. The Union Catalogue presently uses features and functionalities of search query language available in an RDBMS. As such multiple joints are required to retrieve specific search results that take more time in processing of queries. With increase in size of union database and dependence on SQL and RDBMS, time taken in retrieval of search results for a query increases. As such, it was inevitable to use alternative technologies for conducting search on records available in union catalogue. The search and retrieval interface was developed for union catalogue with following features:

- ▶▶ Free text search facilitating users to search by any parameter ;
- ▶▶ Refine search facilitating users to search within displayed results and get more focused results;
- ▶▶ Faceted search facilitating display of most searched keywords first in the ranking of results;
- ▶▶ Searching of records from a selected university;
- ▶▶ Searching of records from all universities in a state; and
- ▶▶ Advance search all facility to conduct a search using multiple parameters.

Implementation of UCMS 2.0 necessitates that all the bibliographic records along with their holding details needs to be converted into MARC format. Moreover, a separate union catalogue management system is required with incorporation of all the functional jobs that are being carried out by the Database Group. As such, a new Union Catalogue Management System (UCMS) was planned that is presently under development. The new UCMS would have the following five modules:

- a) First module would contain a database of universities that contribute to the union catalogue. Modification on bibliographic records can be performed for each university. This module would also have features to add a new university or to drop a university, as well for managing universities.
- b) Second module would contain interface to import records for a selected university. Whenever the fresh lot of bibliographic records arrives, it has to be imported into the new UCMS in MARC XML format. After importing records to the selected university, the interface would facilitate cleaning up and refining operation in imported xml files.
- c) Third module would contain index generation facility on different parameter like title, author, place etc. Index is generated by parsing xml files and storing its value to index. These indices are useful for fast and efficient searching. Indices also help in checking duplicate records within the university, if duplicate records exist, user will has three options. i.e. i) discard duplicate records; ii) merge duplicate records to unique records wherein accession no of duplicate record is merged to the accession no of unique book

record; iii) overwrite duplicate records which will cause deleting index of original record and generation of new index.

- d) Fourth module includes searching page with update functionality. User can search and update records of a university. User can also search with different search parameters and update selected records by opening entire record through this interface.
- e) Fifth module includes merging unique records to master records of union catalogue. This also features duplicate check with all available holdings.

Presently all the sub modules are being tested, as soon as the testing/integration of all module is over, it will be implemented as a complete system.

Technologies: Apache Lucene, Apache Solr, MarcXML, Java, JSP, SolrJs, Apache Tomcat.

7.1.1.5.2. IndCat: Online Union Catalogue of Indian Universities

Shri Abhishek Kumar, Scientist B (CS)

Shri Dharmesh Shah, Project Associate (CS)

IndCat is a web-based search interface for the union databases of books, serials and theses. The interface facilitates users to interact with the union databases and search, browse and display bibliographic records stored in MS-SQL relational database management system. Detailed information about the IndCat is given under 7.1.1.

Technology Used: Dream Viewer, Cascaded Style Sheet (CSS), AJAX, Core Java, Servlet, JavaBeans, JDBC, JSP, Javascript, MS-SQL.

System Optimization: The following steps were taken to optimize search and retrieval process used in the IndCat:

- » Create New Interface for GujCat & NERCat;
- » Creation of new table to fetch detailed information on university;
- » Captcha to avoid SQL injection while downloading;
- » Create stored procedures to improve the retrieval of searched results; and
- » String tokenise is used to mark search result in different colour.

7.1.1.6. Subject Experts Database

Shri Rajesh Chandrakar, Scientist B (LS)

Ms. Kanchan Chavda, Project Assistant (LS)

The INFLIBNET Centre has two databases on subject experts, namely: i) NISSAT Expert Database: an expert database in science and technology; and ii) University Expert Database: online profiles of academicians in Indian universities. "NISSAT" database was created with financial support from NISSAT (National Information System for Science and Technology), New Delhi during 2000 to 2002. The database contains around 24,164 profiles of the subject experts from the science and technology domains of 715 institutions especially covering

CSIR (Council for Scientific and Industrial Research) institutions and its laboratories. The experts, whose profiles are available in the database, are assigned login ID and password for self updation of their profiles online as and when required. After covering all the institutions and R&D labs, the database is left for the voluntary submission and updation by the subject experts themselves.

The “University Expert” database is an initiative of the INFLIBNET Centre that contains around 16,405 profiles of the subject experts serving in the UGC-funded universities, colleges and institutions. This database is being updated regularly. Besides, Head of the Departments and their faculty members of the universities and institutions, the Principal Investigators of the Minor and Major Research Projects are also requested to either register themselves online or submit their expert profiles to the Centre for populating the database. The database also provides unique persistent URL to each expert profile by using their registration number as unique ID in the URL. Further, every expert whose profile is available in the database, has been provided login ID and password with the persistent URL for future updation of their profiles. Both the databases can be searched on parameters such as name, designation, institution, subject, specialization, state, etc.

Major activities performed for the expert database

The following major activities were performed for the subject expert database during the period under report:

- ▶▶ 305 new profiles were added;
- ▶▶ 1,777 departments of the 42 universities were sent letters for contributing the resumes of their faculty members;
- ▶▶ 78 profiles received from the subject experts whose profiles were already available into the database and were updated into the database;
- ▶▶ Faculty of the 404 departments of the 18 universities leading to more than 2,000 profiles were verified and updated through their respective university websites;
- ▶▶ Acknowledgments were sent to 46 departments that responded to our letter of request; and
- ▶▶ Login ID and password were sent to more than 100 experts on their request for updating their profiles.

7.1.1.7. Research Project Database

Shri Rajesh Chandrakar, Scientist B (LS)

Ms. Kanchan Chavda, Project Assistant (LS)

Shri Mohit Kumar, Project Assistant (CS)

The Research Project Database provides details of completed and ongoing projects carried out by faculty members working in universities and institutions across the country. The database contains more than 13,701 records of research project funded by funding agencies such as UGC, CSIR, ICAR, ICMR, DST and DBT. The majority of records of project are for minor and major research projects funded by the UGC. The Centre gets project details along with the project report in print and digital formats from the project investigators regularly. The softcopy and print copy of the project report is available at the INFLIBNET Centre for walk-in users. Project Investigators of the UGC funded major and minor projects were communicated through letters and e-mails to submit the softcopy and print copy of the project report. Project Investigators, whose project reports were received, are acknowledged and their project details were added into the database. Communication to the UGC was also sent on the receipt of the project report from the project investigators.

7.2. Software R & D Group

The Software R & D Group of the Centre is involved in development of software based on the functional requirements, day-to-day activities and services of the Centre including development on library automation system called SOUL 2.0 and customization of open source software.

7.2.1. SOUL 2.0

Shri Yatrik Patel, Scientist C (CS)

Shri Divyakant Vaghela, Scientist B (CS)

Shri Swapnil Patel, Scientist B (CS)

Shri Dinesh Rayka, Project Officer (CS)

The SOUL 2.0 (Software for University Libraries) is state-of-the-art integrated library management software designed and developed by the INFLIBNET Centre based on requirements of colleges, universities and other academic libraries. It is user-friendly software developed to work under client-server environment. The software is compliant to international standards for bibliographic formats and circulation protocols. After a comprehensive study, discussions and deliberations with the senior professionals of the country, the software was designed to automate all house-keeping operations in a library. The software is suitable for the academic libraries as well as for all kinds of other libraries. SOUL 2.0 is compliant to international standards such as MARC 21 for bibliographic format, Unicode based Universal Character Sets for multilingual bibliographic records and NCIP 2.0 and SIP 2 based protocols for RFID, electronic surveillance and control.

The Soul 2.0 was released in January 2009 and was well received by the academic libraries in India. During the year under report, several new features were added to SOUL 2.0 including new WebOPAC, provision for circulation of loose issues as well as several minor enhancements in reporting and other functionalities. New updates of the software are made available through the SOUL 2.0 website at no cost to existing users.

Technologies: Visual Studio .Net, Microsoft SQL Server 2005, Microsoft Server Platform

7.2.2. Customization of SOUL 2.0, Data Conversion and Transfer

Shri Yatrik Patel, Scientist C (CS)

Shri Divyakant Vaghela, Scientist B (CS)

Shri Dinesh Rayka, Project Officer (CS)

Shri Mayur Gohel, Project Associate (SOUL Support)

Ms. Seema Chavda, Project Assistant (LS)

With release of SOUL 2.0, Centre has also introduced scheme for customization of the software on payment basis as per the requirement of libraries. Under this scheme, SOUL 2.0 can be tailored as per requirement of specific libraries. Moreover, this Group is also responsible for converting client's existing data (in any format) to SOUL 2.0 compatible-format on payment basis. During the year under report, this working group has converted data for over 25 institutions which was available in different formats i.e. SQL, MS Excel and others. The total volume of data processed and converted is over 4.5 lakh bibliographic records. Besides, the group handled several customisation requests.

Technologies: Visual Studio .Net, Microsoft SQL Server 2005, Microsoft Server Platform

7.2.3. SOUL Query Management System (SQMS): Web-based Interface for SOUL 2.0 Customer Support and Integration with SOUL Sales

Shri Yatrik Patel, Scientist C (CS)

Shri Swapnil Patel, Project Officer (CS)

Ms. Daksha Halpati, Project Associate (CS)

Shri Vijay Shrimali, Technical Assistant (CS), SOUL Support

Ms. Nabila Shaikh, SOUL Support

Shri Kamlesh Vegad, SOUL Support

SOUL Query Management System (SQMS) is designed to handle and manage user's query on SOUL Software. The system is used for extending online support for SOUL software and for handling queries of SOUL users. SQMS consists of two modules i.e. System User and SOUL Users.

System User module is designed for use of administrator to monitor and manage the queries fed to SQMS. System User module provides system user's list, queries received list, query details, query status, query track, etc. SOUL user module is designed for use by the end users for logging-in their queries. All SOUL users are end user of this system. Users can perform operations like feed queries, check status of their queries, add details of contact person from the institute including their institute details, etc.

Although SQMS was under testing since last year, it has been decided to integrate other operations being performed, i.e. generation of quotation, order processing, payment settlement, dispatch tracking and various reports as suggested by SOUL Sales Support unit. The system is now fully functional and ready for launching after fine-tuning.

Technologies: Visual Studio .Net, SQL Server 2005

7.2.4. Subject Gateway Management System (SGMS)

Shri Yatrik Patel, Scientist C (CS)

Shri Swapnil Patel, Scientist B (CS)

Ms. Roma Shahdadpuri, Project Officer (LS)

Subject Gateway Management System (SGMS) is designed to facilitate entry of Internet resources and extending its access to users. SGMS supports browsing of Internet resources by Dewey Decimal Classification (DDC) Scheme. The main functional parts of subject gateway are:

- »» Dewey Decimal Classification (DDC) Search;
- »» Search Cloud;
- »» Free-Text Search;
- »» Alphabetical Search;
- »» Resource Type Search; and
- »» Intute Search

During the year under report, a number of features and functionalities of subject gateway were enhanced based on feedback from users and populated with number of Internet resource, at present the interface is getting fine-tuned and populated with resources, once a critical mass of Internet resources are available in the database, the application will be released for the benefit of users.

Technologies: Visual Studio .Net, ASP .Net, Microsoft SQL Server, Microsoft Server Platform.

7.2.5. Harvesting and Search Interface for ETDs

Shri Yatrik Patel, Scientist C (CS)

Shri Dinesh Rayka, Project Officer (CS)

The INFLIBNET Centre is already hosting Shodhganga: a repository of Indian electronic theses, however there are many other higher education institutions in the country that have their own repository of doctoral theses. Harvesting and search interface is being developed to enable users to access these content via a single interface. This interface is having two modules; a) Harvesting: This module will facilitate scheduled harvesting of pre selected repositories and convert into Dublin Core and management thereof b) Search. This module will facilitate simple and advanced search options along with faceted browsing. At present search interface is being developed on pre-harvested Dublin Core records.

Technologies: Java, JSP, Apache Lucene, Apache Solr, Dublin Core, SolrJs, Apache Tomcat, OAI-PMH, jOAI.

7.2.6. Server Virtualization

Shri Yatrik Patel, Scientist C (CS)

Virtualization is a framework or methodology of dividing the resources of a computer into multiple execution environments, by applying one or more concepts or technologies such as hardware and software partitioning, time-sharing, partial or complete machine simulation, emulation, quality of service, and many others.

Virtual machines can be used to consolidate the workloads of several under-utilized servers to fewer machines. Related benefits are savings on hardware, environmental costs, power consumption, space, management, and administration of the server infrastructure

This approach benefited to Centre, as some of the application which requires dedicated server has been hosted on virtualized server. These applications include proposed federated access management system, as well as Shodhgangotri: Repository of Research in Progress. Present virtual server implementation at Centre indicates successful and effective partitioning of CPU, RAM, secondary storage and even Network Interface Cards.

Technologies: CentOS 5.6, Xen Hypervisor, Network Bridging, Linux Shell Scripts.

7.3. Web Services R & D Group

The Centre uses web technology to provide organized and structured access to its services and resources to the academic community through the Centre's Website. The Centre's Website is designed to work as an integrated interface for all services and resources accessible to the academic community in the universities and colleges. The Web Development Group has especially been set-up for designing innovative web-based interface for effective and efficient delivery of services using the latest web-based tools and technologies. The Group undertakes all activities related to selection, organisation and presentation of services and resources in a

meaningful way for the benefit of the user community.

Technology Used:

Development Tools: PHP, HTML, DTML, JSP, JavaScript

Database: MySQL Server, Postgres SQL Server and MS SQL Server

Operating Systems: Red Hat Linux Enterprise Server 4.0, Fedora 8.0/9.0

Open Source Software: phpChat, MediaWiki, phpBB, Dspace and WordPress

7.3.1. INFLIBNET Centre’s Main Website (<http://www.inflibnet.ac.in/>)

Shri Ashok Kumar Rai, Scientist D (CS)

The Centre maintains comprehensive Websites in English and Hindi as shown in Figure 14. Several new additions were made to the new version of the Institute’s website. A new technology called “Real Simple Syndication (RSS)” was introduced to facilitate users and bloggers to harvest recent updates from the Centre’s web site. Web 2.0 features and functionalities, including Wiki, Blog, Chat and Discussion Forum, RSS feed, etc. were incorporated in the Web site. The Intranet web site is populated with fillable forms along with internal circulars, committees and their constitutions, Bye Laws, Memorandum of Association, etc. The new website of the Centre has the following main features:



Fig. 14: INFLIBNET’s Web site in English and Hindi

- » Powerful search and browse interface;
- » Dynamic calendar;
- » Recent and new events;
- » Download forms and documents;
- » Online feedback mechanism;
- » Mailing list, video gallery, webmail, etc.;
- » Latest news, jobs, tenders, etc.; and
- » Wiki, weblog, RSS feeds and online chat.

7.3.2. UGC-Infonet Digital Library Consortium (<http://www.inflibnetnet.ac.in/econ/>)

Dr. Jagdish Arora, Director
 Shri Ashok Kumar Rai, Scientist D (CS)
 Shri Dinesh Pradhan, STO – I (LS)
 Ms. Kruti Trivedi, STA-II (LS)
 Shri Saroja Kumar Panda, STA-II (LS)
 Ms. Rachna Shelat, Project Officer (CS)

A separate website is maintained for the UGC-Infonet Digital Library Consortium as shown in Figure 15. The web site provides detailed information about the Consortium including:

- » Search and browse interface for more than 7,500 journals covered under the Consortium;
- » Classified index to journals covered under the Consortium;
- » Search interface for member institutions (universities) and e-resources accessible to each one of them;
- » E-resources Access Management System (E-RAMS) designed to provide access to usage statistics to member universities and for monitoring their complaints;



Fig. 15: Website of the UGC-Infonet Digital Library Consortium

- » Detailed tutorials on each e-resource;
- » Licensing and fair use;
- » Associate membership programmes and information on how to join the Consortium;
- » Guidelines on UGC-Infonet Digital Library Consortium;
- » INTUTE Search interface so as to facilitate search on millions of e-resources under different subject categories available over Internet in open access;
- » Subject-wise list of e-journals subscribed under the Consortium; and
- » Dynamic creation of CSV files for download.

More details on the UGC-Infonet Digital Library Consortium are available at 7.6 in this report.

7.3.3. SOUL 2.0 (<http://www.inflibnet.ac.in/soul/>)

Shri Ashok Kumar Rai, Scientist D (CS)

Shri Yatrik Patel, Scientist C (CS)

Ms. Nabila Shaikh, SOUL Technical Assistant (CS)

A separate website is maintained for the SOUL 2.0 as shown in Figure 16. The web site provides detailed information about SOUL 2.0 including:

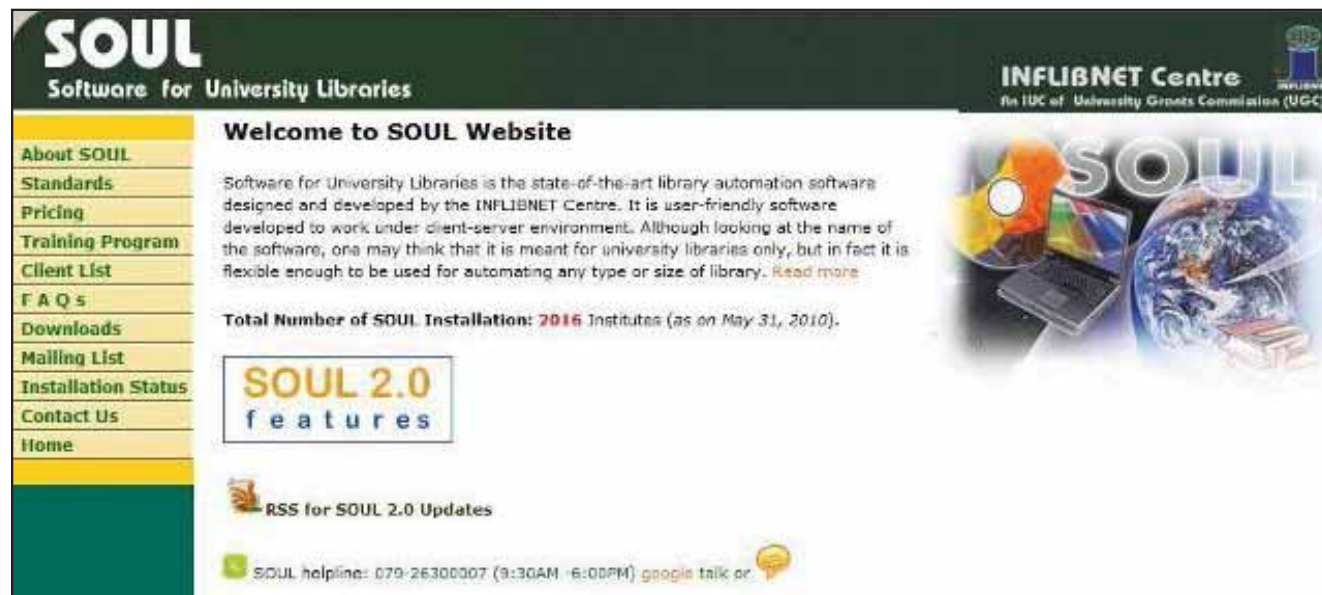


Fig. 16: Website for SOUL 2.0

- » About SOUL 2.0, its features and functionalities;
- » Demo version of SOUL 2.0 with installation guide;
- » SOUL 2.0 modules workflow;
- » Online chat and feedback mechanism;
- » FAQs/training programmes, etc.;
- » Utilities and updates for SOUL users;

- » Online SOUL2.0 Updates; and
- » SOUL2.0 User Manual (PDF version).

More details on SOUL 2.0 are available at 7.2.1 in this report.

7.3.4 N-LIST (National Library and Information Services Infrastructure for Scholarly Content) (<http://nlist.inflibnet.ac.in>)

Dr. Jagdish Arora, Director
 Shri Ashok Kumar Rai, Scientist D (CS)
 Shri Dinesh Pradhan, STO – I (LS)
 Ms. Kruti Trivedi, STA-II (LS)
 Shri Saroja Kumar Panda, STA-II (LS)
 Ms. Rachna Shelat, Project Officer (CS)

A separate website is maintained for the project entitled “National Library and Information Infrastructure for Scholarly Content (N-LIST)”, a joint project of the UGC-Infonet Digital Library Consortium, INFLIBNET Centre and INDEST-AICTE Consortium, IIT Delhi funded by the MHRD, Govt. of India under its National Mission on Education through ICT as shown in Figure 17. The web site provides detailed information about the project including:

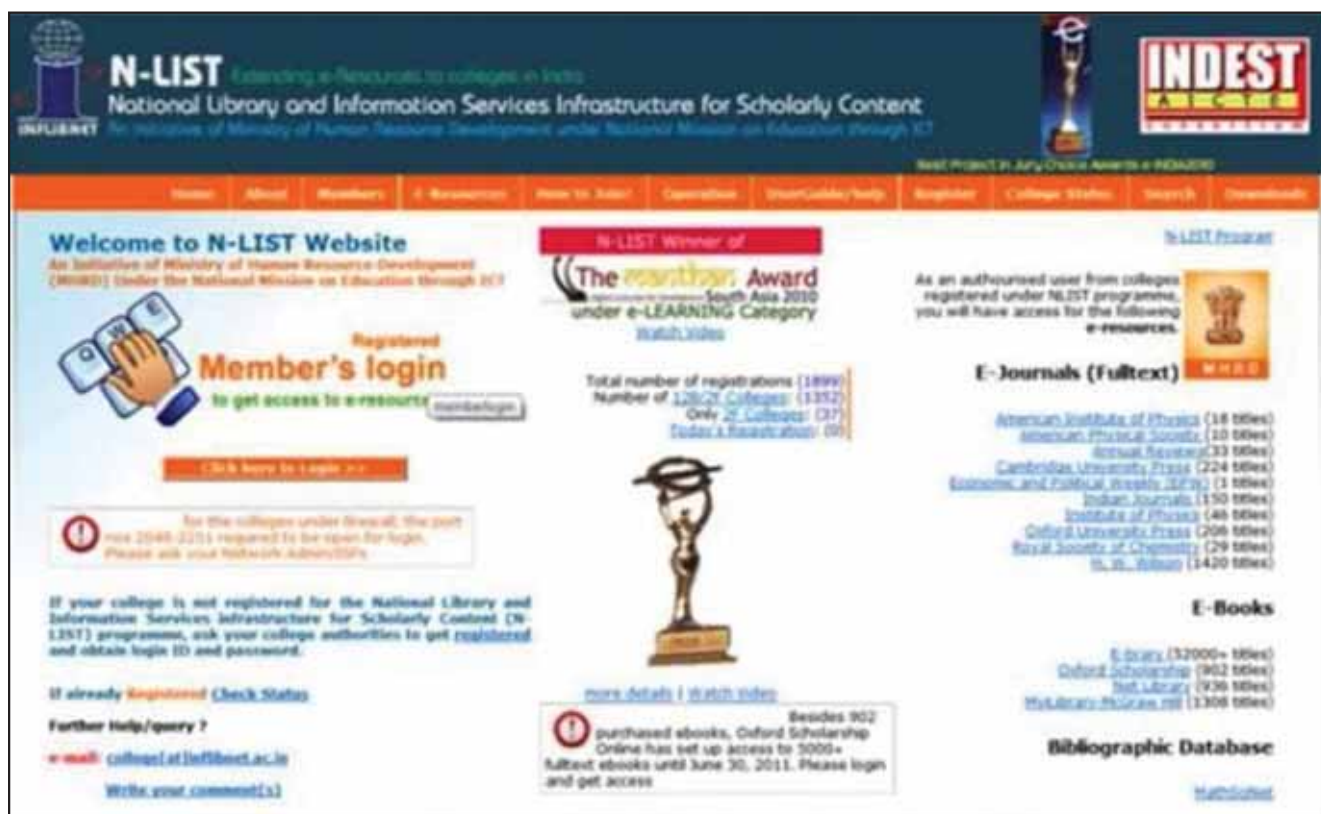


Fig. 17: N-LIST Website

- » Integration of Ezproxy for authentication and access to e-resources with N-LIST Website;
- » Searchable interface for member colleges and e-resources (e-books and e-journals);
- » Eligibility and current status of registered members;
- » Online registration for colleges;
- » E-resources subscribed for colleges as well as for technical institutions and universities under cross-subscription arrangements;
- » User's guide and tutorials on e-resources subscribed for the colleges;
- » A-Z list of members and e-resources;
- » Publisher-wise list of e-resources;
- » State-wise list of members;
- » INTUTE search interface to search open access e-resources for the colleges; and
- » Online feedback and Comment(s).

More details on N-LIST project are available at 13.1 in this report.

7.3.5. Shodhganga: A Reservoir of Indian Electronic Theses and Dissertations

Dr. Jagdish Arora, Director
 Shri Manoj Kumar K, Scientist D (CS)
 Shri Yatrik Patel, Scientist C (CS)
 Shri Swapnil Patel, Scientist B (CS)
 Shri Ramiz Malik, Project Officer (CS)
 Ms. Daksha Halpati, Project Associate (CS)
 Ms. Leena J. Parmar, Project Assistant (CS)

The Shodhganga provides a platform for research scholars to deposit their Ph.D. theses and make it available to the entire scholarly community in open access. The repository has the ability to capture, index, store, disseminate and preserve ETDs (Electronic Theses and Dissertations) submitted by the researchers. Figure 18 depicts website of Shodhganga: A Reservoir of Indian Electronic Theses and Dissertations.

More details on Shodhganga project are available at 7.4.1 in this report.

Features of Shodhganga Interface

- » User friendly interface to compress seven steps of submission processes into single step;
- » Universities and departments structure of universities are replicated in web site for easy submission;
- » Easy navigation for browsing through content of thesis;
- » Simple and advanced search using Lucene search engine for optimum performance;
- » Detailed help and tutorials;



Fig. 18: Shodhganga Website

- »» Important communications are archived for download;
- »» Frequent updation of the index as and when theses are submitted;
- »» Semantic visual browser for browsing through related content in repository; and
- »» Support Web 2.0 features such as RSS feeds for dynamic updates.

7.3.6. Intranet (<http://192.168.1.72/>; for INFLIBNET Staff Only)

Shri Ashok Kumar Rai, Scientist D (CS)

Ms. Rachana Shelat, Project Officer (CS)

A separate Intranet website is maintained for the internal staff of the Centre as shown in Figure 19. The web site provides detailed information including:

- »» Rules and regulations of the Centre;
- »» MoA;
- »» All circulars;
- »» All types of forms in fillable pdf format;
- »» Committees and their constitutions;
- »» Leave Information System;
- »» List of holidays; and
- »» Presentations.

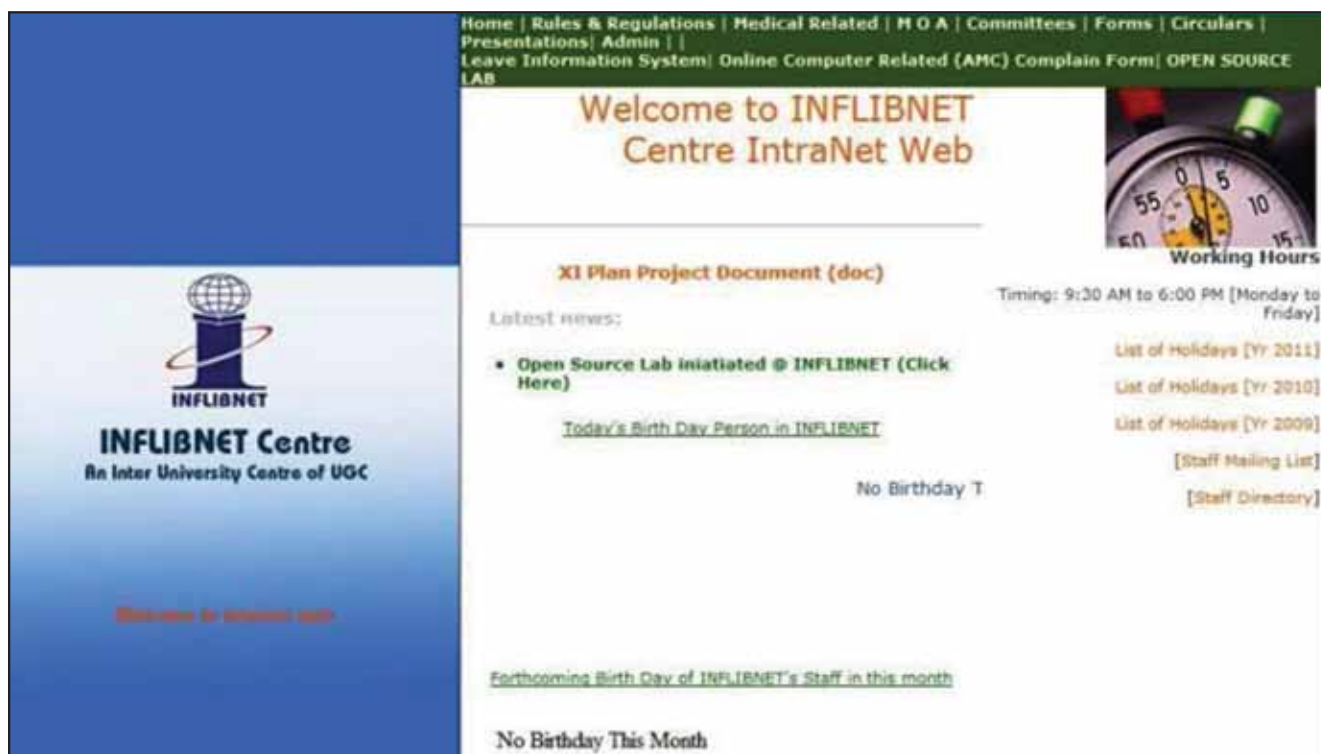


Fig. 19: INTRANET Website

7.3.7. Implementation of Web 2.0 Technologies at the Centre

The INFLIBNET Centre has entered into the world of Web 2.0 and Library 2.0 with implementation of interactive and collaborative technological tools mentioned below. All the Web 2.0 tools used are open source software.

7.3.7.1. Chat (<http://www.inflibnet.ac.in/chat/>)

Shri Ashok Kumar Rai, Scientist D (CS)

The Centre is using online chat for providing technical support to users of SOUL software. The users of SOUL software can log on at <http://www.inflibnet.ac.in/chat> and enter into a chat session with dedicated and qualified team of professionals trained in SOUL software for resolving their problems in a real-time mode.

7.3.7.2. Blogs (<http://www.inflibnet.ac.in/blog>)

Shri Rajesh Chandrakar, Scientist B (LS)

The INFLIBNET Centre has started its blog to encourage interactions amongst users and the INFLIBNET staff. The blog is also being used for promoting activities and services of the Centre. The blog has 94 postings with 503 comments as on March 31, 2011. It is being used extensively by the users and professionals.

7.3.7.3. Wiki (<http://www.inflibnet.ac.in/wiki/>)

The INFLIBNET Wiki provides detailed information on its activities, functions and services. Moreover, the users of the services of the Centre are also encouraged to contribute to the Wiki with their comments and suggestions on Centre's services and activities.

7.3.7.4. Streaming Media and Social Network (<http://in.youtube.com/inflibnet>)

Shri Rajesh Chandrakar, Scientist B (LS)

The Centre uses “YouTube” to upload multimedia video files. All the events held at INFLIBNET Centre are recorded and the content is uploaded on to the You Tube for the benefit of the users. The channel has 26 videos uploaded on different activities of the Centre that were viewed by around 16,500 users as on March 31, 2011.

7.3.7.5. RSS Feeds Aggregation Service (<http://www.inflibnet.ac.in/feed/>)

Shri Dinesh Pradhan, STO (LS)

The Centre has developed and installed RSS Feed Aggregation Service on its website as shown in Figure 20. The service is targeted to users of the UGC-Infonet Digital Library Consortium. The RSS Aggregation Service facilitates RSS links to open on the website of the Centre for all electronic journals that are covered under the Consortium and have option for RSS feeds. Resultantly, the users, instead of copying RSS feeds into their RSS Feed Readers, can visit the INFLIBNET website and read the current content of all the journals subscribed under the UGC-Infonet Digital Library Consortium. These RSS Feeds are arranged according to subject categories as well as alphabetically. Moreover, journals covered under the RSS Feed Aggregation Services can also be searched according to the subject category and by words in journal titles. The RSS Feed Aggregation Service at the Centre provides for the followings:



Fig. 20: INFLIBNET's RSS Feed Aggregation Website

- ▶▶ INFLIBNET's News RSS;
- ▶▶ Search for RSS Feeds;
- ▶▶ Subject-wise / Publisher-wise RSS Feeds;
- ▶▶ My RSS: Select your own set of journals and get their RSS feeds;
- ▶▶ My Feed Reader; and
- ▶▶ Get Feed through SMS and Email.

7.3.7.6. Library Toolbar

Shri Abhishek Kumar, Scientist B (CS)

The INFLIBNET has developed toolbar that facilitates easy access to e-resources, union databases, SOUL and other important links to the INFLIBNET's services and resources. After getting positive response from users, new version of the Toolbar 1.1 was released with enhanced features and functionalities. The list of the e-resources covered under the N-LIST project was also included along with Web single sign-on authentication technology.

7.3.8. Open Journal Access System (OJAS) (<http://www.inflibnet.ac.in/ojs/>)

Shri Ashok Kumar Rai, Scientist D (CS)

Shri Rajesh Chandrakar, Scientist B (LS)

Shri Mohit Kumar, Project Assistant (CS)

The Centre has implemented and maintains a journal publishing system using open source software called Open Journal System (OJS) to facilitate publication of electronic journals in open access environment. Figure 21 depicts Open Journal Access System (OJAS) interface. The following six journals are hosted on OJAS platform:



Fig. 21: Open Journal Access System (OJAS)

- » Journal of Literature, Culture and Media Studies;
- » Assam University Journal of Science and Technology;
- » ICSSR Journal of Indian Psychological Abstracts and Reviews;
- » ICSSR Journal of Abstracts and Reviews – Economics;
- » ICSSR Journal of Abstracts and Reviews – Geography; and
- » ICSSR Journal of Abstracts and Reviews – Political Science.

More details on Open Journal Access System (OJAS) project are available at 7.4.2 in this report.

7.4. Open Access R & D Group

The current system of scholarly communication inhibited rather than promote access to scholarly information at a time when technology can enable vast improvement in access, speed of publication and saving in the cost of publication. The present model of publishing is essentially a monopoly of publishers that is driven by the need to publish rather than the need for more information. The open access has emerged as a promising alternative to the current model of scholarly publishing that provides free access to scientific information to its users. The open access publishing model offers full-text of journals free of charge to a user through well-organized and professionally managed web interfaces. The essential premise of the open access movement is that the scientific community and society in general benefits from the open exchange of ideas and information unaffected and unencumbered from the limitations of subscription costs, licensing arrangements and copyright inherent to the traditional model of commercial journal publishing. Open access journals and institutional repositories are two routes of open access publishing system.

Open-access journals, considered as “golden route”, for providing access to peer-reviewed journal literature in electronic format free-of-charge without any restriction of access. Institutional repositories, considered “green route” to open access publishing, are being set-up in research institutions with anticipation that the faculty and researchers would submit their preprints or post-prints of articles that are either accepted for publication or already published in traditional printed journals.

The Open Access R & D Group at the INFLIBNET Centre is working for spread of open access movement. The Centre has started following two initiatives during the period under report:

7.4.1. Shodhganga: A Reservoir of Indian Electronic Theses and Dissertations

Dr. Jagdish Arora, Director
 Shri Manoj Kumar K, Scientist D (CS)
 Shri Yatrik Patel, Scientist C (CS)
 Shri Swapnil Patel, Scientist B (CS)
 Shri Ramiz Malik, Project Officer (CS)
 Ms. Daksha Halpati, Project Associate (CS)
 Ms. Leena J. Parmar, Project Assistant (CS)

Theses and dissertations are known to be the rich and unique source of information, often the only source for research work that does not find its way into various publication channels. However, theses and dissertations

remain an un-tapped and under-utilized asset, leading to unnecessary duplication and repetition that, in effect, is the anti-theses of research and wastage of huge resources, both human and financial.

The UGC Notification (Minimum Standards & Procedure for Award of M.Phil. / Ph.D Degree, Regulation, 2009) dated 1st June 2009 mandates submission of electronic version of theses and dissertations by the researchers in universities with an aim to facilitate open access to Indian theses and dissertations to the academic community world-wide. Online availability of electronic theses through centrally-maintained digital repositories does not only ensure easy access and archiving of Indian doctoral theses but it also help in raising the standard and quality of research. This initiative overcome serious problem of duplication of research and poor quality resulting from the “poor visibility” and the “unseen” factor in research output. As per the Regulation, the responsibility of hosting, maintaining and making the digital repository of Indian Electronic Theses and Dissertations called ‘Shodhganga’, accessible to all institutions and universities is assigned to the INFLIBNET Centre.

‘Shodhganga’ is the name coined to denote digital repository of Indian Electronic Theses and Dissertations. The word ‘Shodh’ originates from Sanskrit and stands for research and discovery. The ‘Ganga’ is the holiest, longest and largest of all rivers in Indian subcontinent. The Ganga is the symbol of India’s age-long culture and civilisation, ever-changing, ever-flowing, ever loved and revered by its people and has held India’s heart captive and drawn uncounted millions to her banks since the dawn of history. Shodhganga stands for the reservoir of Indian intellectual output stored in a repository hosted and maintained by INFLIBNET Centre.

The Shodhganga@INFLIBNET is set-up using an open source digital repository software called DSpace developed by MIT (Massachusetts Institute of Technology) in partnership with Hewlett-Packard (HP). The DSpace uses internationally recognized protocols and interoperability standards. The Shodhganga provides a platform for research scholars to deposit their Ph.D. theses and make it available to the entire scholarly community in open access. The repository has the ability to capture, index, store, disseminate and preserve submitted by the researchers.

Shodhganga replicates academic structure of each University in terms of Departments / Centres and Colleges each University has to facilitate ease of navigation. This structure facilitates research scholars from universities to deposit their theses in the respective Department/Centre. The Centre has developed custom-made ingestion interface that simplifies the process of registration and submission and compress seven-step submission process used by DSpace into a single-step.

In consultation with the National Committee on ETD/Shodhganga, INFLIBNET Centre has prepared an MoU to be signed with universities for joining Shodhganga along with responsibilities of Universities and INFLIBNET Centre. As on 31st March 2011, twenty universities have signed MoU. Several universities have started contributing full-text of their theses into Shodhganga. About 16 universities have submitted more than 1,600 full-text- theses during the year under report. The list of universities who has signed the MoU is given in Appendix VII and those who contributed softcopy into Shodhganga are given in Appendix VIII.

7.4.2. Open Journal Access System (OJAS)

Shri Rajesh Chandrakar, Scientist B (LS)

Mrs. Priti Sharma, Project Officer (LS)

Shri Mohit Kumar, Project Assistant (CS)

The INFLIBNET Centre has installed and configured Open Journal System (OJS), an open source software for electronic publishing of the journals, on servers at INFLIBNET to facilitate hosting of electronic version of

journals into open access mode with all processes of submission, peer-reviewing, editing, layout designing and publishing built into it. The initiative encourages universities and institutions that are publishing journals in print format to use the platform for hosting electronic version of their journals free-of-cost on servers at the INFLIBNET Centre. The initiative also encourages faculty in universities to start their own open access journals on this platform. The following six journals are currently hosted on OJAS:

- ▶▶ Journal of Literature, Culture and Media Studies - published by Prof. N D R Chandra, Head, Department of English, Nagaland Central University;
- ▶▶ Assam University Journal of Science & Technology on “Biological and Environmental Sciences” and “Physical Sciences and Technology” published by Assam University Press, Silchar;
- ▶▶ ICSSR Journal of Indian Psychological Abstracts and Reviews – published by ICSSR, New Delhi;
- ▶▶ ICSSR Journal of Abstracts and Reviews – Economics – published by ICSSR, New Delhi;
- ▶▶ ICSSR Journal of Abstracts and Reviews – Geography – published by ICSSR, New Delhi; and
- ▶▶ ICSSR Journal of Abstracts and Reviews – Political Science – published by ICSSR, New Delhi.

7.5. UGC-Infonet Connectivity Programme

Shri Manoj Kumar K, Scientist D (CS)

Shri Ramiz Malik, Project Officer (CS)

Ms. Leena J.Parmar, Project Assistant (CS)

The University Grants Commission (UGC), with its responsibility to coordinate and maintain high standards in university education, had launched the UGC INFONET Programme to bring about a qualitative change in the academic infrastructure, especially for higher education. Under this initiative, the UGC facilitates modernization of university campuses with state-of-the-art campus wide networks. Besides, each university gets Internet bandwidth with dedicated IP addresses through a national-level ISP. The scheme was inaugurated by the then Hon'ble Prime Minister of India with the commencement of UGC's Golden Jubilee celebrations on 25th December, 2002.

Services of a national-level Internet Service Provider (ISP) is deployed for providing Internet connectivity as well as for resource conceptualization, planning, establishing and maintaining network and communication infrastructure for all universities covered under 12(B) and 2(f) Sections of the UGC Act.

The INFLIBNET, as an IUC of the UGC, acts as a coordinating agency for monitoring the network and Internet bandwidth provided to the universities under the scheme and liaisons between ISP and universities. The project is managed by the Central Connectivity and Monitoring Committee (CCMC) constituted by UGC for taking policy decisions. Composition of current CCMC is given in Appendix IX.

7.5.1. Aims and Objectives

The UGC-INFONET provides Internet bandwidth, a pre-requisite for delivery of scholarly content subscribed through the UGC-INFONET Digital Library Consortium. Major objectives of UGC-INFONET Connectivity Programme are as follows:

- ▶▶ To serve as a vehicle for distance learning and facilitate spread of quality education all over the country;

- ▶▶ To facilitate delivery of education material including electronic journals and bibliographic databases to all eligible universities in the country;
- ▶▶ To serve as a resource for researchers and scholars for tapping the most up-to-date information;
- ▶▶ To act as a medium for collaboration among teachers and students, not only within the country but also all over the world;
- ▶▶ To facilitate Intranet infrastructure for beneficiary universities;
- ▶▶ To serve as a channel for globalization of education and facilitate the universities in marketing their courses, their project and R & D activities;

- ▶▶ To establish a Wide Area Network in the Nation to connect all universities and IUCs in India to a common backbone network;
- ▶▶ To facilitate each university to host their Web sites and other resources for access through this network;
- ▶▶ To facilitate access to full-text e-resources and bibliographic databases through the UGC-Infonet Digital Library Consortium secured link with IP authentication;
- ▶▶ To provide security and other protection for the network against attacks, hacking, etc.;
- ▶▶ To provide backbone network to support video conferencing facilities between the connected universities;
- ▶▶ To assist or support university to establish their network infrastructure and Campus Wide Network for effectively using UGC Infonet;
- ▶▶ To train the computer professionals, if required, for handling the network properly; and
- ▶▶ 32 IP addresses to each university to access e-resources.

7.5.2. BSNL as New ISP for UGC Infonet Connectivity Programme

The Guidelines for UGC-Infonet Connectivity Programme, implemented in the year 2009, provides for selection of ISP with better national network infrastructure. Based on the recommendation of the CCMC, purchase Order was placed with M/s. BSNL for providing 10 Mbps (1:1) Internet connectivity to 182 Institutions as per the negotiated rates shown in Table 11. An MoU was signed between BSNL and the Director, INFLIBNET Centre. The MoU spells out technical specification, SLA and terms and conditions recommended by CCMC, Negotiation Committee and Technical Committee.

Within a short period of 3-6 months about 174 universities were migrated to 10 mbps (1:1) BSNL Connectivity on optical fiber as per the architecture shown in Figure 22. Due to difficulties in laying optical fiber, 32 universities were connected with 2 Mbps after obtaining special rates from BSNL. All 2 Mbps connections are upgraded to 10 Mbps (1:1) after laying the fiber. UGC-INFONET has paved the way for National Knowledge Network (NKN)/ NME-ICT project that provides 1 Gbps MPLS connectivity to all universities in India since the Fiber laid for providing 10 Mbps connectivity to universities under UGC INFONET 2.0, is also used for 1Gbps connectivity. As per the MoU signed with the BSNL, UGC-Infonet connectivity from a university is withdrawn as soon as a university gets NKN/ NME-ICT Internet connectivity. Prior to withdrawing UGC- Infonet connectivity, it is ensured that access to e-resources is enabled on new sets of IP addressed used by the university for NKN/NME-ICT connectivity. About 90 already universities have migrated to NKN/NME-ICT scheme during the year under review. The Internet connectivity status as on 31st March 2011 is shown in Table 10.

Total number of universities as per PO	182
Universities connected by BSNL under UGC Infonet	174
Universities migrated to NKN/NME-ICT (Appendix X)	90
Universities remaining under UGC-Infonet 2.0 (Appendix XI)	84
Order Cancelled due to NKN Connection (Appendix X)	4
Pending connections	4

Table 10: Status of Universities under UGC Infonet Scheme as on 31st March, 2011

Rates negotiated by the Negotiation Committee and approved by the CCMC are given in Table 11

Sr.	Item	Bandwidth in Mbps IBW	BSNL standard Tariff annum*)	Original Quote (Rupees per annum*)	Negotiated Rates(Rupees)
1	Internet Leased Line (1:1 unshared)	2	800000	300000	Rs. 235,000
2	Internet Leased Line (1:1 unshared)	4	1650000	330000	Rs. 325,000
3	Internet Leased Line (1:1 unshared)	6	2462500	492500	Rs. 485,000
4	Internet Leased Line (1:1 unshared)	8	3275000	655000	Rs. 650,000
5	Internet Leased Line (1:1 unshared)	10	4000000	800000	Rs. 725,000

* Including required equipment

Table 11: Approved Rates for Internet Bandwidth

As per the terms and conditions of negotiations, web co-location service is offered by BSNL to the INFLIBNET Centre free-of-cost at their Data Centre with 20 U Space and 100 Mbps connectivity. 3 servers were shifted to the Data Centre for various services including NLIST.

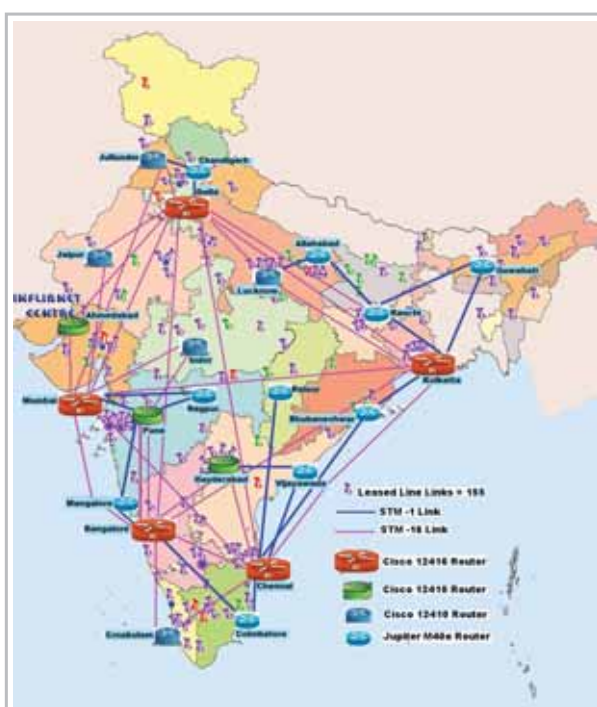


Fig. 22: Architecture for UGC Infonet 2.0

7.5.3. New Format for UGC-Infonet

As mentioned above, National Knowledge Network (NKN), a programme of the Govt of India, envisages to provide 1 Gbps connectivity to all universities and the academic and research institutions in the country using high bandwidth / low latency network. On setting up of NKN in the country directly or through NME-ICT project of MHRD, UGC-Infonet connectivity would be subsumed into the NKN network. Around 50% of the universities have already migrated to NKN/NME-ICT connectivity till 31st March 2011.

However, while NKN will successfully take-up the task of providing greater Internet bandwidth to all universities, it was proposed in the CCMC to redefine and reformat the UGC-Infonet Connectivity programme with an aim to assist member universities to make better use of greater connectivity made available to the universities through NKN. The new format for the UGC-Infonet scheme was discussed during the Meeting of the R & D Panel on Existing Services of INFLIBNET held on 7th June 2010 as well as in the CCMC in its two meetings held on 19th November 2010 and 25th May 2011.

CCMC, the Committee responsible for steering UGC-Infonet project, in its meeting held on 19th November, 2010 at IUCAA, Pune unanimously agreed that the UGC-Infonet Connectivity programme can effectively provide greater support to the university with augmentation of their network and computing infrastructure especially for accessing e-resources and Internet services. It was observed that several universities are not able to use full bandwidth provided to the universities due to lack of proper access infrastructure. Given the fact that NKN will take care of the connectivity part, INFLIBNET should focus on the services to be offered on the Internet connectivity made available by the NKN. It was resolved in the CCMC that the new format for UGC-INFONET scheme would include:

- i) Data Centre at INFLIBNET Centre as well as for universities in different geographical regions for hosting scholarly content from universities including lecture notes, class room lectures, teaching materials, etc.;
- ii) UGC-INFONET Resource Centre at every university consisting of Institutional Repository and PCs to access electronic resource provided through the UGC-Infonet Digital Library Consortium; and
- iii) Video conferencing facility where adequate ICT infrastructure is available.

Detailed proposal with methodology for implementation of the new scheme, budget, responsibilities of universities, INFLIBNET etc. was prepared by the Centre. The proposal is being processed for getting approval of the CCMC and UGC.

7.6. UGC-Infonet Digital Library Consortium

Dr. Jagdish Arora, Director
Shri Ashok Kumar Rai, Scientist D (CS)
Shri Dinesh Kumar Pradhan, STO-I (LS)
Ms. Kruti Trivedi, STA-II (LS)
Shri Saroj Kumar Panda, STA-II (LS)
Ms. Rachna Shelat, Project Officer (CS)

The UGC-Infonet Digital Library Consortium was launched by Dr. A.P. J. Abdul Kalam, the then President of India during December 2003. The UGC-Infonet Digital Library Consortium provides current as well as archival access to more than 7,500+ core and peer-reviewed journals and eleven bibliographic databases from 25 publishers including commercial publishers, scholarly societies, university presses and aggregators in different

disciplines. The programme has been implemented in a phased manner. In the first phase that began in 2004, access to e-resources was provided to 50 universities who had Internet connectivity under the UGC-Infonet Connectivity programme. In the second phase, 50 more universities were added to the programme in the year 2005 as additional universities got Internet connectivity through UGC-Infonet programme. So far 167 Universities are being provided differential access to subscribed e-resources including all the IUCs of the UGC. These e-resources cover almost all subject disciplines including arts, humanities, social sciences, physical sciences, chemical sciences, life sciences, computer sciences, mathematics and statistics, etc. The programme is wholly funded by the UGC and executed by the INFLIBNET Centre. The Centre has also initiated Inter-Library Loan (ILL) through JCCC (Journal Custom Content for Consortium). The JCCC provides article-level access to all articles published in journals subscribed by the UGC-Infonet Digital Library Consortium as well as content in journals subscribed by 22 university libraries designated as ILL Centres of the INFLIBNET Centre.

The Consortium has also launched its “Associate Membership Programme” wherein private universities and other research organizations are welcomed to join the Consortium for selected e-resources.

7.6.1. Objectives

The major aims and objectives of the UGC-Infonet Digital Library Consortium are as follows:

- ▶▶ to subscribe electronic resources for the universities at a highly discounted rates of subscription and at the best terms and conditions;
- ▶▶ to extend the benefit of consortium-based subscription to all Indian universities and colleges;
- ▶▶ to extend the benefit of consortium to associate members of the Consortium;
- ▶▶ to impart training to the users, librarians, research scholars and faculty members of the institutions on the use of electronic resources with an aim to optimize their usage;
- ▶▶ to promote increased interaction amongst the member libraries;
- ▶▶ to catalyse increase in the research productivity of the institutions both in terms of quality and quantity of publications;
- ▶▶ to evaluate the usage of the resources subscribed; and
- ▶▶ to identify new resources that are required to be subscribed under the programme based on the availability of funds.

7.6.2. Governance of UGC-Infonet Digital Library Consortium

7.6.2.1. National Steering Committee

The UGC-INFONET Digital Library Consortium is operated by the Centre under the guidance of a National Steering Committee (NSC) constituted by the UGC. The NSC is responsible for policy issues of the Consortium. The Committee decides on e-resources to be subscribed from various publishers and its numbers along with names of the beneficiary universities. The NSC was also responsible for negotiating the subscription rates of e-resources in its formative years. The current composition of the NSC is given in Appendix XII.

7.6.2.2. Negotiation Committee

The Negotiation Committee is constituted as per UGC Guidelines on UGC-Infonet Digital Library Consortium for negotiating the subscription rates of e-resources. The current composition of the Negotiation Committee is given in the Appendix XIII.

7.6.3 Current Status

The Consortium offers access to more than 7,500+ peer reviewed electronic journals and eleven bibliographic databases from 25 major publishers and aggregators. The access of the journals covers through current issues of the journals as well as 10 years back files (from 1997 in most cases) and from volume 1 onwards in some cases (American Chemical Society, Institute of Physics and JSTOR). The service is offered to 167 universities covered under phase I, II and III (Appendix XIV). The details of subscribed e-resources are provided in Appendix XV.

7.6.3.1. Subscription to 10 Subject Collection of ScienceDirect

Beginning January 2011, the UGC-INFONET Digital Library consortium has extended the access of 10 subject collections of ScienceDirect, which is the world's largest full-text database in science, technology and medicine (STM) and the most sought after resource in the universities. The access is enable for 60 universities including 50 on subscription basis and 10 on trial. The consortium was earlier providing access to Cell Press journals (34 titles) to 50 (phase I) universities. The universities are getting access to 1036 titles from 10 subject collections (Biochemistry, Genetics & Mol. Biology, Agriculture & Biological Science, Chemistry, Computer Science, Economics, Immunology & Microbiology, Mathematics, Physics & Astronomy, Social Sciences, Psychology) with access to back files since 1995. The subscription arrangement has been made on cost sharing basis, where in the universities have to contribute to the cost by retaining their print subscriptions. Additionally, Elsevier has extended the facility to download 500 articles to every university that can be used by the university authorities on username & password basis for downloading articles from the non-subscribed content. The access to Freedom Collection of Elsevier ScienceDirect is provided to the INFLIBNET, enabling it to fulfil the document delivery requests from other universities not included in 60 universities.

7.6.3.2. Subscription to Enhanced Collection of Wiley-Blackwell

Beginning October 2010, all the universities getting access to 497 e-journals from Blackwell publishing were provided trial access to 571 titles from HSS and ST collection of Wiley. The Consortium has subscribed to the enhanced collection from Wiley-Blackwell which includes 908 titles from HSS and ST collection of Wiley-Blackwell from January 2011 onwards. The subscription has been made for 95 universities and 20 universities are given complimentary access to the enhanced collection.

7.6.3.3. User Awareness Programmes

The Centre conducts user awareness programmes in universities to promote usage of e-resources. During this financial year under review, 5 user awareness programmes were organized at different universities as per the details given in Table 12 below:

Sr.	Name of the University	Dates	INFLIBNET Representative
1.	SNDT University	25th Aug 2010	Shri Ashok Kumar Rai
2.	Karnataka University	10-11th Nov 2010	Smt. Hema Cholin
3.	Mizoram University	15-16th Nov 2010	Shri Manoj Kumar K.
4.	Mangalore University	22-23 Oct 2010	Dr. Jagdish Arora
5.	Cochin University of Science & Technology	29th Oct 2010	Dr. Jagdish Arora

Table 12: User Awareness Programmes

7.6.3.4. Associate Membership Programme

The resources subscribed under the UGC-INFONET Digital Library Consortium are available on subscription to private universities and other institutions under the "Associate Membership Programme". Under the scheme, private universities and other researcher institutions can enrol themselves as "Associate member" and subscribe to resources of their choice available under the Consortium. The rates of subscription are same as applicable to Consortium for its core members. Associate members are charged an annual membership of Rs. 5,000.00. The subscription of e-resources is subject to the approval of respective publishers. During the period under report, 76 universities and other institutions have enrolled as associate members and are subscribing to different sets of resources.

7.6.4. Usage of E-Resources

Most publishers maintain detailed usage statistics for resources made accessible to universities by them. The publishers provide username and password for accessing the usage statistics for their resources for monitoring purpose. Most publishers provide COUNTER compliant usage statistics, which is an International standard for comparison of usage available through various platforms. The usage statistics from various publishers' website are downloaded on regular intervals and made accessible to the member universities on INFLIBNET website through an interface called e-RAMS (Electronic Resource Access Management System). Universities with low usage of e-resources are requested to optimize their usage.

Table 13 reflects consistent increase in usage from 2009 to 2010 for all e-resources. There is an increase of 22.76% in overall usage of all the resources from 2009 to 2010.

Sl. No.	Publishers	2009	2010	Increase in 2010
1	ACS	1031237	1196487	16.02
2	AIP/APS	419658	377910	-9.95
3	AR	76731	71637	-6.64
4	Blackwell	178869	526986	194.62
5	CUP	72972	58165	-20.29
6	Elsevier	165029	181162	9.78
7	Emerald	69363	74499	7.40
8	IOP	232573	249259	7.17
9	JSTOR	1566952	2140689	36.61
10	Nature	79456	107648	35.48
11	OUP	208692	304269	45.80
12	PM	89175	86094	-3.46
13	Portland	22294	NA	NA
14	RSC	185985	220134	18.36
15	SpringerLink	1397193	1501513	7.47
16	TandF	293286	378814	29.16
17	Pr. Euclid	2124	2151	1.27
18	SIAM	1922	1643	-14.52
19	JCCC	881307	1820101	106.52
20	MathSci	125778	148875	18.36
21	SciFinder	292099	273487	-6.37
22	WOS*		86261	—
		6089465	7475266	22.76

Table 13: Publisher wise usage from 2009-2010

*Usage statistics for WOS is available since June 2010.

The comparative usage of various resources through in 2009 and 2010 is given below in Figure 23. The graph clearly shows that there is an increase in the usage of most publishers although decrease in usage is visible in case of few publishers during the period under report.

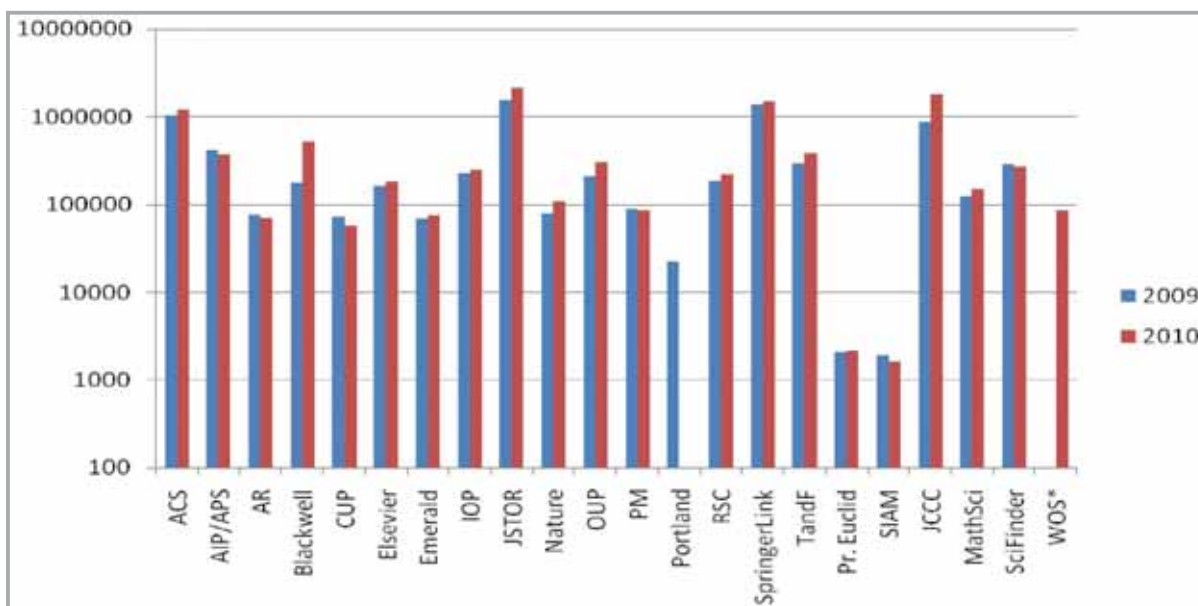


Fig. 23: Publisher-wise Usage of Resources for year's 2009 and 2010

7.6.5. Economics of UGC-Infonet Digital Library Consortium

7.6.5.1. Annual Increase in Rates of Subscription

In general, there is 10% to 15% annual increase in subscription rate of resources. However, Consortium has negotiated the rates of increase in price of the e-resources and fixed the price cap within 4-5% annually.

7.6.5.2. Intensity of Usage: Cost Recovery

“Cost Recovery” and “Average cost of article per download” can be used effectively to judge cost effectiveness of e-resources. These two factors reflect the intensity and frequency of usage of e-resources by member institutions in a Consortium.

The cost recovery factor is calculated by multiplying number of articles downloaded with the cost of a single article, if it is purchased directly from the publishers in the pay per view model or brought through ILL from any document delivery service. According to ALPSP survey, 78% of publishers surveyed offer pay-per-view or individual article purchase options. In the pay-per-view model the cost of articles varies from publisher to publisher and average cost is \$30 per article. Assuming that if the electronic resources were not available through the Consortium, articles downloaded from these resources by the member institutions would have been sourced on inter-library loan / document delivery service at a cost of US \$ 15.00 per article (Average cost of article taken from a study conducted by the American Research Libraries).

The total amount of Rs. 5799.72 millions has been recovered as against the total cost incurred of Rs. 462.51 millions with Rs. 5337.20 millions as the cost in excess as shown in Figure 24.

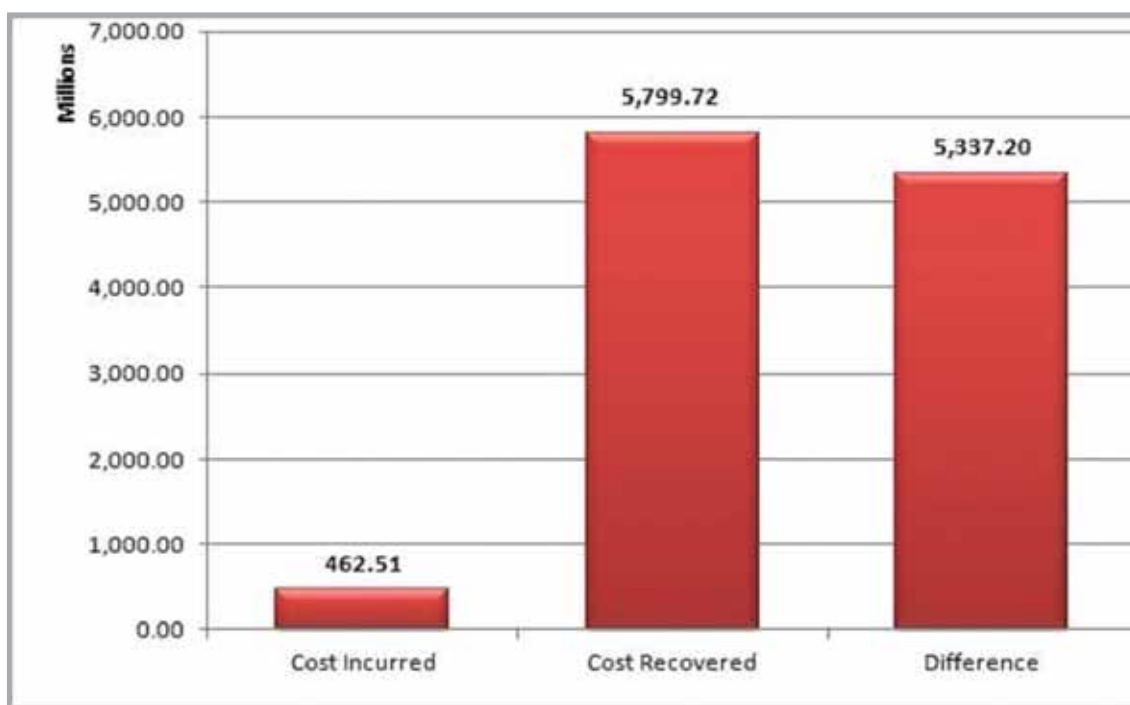


Fig. 24: Total Cost Recovery during 2010

The cost recovery factor for each resource is shown in Figure 25, that reflects that the cost recovery factor for JSTOR is highest followed by Springer & ACS.

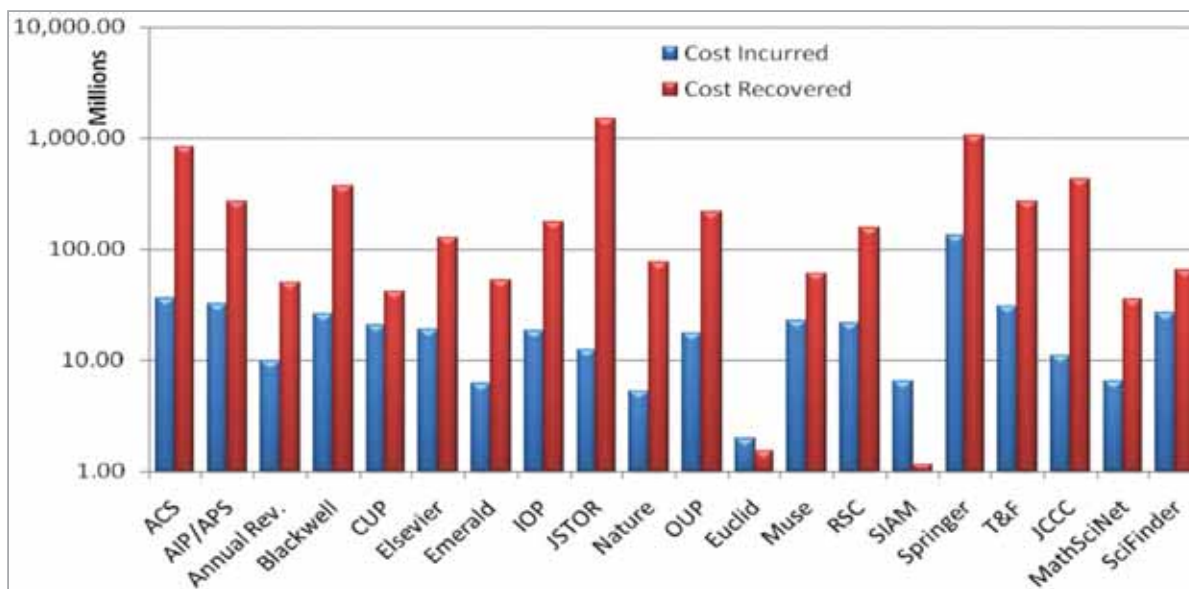


Fig. 25: Publisher-wise Cost Recovery during 2010

7.6.5.3. Average Cost of an Article/Bibliographic Record

The average cost per download represents average cost of each access event to a full-text article and is calculated by dividing subscription cost of a resource by the number of articles downloaded.

The Table 14 and Figure 26, given below, provide the cost per download of an article. The cost per download is lowest for JSTOR (Rs. 5.84) and highest for SIAM (Rs. 3903.66), whereas the Consortium average is Rs. 55.94.

Sr.	E-Resource	Average cost per Download (in Rs)
1.	JSTOR Archival Access	5.84
2.	ACS	30.22
3.	Nature	48.68
4.	Blackwell	49.38
5.	OUP	57.34
6.	Institute of Physics	74.16
7.	Taylor & Francis	80.81
8.	Emerald	81.74
9.	AIP/APS	85.21
10.	Springer	87.98
11.	RSC	97.70
12.	Elsevier	105.00
13.	Annual Rev.	135.32
14.	Project Muse	261.36
15.	CUP	351.42
16.	Proj. Euclid	921.28
17.	SIAM	3903.66
	Average cost	55.94

Table 14: Publisher-wise Average Cost of an Article

Table 15 given below provides the average cost of a search for bibliographic database.

Sr.	Bibliographic Database	Average cost per Search (in Rs)
1.	JCCC	6.04
2.	MathSciNet (AMS)	43.30
3.	SciFinder Scholar	97.52
	Average cost	19.66

Table 15: Average Cost of Bibliographic Database

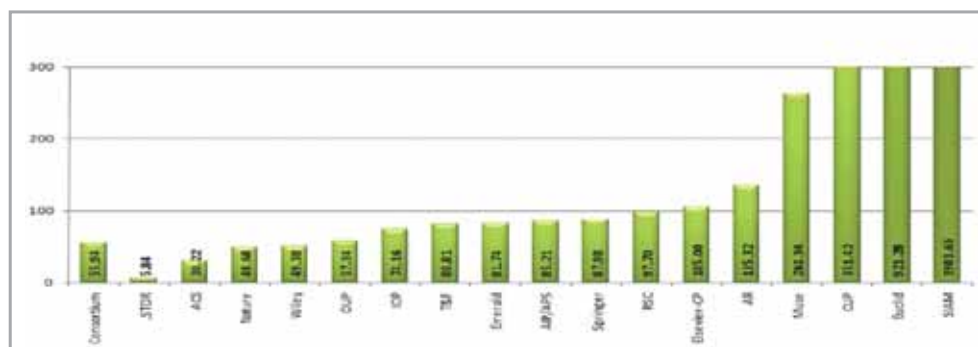


Fig. 26: Average Cost of an Article (in Rs.) for Consortium during the Year 2010

Over the last few years the cost of an article has been reduced due to increase in usage of the resources. The bar chart given in Figure 27 plots average cost per article for the e-journals over a period of 6 years, i.e. 2005-2010.

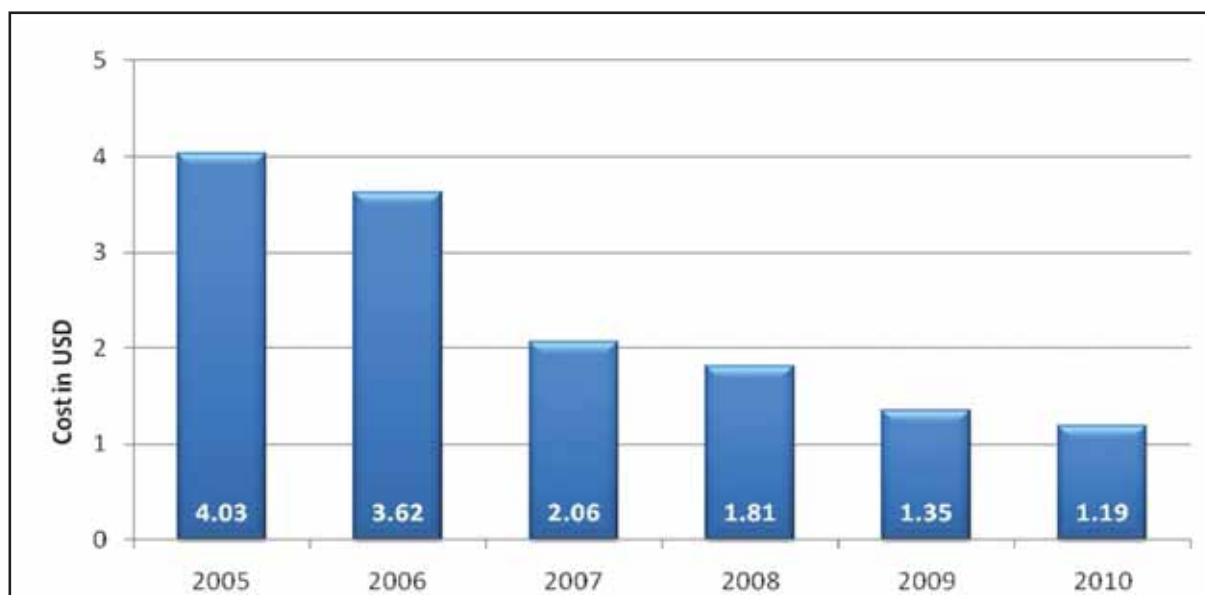


Fig. 27: Average Cost of per Download (in USD) for Consortium from 2005 to 2010

7.6.6. Document Delivery through JCCC

The JCCC@UGC-Infonet is virtual library of journals article created as a customized e-journals articles access gateway and database solution for UGC-Infonet Digital Library Consortium. JCCC provides article level access to e-journals subscribed under the Consortium as well as e-journals subscribed by 22 university libraries designated as ILL Centres since 2009. It acts as a gateway to search 11,500+ journals including 3215 open access journals and 6500+ journals subscribed by the consortium and 3996 journals subscribed by the ILL Centres. The JCCC interface facilitates triggering of e-mail request for articles that are not accessible online and are available only in universities designated as ILL Centres.

During the period under report, 1302 ILL requests were generated for the INFLIBNET Centre by 20 member university libraries and 1182 requests were fulfilled. The numbers of requests made by member universities are given in Table 16 below:

Sr.	Institution Name	*DDR-F	+DDR-P	#DDR-UF	Total
1	Sree Sankaracharya University of Sanskrit, Kalady	110	1	1	112
2	Vikram University, Ujjain	82	0	2	84
3	Kannur University, Kannur	69	0	6	75
4	Swami Ramanand Teerth Marathwada University, Nanded	58	0	4	62
5	Acharya Nagarjuna University, Nagarjunanagar	53	0	3	56
6	Sri Chandresekharendra Saraswati Viswa Mahavidyalaya, Kanchipuram	55	0	0	55
7	Yashwantrao Chavan Maharashtra Open University, Nashik	45	1	7	53
8	Periyar University, Salem	42	0	0	42

Sr.	Institution Name	*DDR-F	+DDR-P	#DDR-UF	Total
9	Banasthali Vidyapith, Banasthali	36	0	1	37
10	Barkatullah University, Bhopal	33	0	1	34
11	Pondicherry University, Pondicherry	12	0	18	30
12	Alagappa University, Karaikudi	25	0	4	29
13	Hemchandraacharya North Gujarat University, Patan	26	0	2	28
14	University of Calicut, Calicut	18	0	10	28
15	University of North Bengal, Darjeeling	26	0	2	28
16	Babasaheb Bhimrao Ambedkar University, Agra	21	0	2	23
17	Berhampur University, Berhampur	19	0	2	21
18	Gulbarga University, Gulbarga	18	0	2	20
19	Sri Krishnadevraya University, Anantapur	17	2	1	20
20	Kuvempu University, Shankaraghatta	19	1	0	20
21	Other Universities	398	0	47	445
	Total	1182	5	115	1302

*DDR-F: Document Delivery Request – Fulfilled

+DDR-P: Document Delivery Request - Pending

#DDR-UF: Document Delivery Request – Unfulfilled

Table 16: Document Delivery Requests made by different Universities

During the period under report, a total number of 25001 requests were received by the 22 ILLCentres from 125 universities and 17496 were fulfilled as per the details given below in Table 17:

Sr.	Institution Name	*DDR-F	+DDR-P	#DDR-UF	Total	% of Fulfilled
1	Jadavpur University, Kolkata	11416	364	560	12340	92.51
2	Tata Institute of Social Science, Mumbai	1932	1	244	2177	88.75
3	University of Delhi, New Delhi	952	218	103	1273	74.78
4	The Maharaja Sayajirao University of Baroda, Vadodara	662	0	518	1180	56.10
5	North-Eastern Hill University, Shilong	493	156	286	935	52.73
6	Panjab University, Chandigarh	842	20	18	880	95.68
7	University of Kolkata, Kolkata	144	7	668	819	17.58
8	Bangalore University, Bangalore	24	457	300	781	3.07
9	Jawaharlal Nehru University, New Delhi	100	598	0	698	14.33
10	University of Hyderabad, Hyderabad	184	6	405	595	30.92
11	Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur	14	543	0	557	2.51
12	University of Pune, Pune	66	23	422	511	12.92

Sl. No.	Institution Name	*DDR-F	+DDR-P	#DDR-UF	Total	% of fulfilled
13	Banasthali Vidyapith, Banasthali	361	0	98	459	78.65
14	University of Rajasthan, Jaipur	15	313	40	368	4.08
15	Pondicherry University, Pondicherry	182	0	167	349	52.15
16	University of Madras, Chennai	2	322	0	324	0.62
17	Pandit Ravishanker Shukla University, Raipur	0	265	0	265	0.00
18	Annamalai University, Annamalainagar	79	74	31	184	42.93
19	Kurukshetra University, Kurukshetra	0	146	0	146	0.00
20	Assam University, Silchar	0	111	0	111	0.00
21	Punjabi University, Patiala	20	3	12	35	57.14
22	Banaras Hindu University, Banaras	8	6	0	14	57.14
	Total	17496	3633	3872	25001	69.98

*DDR-F: Document Delivery Request – Fulfilled

+DDR-P: Document Delivery Request - Pending

#DDR-UF: Document Delivery Request – Unfulfilled

Table 17: Document Delivery Requests Received by 22 ILL Centres

7.6.7. Access to E-Resources for Walk-in Users

The walk-in-users facility of the Centre has 10 Internet-enabled PCs dedicated to the walk-in users for accessing electronic resources subscribed under the UGC-Infonet Digital Library Consortium. The license agreements signed with the publishers of e-resources provides for access to e-resources to the “walk-in” users at the Centre. The walk-in users include students and researchers from Gujarat University, its affiliated colleges and students from the nearby universities and colleges. During the period under report, a total number of 703 users visited the Centre with an average of 59 users per month.

7.7. E-Resources Access Management

Shri Yatrik Patel, Scientist C (CS)

Shri Ashok Kumar Rai, Scientist D (CS)

Dr. Jagdish Arora, Director

The Shibboleth working architecture requires each participating institute to set-up their own identity provider services. Looking at the present scenario, universities and colleges do not have requisite technical know-how and ICT infrastructure to set up their own IDPs, INFLIBNET, therefore, would act as an IDP for all the institutions, including universities and colleges under its umbrella. Shibboleth implementation at INFLIBNET is being suitably amended as mentioned below:

- ▶▶ Users from N-LIST or UGC-INFONET Digital Library Consortium visits the publisher’s web site to access e-resources;
- ▶▶ The resource redirects the user to WAYF (where are you from), so that he/she can select his / her home organisation. The service provider (publisher) would recognize INFLIBNET Centre as a trusted organization for authenticating user, and would give an option on its Web site of their resource to select

INFLIBNET as an Identity Provider Service. Since INFLIBNET will serve as an IDP for all its member universities and colleges, individual institutions would not be required to set-up their separate IDP and publisher would not be required to maintain separate link for each institution;

- ▶▶ When a user selects INFLIBNET Federation for his / her authentication, he / she would be re-directed to IDP link at INFLIBNET Server;
- ▶▶ After verifying user's credentials, IDP at INFLIBNET will pass "user attributes" which may also contain his / her institute, department, role (faculty/student/researcher), and if agreed, whether he / she is having access to a given resource or not and / or any other attributes which are mutually agreed between INFLIBNET as IDP and publisher as service provider;
- ▶▶ After successful authentication, a one-time handle or session identifier is generated for a session, and the user is returned to the resource at publisher's site;
- ▶▶ The resource (publisher's site) uses the handle to request attribute information from the Identity Provider for this user. The INFLIBNET, as IDP, allows or denies the attribute information to be made available to this resource using the Attribute Release policy; and
- ▶▶ Based on attributes associated with the authenticated user, he/she would be allowed access to an e-resource.

7.7.1 Customization of Shibboleth System

The Shibboleth working architecture requires that each participating institute should set-up their own Identity Provider Services (IDP). Given the fact that most universities and colleges do not have requisite technical know-how and ICT infrastructure, the INFLIBNET would act as an IDP for all the institutions, including universities and colleges under its umbrella. Shibboleth implementation at INFLIBNET is being amended as mentioned below.

7.7.2. Authentication Mechanism

Native installation of Shibboleth supports LDAP or Kerberos authentication mechanism, keeping in mind the present scenario and infrastructure available in colleges, it was not possible to have LDAP / Kerberos databases for all the users of N-LIST. It was, therefore, decided to re-write entire JAAS (Java Authentication and Authorization Service) module, to accept authentication for users and their MD5 encoded passwords from MySQL database that was created while implementing EZproxy. Entire JAAS module was written from scratch and compiled as 'jaasjini.jar' and was placed in application's library.

7.7.3. Attribute Release

Native mechanism of Shibboleth IDP supports only one institute which is hosting IDP server. The primary task for Shibboleth implementation at INFLIBNET was to enable Shibboleth in a way that it should release user's organization, Department and its affiliation, once user has been authenticated. As attributes will be dynamic in nature for each user, it was decided to use "Relational Database Connector" instead of "Static Connector" in "attribute-resolver.xml" of Shibboleth configuration, as these attributes were already available in RDBMS tables of NLIST database.

7.7.4. Implementation of Shibboleth-based Authentication into EZProxy

Presently, the Centre is using EZProxy for extending access to resources to users in colleges under N-LIST Programme. Considering the fact that some of the e-resources subscribed by the UGC-Infonet Digital Library

Consortium and N-LIST are not Shibboleth compliant, the Centre has induced Shibboleth into EZproxy by overriding native authentication mechanism of EZproxy. In this scenario, EZproxy will hand-off authentication task to Shibboleth if the resource is Shibboleth-compliant, and all non-Shibboleth compliant resources will be proxied through EZ Proxy in the usual course.

7.7.5. Member Creation Interface

Presently, member creation interface is being developed by the Centre, which will facilitate member institutions to create authorized users and their log in IDs. The users, thus created using the custom-designed interface, will receive their passwords through e-mail enabling them to access e-resources.

As soon as this development is over, these services will be formally launched.

7.8. Bibliometric Study Group

Shri Rajesh Chandrakar, Scientist B (LS)

Shri Pallab Pradhan, Project Associate (LS)

Mrs. Priti Sharma, Project Officer (LS)

Shri Imran Mansuri, Project Assistant (LS)

The Centre has recently started a Bibliometric Study Group with an aim to measure research output from universities in terms of research publications and its impact using tools and techniques of bibliometrics and citation analysis. The Group is working on data from the Web of Science and other databases subscribed and developed by the INFLIBNET Centre. The findings of the studies are being sent for publication in reputed research journals as well as to conferences for presentation. The preliminary study was undertaken in the field on library and information science. Further, study is undertaken in agriculture sciences and chemistry.

7.9. Bibliographic Standards, Formats and Protocols

Shri Rajesh Chandrakar, Scientist B (LS)

Bibliographic standards and protocols are backbone of any bibliographic databases and related software. The standards and protocols streamline the implementation of activities, provide utmost quality, consistency and most importantly facilitate interoperability, data transfer and exchange of the system. Uniform standards and protocols are pre-requisite for data transfer, exchange and interoperability of the system. It facilitates merging of records in union catalogue and maintaining of its quality. The development and maintenance of union catalogues is one of the key activities of the Centre. As per the directives from the MHRD and recommendation of Expert Committee appointed by the Centre, important fields from MARC21 bibliographic format were identified according to practices in Indian libraries. The committee recommended use of MARC21 bibliographic format in university and college libraries. The committee also recommended making SOUL software compliant to MARC21 bibliographic format. Accordingly, each participating library was advised to use MARC21 bibliographic format for creation of bibliographic records using their library automation software. As such, the SOUL2.0 software, released in Jan 2009, was made MARC21 compliant. Further, the SOUL2.0 is also fully compliant to other standards such as Unicode, ISO2709, MARCXML, AACR2, SIP2.0 and NCIP2.0 protocols. Besides, the Dublin Core Metadata set is used in Shodhganga, a full-text database of Indian theses and dissertations. These standards and some of the guidelines prepared by the Centre such as "Guidelines for Data Capturing: A User Manual" and "SOUL Guidelines for Data Capturing: A User's Guide" are available for download on the INFLIBNET website: <http://www.inflibnet.ac.in/publication/>. Other standards recommended to the participating libraries are:

- » Anglo American Cataloguing Rules 2 (Rev.)
- » Library of Congress Subject Headings

The Centre participates in the activities of the National Information Standards Organization (NISO) as its Voting Member. The NISO is a non-profit association accredited by the American National Standards Institute (ANSI), which identifies, develops, maintains, and publishes technical standards to manage information in digital environment. NISO standards apply in both traditional and new technologies to the full range of information related needs, including retrieval, re-purposing, storage, metadata and preservation. Leaders of the organizations in the fields of publishing, libraries, IT and media serve as Voting and Alliance Members to the NISO. With the NISO, which is closely associated with the Technical Committee (TC) 46 of the International Organization for Standardization (ISO), the Centre is also involved with the activity of TC46. The TC46 Committee on Information and Documentation of the ISO serves to the following subcommittees:

- a. SC4 on Technical Interoperability
- b. SC8 on Quality – Statistics and Performance Evaluation
- c. SC9 on Identification and Description
- d. SC11 on Archival / Records Management

The Centre is a member of the Cataloguing, Information Technology and Serials Working Group of the IFLA (International Federation for Library Associations and Institutions) based at The Hague, Netherland. Further, the Centre is also Review Group Member of the IFLA FRBR (Functional Requirements for Bibliographic Records). It is associated with the Technical Committee MSD5 on Documentation and Management of Bureau of Indian Standards (BIS), New Delhi at the national level as its Voting Member. Besides, the Centre also serves as a Member on its different Panels formed for various activities and development of standards. As member of various Institutions involved in formation of standards, the Centre participated in the following activities:

7.9.1. Indian Standards Reviewed

Following Indian Standards were reviewed and comments were sent to the BIS during the period under report:

MSD 5 (387)	Guide for preparation of abstracts (Second Revision of IS 795:1976)
IS 12:2005	Guide for drafting and presentation of Indian Standards (Fourth revision).
MSD 5(392)/ISO 2709: 2008	Information and documentation - Format for information exchange
MSD 5 (394)/ISO 15836: 2009	Information and documentation - The Dublin Core metadata element
MSD 5 (395)/ISO 20775: 2009	Information and documentation - Schema for holdings information
MSD 5 (396)/ISO 25577: 2008	Information and documentation - MarcXchange
MSD 5 (398)/ISO 23081: 2006	Information and documentation - Records management processes — Metadata for records — Part 1: Principles
MSD 5 (399)/ISO 23081 - 2: 2009	Information and documentation - Managing metadata for records — Part 2: Conceptual and implementaton issues

7.9.2. BIS MSD5 and Panel Meetings

As part of the standards development activities, the Centre participated in the following BIS meetings during the period under report:

- » Meeting of the Panel on Content Analysis (MSD5/P-10), Manak Bhavan, New Delhi, August 5, 2010

7.10. Human Resource Development & Consultancy

Shri H G Hosamani, Scientist B (LS)

Mrs. Hema Cholin, STA – I (LS)

All Technical Staff Members

Imparting training to manpower working in the university and college libraries in the use of ICT is an important objective of the Centre and has been given due priority. 464 training programmes, workshops and seminars focusing on the library automation, networking, e-resource awareness, Institutional Repositories, etc. have so far been conducted benefiting 37,387 participants. INFLIBNET Regional Training Programme for Library Automation and User Awareness Training Programme were conducted across the country in collaboration with the universities and colleges. National and International Conventions called PLANNER in North-eastern regions and CALIBER in various states in India are being organized annually / bi-annually as part of the human resource development activities. The Centre has also conducted 90 Training Programmes on SOUL Installation and Operations for Libraries so far. A brief report on these training programmes is given below:

7.10.1. SOUL Training Programmes

The INFLIBNET provides five-day Orientation Training Programme specially designed for imparting training to new users on installation and implementation of the SOUL software in libraries. The morning sessions of the programme are devoted to theoretical lectures and demonstrations, while the afternoon sessions are completely earmarked for “hands-on” practice. The participants are given facilities of a well-equipped computer laboratory and “hands-on” sessions are conducted under the guidance of trained staff members of the Centre. The course content of the programme is designed to cover the following topics:

- i) INFLIBNET: Major Activities and Services
- ii) SOUL – Administration and Overview
- iii) SOUL - Catalogue Module
- iv) SOUL - Acquisition Module
- v) SOUL – Circulation Module
- vi) SOUL – Serials Control Module
- vii) SOUL- OPAC, WebOpac, Installation and Backup

Generally, two participants from every user institution are invited to join this training programme, one each with computer and library science background. As on March 31, 2011, 90 such training programmes were organized at the Centre so far. During the period under report, 7 training programmes were organized to impart training to 160 participants from different institutions as shown in Table 18 given below.

Training Programme No.	Period of Programme	No. of Participants
83	June 28 - July 2, 2010	22
84	July 12 - 16, 2010	17
85	July 26 - 30, 2010	23
86	Sept 27 - Oct 1, 2010	23
87	Oct 4 - 8, 2010	18
88	Jan 17 - 21, 2011	31
89	March 14 - 18, 2011	26
	Total	160

Table 18: SOUL Training Programmes Organized at the INFLIBNET Centre during 2010-11

As depicted in Figure 28, the Centre has sold 500 copies of SOUL 2.0 to universities and institutions across the country during the financial year 2010-11. It includes 272 copies of Limited Edition and 33 copies of Full Edition of SOUL Software. The SOUL 1.0 users have been provided the latest version of SOUL 2.0 free of cost on request. So far 85 copies of Limited Version and 110 copies of Full Edition have been given to the users of SOUL 1.0

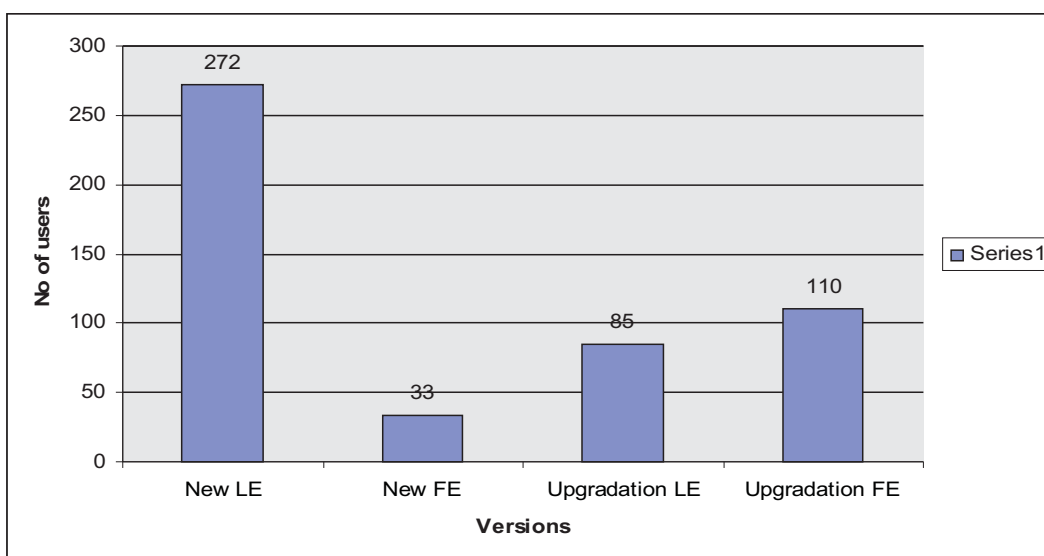


Fig. 28: SOUL 2.0 Users added during 2010-11

7.10.2. Specialized Training Programmes

7.10.2.1. National Workshop on Building & Managing Institutional Repositories, DLIS, University of Kashmir, Srinagar (J & K), 28th June – 2nd July, 2010

A five-day National Workshop on “Building and Managing Institutional Repositories” was jointly organized by the Department of Library and Information Science, University of Kashmir, Srinagar and the INFLIBNET Centre, Ahmedabad from 28th June to 2nd July, 2010 at University of Kashmir, Srinagar. The National Workshop was inaugurated by Prof Riyaz Panjabi, Vice Chancellor, University of Kashmir. Shri Yatrik Patel, Scientist C (CS), Shri Swapnil Patel, Project Officer (CS) and Shri Mayur Gohel, SOUL Technical Assistant (CS) from the INFLIBNET Centre served as resource persons for the workshop. 28 library and computer professionals from various states of the country participated in the programme. Prof. Nadeem Akhtar Khan co-ordinated the programme on behalf of the University of Kashmir, Srinagar.

7.10.2.2. National Workshop on Knowledge Repository, Department of Library and Information Science, Mizoram University, Aizawl, 18th - 20th November, 2010

The Mizoram University, Aizawl, in collaboration with INFLIBNET Centre, Ahmedabad, RRRLF (Ministry of Culture), Kolkata and NASSDOC (ICSSR), New Delhi, jointly organized three days National Workshop on Knowledge Repository from 18th to 20th November, 2010 at Department of Library and Information Science, Mizoram University, Aizawl. The Workshop was inaugurated by Prof. A. K. Agarwal, Vice-Chancellor, Mizoram University, Aizawl. Prof. A. R. D. Prasad, Professor, DRTC, Bengaluru, was the special invitee in the inauguration session. A total number of 75 participants including library professionals and computer science teachers and professionals from various universities and institutions participated in the Workshop. Prof. A. R. D. Prasad, DRTC, Bengaluru, Dr. Aruna, Scientist 'F', DRDO, Bengaluru, Prof. Masoom Raja, Head, Department of Library and Information Science, NEHU, Shillong and Shri Manojkumar K, Scientist D (CS), INFLIBNET Centre, served as resource persons for the workshop. Prof. Lianzela, Dean, School of Management and Information Sciences, Mizoram University, Aizawl, was the Chief Guest for the valedictory session. Prof. Pravakar Rath coordinated the workshop on behalf of the Mizoram University, Aizawl.

7.10.2.3. Five-Day National Workshop on D Space, University of Calicut, Kerala, 3rd - 7th January, 2011

The C. H. Mohammed Koya Library, University of Calicut and INFLIBNET Centre, Ahmedabad jointly organized five days National Workshop on DSpace from 3rd to 7th January 2011 at University of Calicut, Kozhikode, Kerala. The Programme was inaugurated by Dr. Jagdish Arora, Director, INFLIBNET Centre, Ahmedabad. Prof. Anwar Jahan Zuberi, Vice-Chancellor, University of Calicut presided over the function. Dr. Abdul Azeez T. A., University Librarian in-charge welcomed the participants and invitees. Mr. Manoj Kumar K, Scientist D, INFLIBNET Centre, Dr. K.M. Jayaram, Syndicate Member, University of Calicut and Dr. K.P. Muraleedharan, Director, College Development Council, University of Calicut felicitated the function. Dr. K. N. Soman, Assistant Librarian proposed a warm vote of thanks. A total number of 25 participants including library professionals and computer science teachers and professionals from various universities and institutions participated in the Workshop. Dr. Jagdish Arora, Director, INFLIBNET Centre, Mr. Manoj Kumar K., Scientist D (CS), INFLIBNET Centre, Mr. Yatrik Patel, Scientist C, INFLIBNET Centre, Dr. Muhammed Salih T.K., Information Scientist, University of Calicut, Dr. Mohammed Haneefa K, Assistant Professor, DLISc, University of Calicut, Dr. M.G. Sreekumar, Librarian, IIM, Kozhikode, and Mr. T.R. Nishad, Lime Consultants served as the resource persons for the workshop. Prof. T. K. Narayanan, Registrar, University of Calicut was the Chief Guest for the valedictory session, wherein feedback of participants was obtained and certificate of participation was handed over to the participants. Dr. Abdul Azeez T.A., University Librarian in-charge, Mr. Manoj Kumar K, INFLIBNET Centre and Mr. Yatrik Patel, INFLIBNET Centre expressed their views during valedictory session. Dr. Abdul Azeez T. A. coordinated the programme on behalf of the Calicut University.

7.10.3 Onsite/In-house Training Programmes on SOUL 2.0

7.10.3.1. Five-Day In-house Workshop on SOUL 2.0 Operations, M S University of Baroda, Vadodara, Gujarat, 19th -23rd April, 2010

The Smt Hansa Mehta Library, Maharaja Sayajirao University of Baroda organised a five-day In-house Workshop on SOUL 2.0 from 19th to 23rd April 2010 at M S University of Baroda, Vadodara. The training programme was inaugurated by Prof. Ramesh Goyal, Vice Chancellor, Maharaja Sayajirao University of Baroda. Ms. Jyoti Bhat, In-Charge University Librarian welcomed the dignitaries, guests and participants from MSU Library. Dr. Jagdish Arora, Director, INFLIBNET Centre and Shri Yatrik Patel, Scientist C (CS) represented the INFLIBNET Centre. Mrs. V. J. Mutalik, Deputy Librarian proposed a warm vote of thanks. Mrs. Jyoti A Bhat coordinated the training programme on behalf of M S University, Baroda.

7.10.3.2. Three-Day In-House Training Programme on Soul 2.0 Installation and Operation, Parul Group of Institutes, Waghodia, 6th - 8th July, 2010

Three-day In-house Training Program on “SOUL 2.0 Installation and Operation” was co-organized from 6th to 8th July 2010 by Parul Group of Institutes and INFLIBNET Centre, Ahmedabad at Central Library, Parul Group of Institutes, Limda. This training program was inaugurated by Dr. Jagdish Arora, Director, INFLIBNET Centre, Ahmedabad. Dr. (Mrs.) Dhaval D. Bhatt, Chief Librarian, Parul Group of Institutes welcomed the delegates and introduced the Chief Guest. More than 21 librarians of various institutions’ libraries of the Parul Arogya Seva Mandal, including Limda Campus, Ahmedabad Campus and Rajkot Campus, participated and benefited from the training programme. Mrs. Vaishali Shah, STO and Ms. Nabila Shaikh served as resource persons from the INFLIBNET Centre for the programme. Dr. (Mrs.) Dhaval Bhatt co-ordinated the training programme on behalf of the Parul Group of Institutes, Limda.

7.10.3.3 Three-Day In-House Training Programme on SOUL 2.0, BRCM College of Business Administration, Surat, 30th August – 1st September, 2010

Three days In-house Training Programme on Soul 2.0 was jointly organised by Sarvajanic Education Society, Surat and INFLIBNET Centre, Ahmedabad from 30th August to 1st September, 2010 at BRCM College of Business Administration, Surat. The inaugural address was delivered by Mr. Rajnikant Marfatia, Chairman of Sarvajanic Education Society. Ms. Hema Cholin delivered talk on activities of INFLIBNET and features and functionalities of SOUL 2.0. The training programme was attended by 25 library professionals from different institutes run by Sarvajanic Education Society. Mrs. Hema Cholin, STA-I, Mr. Kamlesh Vegad and Ms. Kanchan Chawda, Technical Assistants served as resource persons from the INFLIBNET Centre. Ms. Meeta Rathod co-ordinated the programme on behalf of Sarvajanic Education Society, Surat.

7.10.3.4 Special Training Programme on SOUL 2.0 for North Eastern Region of India, K C Das Commerce College, Guwahati, Assam, 19th -23rd July 2010

The K C Das Commerce College, Guwahati, in collaboration with the INFLIBNET Centre, Ahmedabad organized special Training Programme on Installation and Operations of SOUL 2.0 for the college librarians of Assam from 19th to 23rd July, 2010, at K C Das Commerce College, Guwahati, Assam. The training programme was inaugurated by Prof Alaka Buragohain, Retired Head, Department of Library and Information Science, Gauhati University, Guwahati. Dr. Jagdish Arora, Director, INFLIBNET Centre, Shri A C Roy, Dy. Secretary, UGC (NERO), Guwahati, Prof. Narendra Lahkar, Former Head, DLIS, Gauhati University, Prof. Rajani Kanta Barman, Head, DLISc, Gauhati University, Shri H G Hosamani, Scientist-B (LS), INFLIBNET Centre and Dr Sanjay Kumar Singh, SOUL Regional Coordinator for NE Region & Reader, DLISc, Gauhati University addressed the participants during Inaugural Session. Shri H G Hosamani, Scientist B, Shri Imran Mansuri, Project Assistant (LS), Shri Jitendra Kumar, SOUL Technical Assistant, SOUL Regional Centre, Delhi Region and Shri Nityananda Pathak, ATP Fellow, INFLIBNET Centre served as the resource person. 30 participants from North Eastern Region took benefit of the training programme. Shri Prashant Deka co-ordinated the programme on behalf of the K C Das Commerce College, Guwahati.

7.10.3.5 Special Training Programme on SOUL 2.0 for North Eastern Region of India, K C Das Commerce College, Guwahati, Assam, 15th -29th November 2010

The INFLIBNET Centre, in collaboration with the KC Das Commerce College, Guwahati organised special Training Programme on Installation and Operations of SOUL 2.0 for the college librarians of Assam and North-East India from 15th to 19th November 2010 at K C Das Commerce College, Guwahati, Assam. The programme was inaugurated by Dr Hitesh Deka, Principal, K C Das Commerce College, Guwahati. Dr. Sanjay Singh, Regional SOUL Coordinator for NE Region & Reader, Department of Library and Information Science,

Gauhati University welcomed the guests and participants. Shri H G Hosamani, Scientist B (LS), Shri Mayur Gohel, Technical Assistant (CS) and Shri Nityananda Pathak, ATP Trainee, INFLIBNET Centre served as resource persons. Shri Prashant Deka co-ordinated the programme on behalf of K C Das Commerce College, Guwahati.

7.10.3.6 One-Day Workshop on Use of SOUL Software for Library Automation, North Maharashtra University, Jalgaon, Maharashtra, 21st February, 2011

The one-day Workshop on Use of SOUL 2.0 software for Library Automation was jointly organized by Central Library and Department of Library and Information Science, North Maharashtra University, Jalgaon on 21st February, 2011 at North Maharashtra University, Jalgaon. The workshop was organized to impart training on library automation to the library professionals of colleges and institutions affiliated to this University. Total number of 100 library professionals participated in the programme. Dr. K. B. Patil, Vice Chancellor, North Maharashtra University, Jalgaon inaugurated the workshop. Shri H. G. Hosamani, Scientist B (LS), INFLIBNET Centre, Ahmedabad, Dr. A. S. Patil, Department of Computer Science, NMU, Jalgaon and Nalini Raja, Regional SOUL co-ordinator, Maharashtra, were invited as resource persons for the workshop. Dr. T. R. Borse co-ordinated the programme on behalf of North Maharashtra University, Jalgaon.

7.10.4. INFLIBNET Regional Training Programmes on Library Automation

Twelve INFLIBNET Regional Training Programme on Library Automation (IRTPLA) were organized by the Centre in collaboration with 12 different institutions during the period under report. A brief report on IRTPLAs organised during the year is given below:

7.10.4.1 University of Manipur, Imphal, Manipur, 10th -14th May 2010

The Department of Library and Information Science, Manipur University, Imphal organised five-day IRTPLA Training Programme in collaboration with the INFLIBNET Centre, Ahmedabad from 10th to 14th May 2010 at University of Manipur, Imphal. Prof. C. Amuba Singh, Vice Chancellor, Manipur University inaugurated the function. Dr R. K. Chadha, Joint Secretary, Parliament of India and Dr. Jagdish Arora, Director, INFLIBNET Centre were the Chief Guests at the inaugural programme. Shri H G Hosamani, Scientist B (LS) and Shri Abhishek Kumar, Scientist B (CS), INFLIBNET Centre served as the resource person for the training programme. Total number of 40 library professionals participated in the programme. Dr R K Ranjan Singh, Director, UGC-ASC, Manipur University was Chief Guest and Dr. Th. Khomdon Singh, University Librarian, Manipur University presided over the Valedictory Session. Dr. Th. Madhuri Devi co-ordinated the programme on behalf of University of Manipur, Imphal.

7.10.4.2 Sardar Patel University, Vallabh Vidyanagar, Gujarat, 17th-21st May, 2010

The Sardar Patel University, Vallabh Vidyanagar, in collaboration with the INFLIBNET Centre conducted IRTPLA programme on 17th to 21st May 2010. The programme was inaugurated by Dr. B. G. Patel, Hon'ble Vice Chancellor, Sardar Patel University. Dr Jagdish Arora, Director, INFLIBNET Centre was the Chief Guest of the programme. Shri H G Hosamani, Scientist B (LS), Mrs. Vaishali Shah, STO-I (LS), Mrs. Hema Cholin, STA-I (LS), Shri Kamlesh Vegad, SOUL Technical Assistant (LS) and Shri Mayur Gohel, SOUL Technical Assistant (CS) served as resource persons from the INFLIBNET Centre. Total number of 38 library professionals from various institutions participated in the programme. Shri Yatrik Patel, Scientist C (CS), INFLIBNET Centre was also present during the concluding session. Dr. Mayank Trivedi, Librarian, Sardar Patel University co-ordinated the programme on behalf of the Sardar Patel University, Vallabh Vidyanagar.

7.10.4.3 University of Calicut, Kozhikode, Kerala, 7th -11th June 2010

The C. H. Mohammed Koya Library, University of Calicut in collaboration with the INFLIBNET Centre, Ahmedabad conducted IRTPLA from 7th to 11th June 2011 at University of Calicut, Kozhikode. The programme was inaugurated by Prof. Anwar Jahan Zuberi, Vice Chancellor, University of Calicut. Dr. K. M. Jayaram, Syndicate Member, University of Calicut and Dr. Jalaya V., Head, Department of Library and Information Science. University of Calicut felicitated the function. Total number of 37 library professionals participated in the programme. Shri Dinesh Ranjan Pradhan, Scientific and Technical Officer-I, INFLIBNET Centre and Shri K. V. R. Kiran, SOUL Regional Technical Assistant, served as resource persons from INFLIBNET Centre. Dr. Abdul Azeez co-ordinated the programme on behalf of University of Calicut, Kozhikode.

7.10.4.4 Dr. Y S Parmar University of Horticulture and Forestry, Solan, Himachal Pradesh, 5th - 9th July, 2010

The Satyanand Stokes Library, Dr. Y. S. Parmar University of Horticulture and Forestry, Nauni, Solan organised a five-day IRTPLA training programme in collaboration with the INFLIBNET Centre, Ahmedabad from 5th to 9th July 2010 at Dr. Y. S. Parmar University of Horticulture and Forestry, Solan. The training programme was inaugurated by Dr. K. R. Dhiman, Vice Chancellor, Dr. Y. S. Parmar University of Horticulture and Forestry. Dr. M. S. Pathania, University Librarian and Coordinator of the programme, welcomed the chief guest, participants and invited dignitaries. Total number of 35 library professionals participated in the programme. Shri Rajesh Chandrakar, Scientist B (LS), Shri Mayur Gohel, SOUL Technical Assistant (CS) and Shri Kamlesh Vegad, SOUL Technical Assistant (LS) served as the resource person from the INFLIBNET Centre.

7.10.4.5 University of Burdwan, Burdwan, 26th -30th July, 2010

The University of Burdwan, organized IRTPLA in collaboration with INFLIBNET Centre, at University of Burdwan, Burdwan, from 26th to 30th July 2010 at University of Burdwan, Burdwan. Prof. Arup Chattopadhyay, Dean, Arts Faculty of the University of Burdwan inaugurated the programme. A total number of 35 library professionals participated in the programme. Shri Dinesh Ranjan Pradhan, Scientific Technical Officer (LS), Shri Saroj Kumar Panda, Project Associate (LS), Shri Vijaykumar Shrimali, SOUL Technical Assistant (CS) from INFLIBNET Centre and Dr. Biplab Sarkar, System Manager, University of Burdwan, Dr. Parthasarathi Mukhopadhyay, Senior Lecturer, Library and Information Science, University of Burdwan served as resource persons. Dr. S. Dan, Registrar, University of Burdwan was Chief Guest during the valedictory programme. Dr. Biswajit Das, Assistant Librarian and Dr. Bikash Mukhopadhyay, Information Scientist were joint co-ordinators of the programme on behalf of University of Burdwan, Burdwan.

7.10.4.6 Vikram University, Ujjain, Madhya Pradesh, 13th -17th September, 2010

The School of Studies (SOS) in Library and Information Science, Vikram University, Ujjain organized a five-day IRTPLA in collaboration with INFLIBNET Centre, Ahmedabad from 13th to 17th September, 2011 at Vikram University, Ujjain. Dr. T. R. Thapak, Vice Chancellor, Vikram University inaugurated the programme. Dr I. R. Kumar, Chairman, SALIS, Delhi-NCR was the Chief Guest and Dr G.D Agarwal, Librarian, Public Library, Indore was the Special Guest for the inaugural session. Total number of 80 library professionals participated in the programme. Sh Abhishek Kumar, Scientist B (CS), Shri Kamlesh Vegad, SOUL Technical Assistant (LS), INFLIBNET Centre, Shri Rakesh Khare, SOUL Coordinator (Madhya Pradesh and Chattisgarh) and Shri Kavi, Technical Assistant served as resource person for the training Programme. Dr. Sonal Singh co-ordinated the programme on behalf of Vikram University, Ujjain.

7.10.4.7 Thapar University, Patiala, Punjab, 4th -6th October, 2010

The Thapar University, Patiala organized IRTPLA in collaboration with INFLIBNET Centre, Ahmedabad from 4th to 6th October 2010 at Thapar University, Patiala. Dr K. K. Raina, Deputy Director, Thapar University inaugurated the programme. Total number of 30 library professionals participated in the programme. Mrs Vaishali Shah, STO-I (LS), Ms. Seema Chavda, Project Assistant (LS) and Ms. Nabila Shaikh, SOUL Technical Assistant (CS) served as the resource person for the training programme from INFLIBNET Centre. Dr Rama Verma and Ms. Archana Nanda jointly co-ordinated the programme on behalf of Thapar University, Patiala.

7.10.4.8 Government Hrangbana College, Aizawl, Mizoram, 6th -10th December, 2010

The Government Hrangbana College, Aizawl organised IRTPLA in collaboration with INFLIBNET Centre, Ahmedabad from 6th to 10th December, 2010 at Government Hrangbana College, Aizawl. Mr K Liantuala, Principal, Hrangbana College welcomed the participants, faculty and guests. The Chief Guest of the programme, Prof. Pravakar Rath, Head, Department of Library and Information Science, Mizoram University, Aizawl delivered the inaugural address. Total number of 26 Library professionals participated in the programme. Shri Rajesh Chandrakar, Scientist B (LS), Shri Vijaykumar Shrimali, SOUL Technical Assistant (CS) and Shri Anupam Sarma, Regional SOUL Technical Assistant (LS) served as resource person from INFLIBNET Centre. Dr Kalyan Adak, Reader & Chairman, Research Cell, Government Hrangbana College proposed a warm vote of thanks. Shri Lalchatuana co-ordinated the programme on behalf of Government Hrangbana College, Aizawl.

7.10.4.9 M L B Girl's PG (Auto) College, Bhopal, Madhya Pradesh, 10th – 14th January, 2011

The M L B Girl's PG (Auto) College, Bhopal organized IRTPLA in collaboration with INFLIBNET Centre, Ahmedabad from 10th to 14th January, 2011 at M L B Girl's PG (Auto) College, Bhopal. The programme was inaugurated by the Chief Guest Mr. Vishwas Sarang, M.L.A. (NARELA), President Madhya Pradesh Laghu Vanopaj Sangh. Mrs. Krishna Gaur, Mayor Nagar Nigam, Bhopal was the Chairperson of the session. Total number of 52 Library professionals participated in the programme. Shri Abhishek Kumar, Scientist B (CS), Shri Vijay Shrimali, SOUL Technical Assistant (CS) and Kamlesh Vegad, SOUL Technical Assistant (LS) served as the resource person from INFLIBNET Centre. Shri Rakesh Khare co-ordinated the programme on behalf of M L B Girl's PG(Auto) College, Bhopal.

7.10.4.10 Mata Gujri College, Fatehgarh Sahib, Punjab, 8th -12th February, 2011

The Mata Gujri College, Fatehgarh Sahib, Punjab organized IRTPLA in collaboration with INFLIBNET Centre, Ahmedabad from 8th to 12th February, 2011 at Mata Gujri College, Fatehgarh Sahib. The Chief Guest, Dr Gurmohan Singh, Director, SGPC Education, inaugurated the programme. Dr B. S. Ghuman, Dean Social Sciences, Punjab University, Chandigarh and Dr. Jatinder Singh Sidhu Director-Principal, Mata Gujri College were special guests in the inaugural session. Total number of 29 Library professionals participated in the programme. Mrs. Hema Cholin, STA-I (LS), Ms. Nabila Shaikh, SOUL Technical Assistant (CS) and Shri Ranjeet Kumar, Regional SOUL Technical Assistant served as the resource person from INFLIBNET Centre. Mrs Jaswinder Kaur co-ordinated the programme on behalf of Mata Gujri College, Fatehgarh Sahib, Punjab.

7.10.4.11. Mohanlal Sukhadia University, Udaipur, Rajasthan, 23rd -27th February, 2011

The Mohanlal Sukhadia University, Udaipur organized IRTPLA in collaboration with INFLIBNET Centre, Ahmedabad from 23rd to 27th February, 2011 at Mohanlal Sukhadia University, Udaipur. The Chief Guest Prof. I. V. Trivedi, Vice-Chancellor, Mohanlal Sukhadia University, Udaipur inaugurated the programme. Prof. L. N. Verma, Ex. Deputy Librarian, Mohanlal Sukhadia University, Udaipur, was special guest in the inaugural

session. Total number of 66 Library professionals participated in the programme. Shri Swapnil Patel, Scientist B (CS), Shri Imran Mansuri, SOUL Technical Assistant (LS) and Shri Mayur Gohel, Technical Assistant (CS) from INFLIBNET Centre and Dr. L. N. Verma, Dr. T. D. Tilwani, Dr.U.K.Agarwal and Dr. J. M. S. Rathore from Mohanlal Sukhadia University served as resource person in the programme. Dr. Ramkesh Meena co-ordinated the programme on behalf of Mohanlal Sukhadia University, Udaipur.

7.10.4.12. Orissa University of Agriculture and Technology, Bhubaneswar, Orissa, March 7th - 11th, 2011

The Orissa University of Agriculture & Technology, Bhubaneswar, organised IRTPLA in collaboration with INFLIBNET Centre, Ahmedabad from 7th to 10th March, 2011 at Orissa University of Agriculture and Technology, Bhubaneswar. The training programme was inaugurated by Prof. S. S. Nanda, Dean - Extension Education, OUAT, Bhubaneswar. Total number of 30 Library professionals participated in the programme. Shri Divyakant Vaghale, Scientist-B (CS) and Shri Saroj Kumar Panda, STA – I (LS) served as resource person from INFLIBNET Centre. Prof R. K. Mahapatra co-ordinated the programme on behalf of Orissa University of Agriculture and Technology, Bhubaneswar.

7.10.5. SOUL Support Services

The INFLIBNET Centre uses the following ways and means to extend after-sale service and support to its SOUL users:

7.10.5.1. SOUL Support Cell at INFLIBNET Centre

SOUL Support Cell is a joint activity of Software Development Group & Human Resource Development Group. The SOUL Support Cell helps in handling queries and troubleshooting pertaining to SOUL software, its installation and usage for a user base of 2321 across the country as per details given in Appendix XVI. The SOUL Support Cell co-ordinates with the library professionals and SOUL developers for resolving queries regarding SOUL software and customization issues raised by SOUL users. The SOUL Support Cell consists of staff members from library and computer science background. The tools used for handling queries are as follows and mentioned in below Figure 29

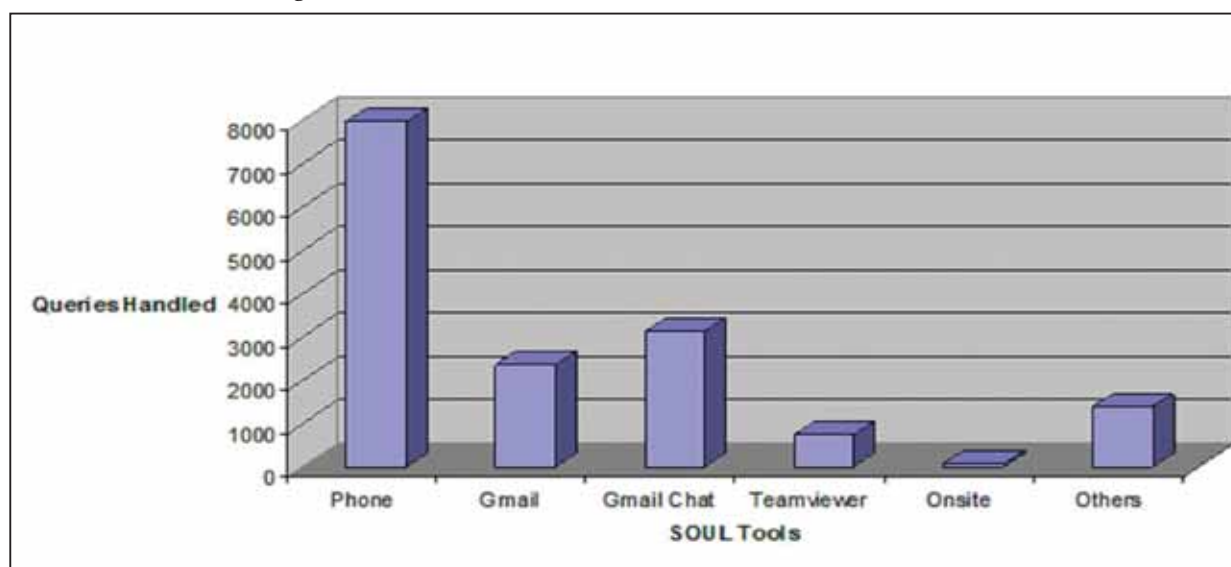


Fig. 29: SOUL Query Handled by Technical Assistant

Telecommunication: The Centre has extended a dedicated telephone line (079-26300007) with extensions 28 and 35 for handling queries from SOUL users.

Instant Messaging: The Centre has created a Google email ID (soulhelp0007@gmail.com) to provide support to SOUL users through Google Talk and E-Mails.

INFLIBNET Chat: Besides, Google Talk and email, users can also log on to <http://www.inflibnet.ac.in/chat> to chat and interact with SOUL Support Staff in real time mode.

Remote Connection: SOUL Support Cell uses the software such as Teamviewer, ShowMyPC etc. to remotely connect the User's SOUL server to view and solve the query in real time mode. This method is used for fixing the problem when all other methods of solving the problems do not provide desired result.

Onsite Visit: Besides all above methods of solving queries, SOUL Support Staff also visits the Institutes of SOUL Users in case every other method could not resolve the problem and also if user wants SOUL Technicians to install and upgrade the SOUL at their Institute.

FAQs: To help the users of SOUL 2.0, FAQs (Frequently Asked Questions) have been created including Screen Shot and Step-wise solution to the queries that are being asked regularly. ([Www.inflibnet.ac.in/soul/faq.htm](http://www.inflibnet.ac.in/soul/faq.htm))

Downloads: Users can download Flow Chart for every SOUL 2.0 module and e-book version of User Manual to learn the operations on their own. User can also download SOUL 2.0 Demo Version (up to 500 entries) and can practice on SOUL 2.0. Besides, the minor updates of SOUL 2.0 can also be downloaded which facilitate users to keep their SOUL software updated.

7.10.5.2. SOUL Regional Support Services

The Centre has appointed six SOUL Coordinators in different geographical regions of the Country based on number of installations of the software. Each SOUL Coordinator employs 2 to 3 technical assistants so as to provide proactive support to the SOUL users in their respective regions. SOUL Coordinators are responsible for providing maintenance support to the existing users as well as for promoting the software to the new users. Names and contact details of the SOUL coordinators are given below in Table 19:

Name	Address/Phone No. / Email/ State
Prof. C. P. Vashishth	Delhi, Uttaranchal & UP
	28-B, Pocket 'A' MIG Flat Ashok Vihar, Phase III, Delhi – 110 052.
	Ph. No. : 011-25774507 (O) 011-27112721 (R)
	Email: cpv_36@yahoo.co.in
Dr. Sanjay Singh	North Eastern Region
	Dept of Library and Information Science Guahati University,
	Guwahati- 781014, Assam. Mobile No 09435040402
	Email: sksgu1@gmail.com
Shri Ashok S. Sonone	Maharashtra & Goa
	Librarian, Sitabai Arts College, Civil Line, Akola – 444 004,
	Maharashtra. Mob.: 094217 55869
	Email: asonone67@gmail.com

Name	Address/Phone No. / Email/ State
Shri Rakesh Kumar Khare	M.P. & Chhattisgarh
	Govt. M.L.B. Girls PG (Auto) College, Bhopal- 462002, Madhya Pradesh.
	Mob. : 099265 35452
	Email: orakesh16@yahoo.co.in
Shri J. Laxma Reddy	A.P., Karnataka, Pondicherry and Kerala
	Lecturer in Library Science, Nagarjuna Government College (A), Nalagonda- 508 001, Andhra Pradesh.
	Ph. No. : 099081 15333
	Email: clicngc@gmail.com
Smt. Nalini A Raja	Maharashtra and Goa
	302, Hari-Kripa, L.T.Road, Borivli (W), Mumbai - 400 92, Maharashtra
	Mob.: 09920790757
	E-mail: nalini99@gmail.com
INFLIBNET SOUL Support	Gujarat and Rajasthan
	Shri H G Hosamani, Scientist B (LS) And his Team of the SOUL Support
	INFLIBNET Centre, Ahmedabad-380009, Gujarat.
	Phone: 079-26300007
	E-mail: soul@inflibnet.ac.in

Table 19: Names of the SOUL Coordinators with their Contact Addresses

8. International Convention

The Centre organizes two major conventions, namely International CALIBER and PLANNER on alternate years. During the year under report, 8th CALIBER was organized at Goa University, Goa in March 2011. A brief write-up on this event is given below:

8.1 8th International CALIBER 2011

The 8th International CALIBER 2011 was organised by the INFLIBNET Centre at Goa University, Goa from 2nd to 4th March 2011 on the theme "Towards Building a Knowledge Society: Library as Catalyst for Knowledge Discovery and Management", in collaboration with the Goa University, Goa. The main theme of the convention was divided into four sub-themes i.e. Knowledge Discovery Tools and Techniques, Web Resource Management and Semantic Web, Information Literacy, and Measuring Research Productivity and ROI. More than 400 delegates were registered for the convention including delegates from Sri Lanka, Canada, UK, US and Singapore. 62 papers were selected for presentations in the convention and 120 papers were selected for poster sessions from over 220 submissions.

8.1.1 Inaugural Session

Prof. Arun Nigvekar, former Chairman of the UGC inaugurated the convention as shown in Figure 30. Prof. Nigvekar, in his inaugural address, elaborated on the history and development of the INFLIBNET Centre. He touched upon the massive technological changes that the Centre has undergone and its positive impact on the higher education community. He said that no library can exist as an island, however big it may be. The libraries have to depend on other libraries to provide services to its users and to fulfill their information requirements. He

also highlighted the important decisions that were taken by the UGC in 2005 on electronic submission of theses and creation of e-learning products by college/university teachers that enables them to earn credits for their career development. He emphasized that the libraries should play an active role in the content creation process and its delivery to the users. The synergy between academics and librarians is very crucial in the process of content creation. Prof. Nigvekar proposed that these aspects might be considered while drafting 12th Five Year Plan for the INFLIBNET Centre. Moreover, he mentioned that the INFLIBNET should work in close collaboration with the Consortium for Educational Communication (CEC) and Educational Multimedia Research Centres (EMRCs) for content development and its delivery.

Dr. Jagdish Arora, Director, INFLIBNET Centre welcomed the guests and participants to the convention. He provided an overview of INFLIBNET Centre and highlighted its recent initiatives. Shri Manoj Kumar K, Scientist D (CS), INFLIBNET Centre and convener of the convention highlighted the theme and sub-themes of the convention.

Prof. Dileep Deobagkar, Vice-Chancellor, Goa University, in his presidential address, highlighted the unique features of the libraries in Goa. He appreciated the support of INFLIBNET Centre to Goa University in terms of access to e-resources. He cautioned that the new technological tools such as anti-plagiarism software should be used with greater caution lest it damage the fundamentals of academics. He advocated for academic evolution rather than revolution.

Prof. Ajit Kembhavi, Director, IUCAA and Chairman, National Steering Committee, UGC-Infonet Digital Library Consortium stated that he is very close to the libraries and librarians because of his involvement with INFLIBNET activities and a simile between the astronomy research and knowledge discovery process in



Fig. 30. Prof. Arun Nigvekar Inaugurating the International CALIBER 2011 at Goa University, Goa by Lighting the Traditional Lamp

general. In his key-note address entitled 'E' (Electronic and Education), he indicated that finding an astronomical object from the galaxies is as difficult as finding a piece of information from the documented knowledge. He underlined the need for use of modern technology to handle such massive information of complex nature for appropriate analysis and interpretation of results. Referring to the N-LIST Project, he hoped that the digital divide between universities and colleges would soon be bridged with efforts of INFLIBNET Centre. He stressed upon the need for statistical data such as number of downloads, publications, citations, etc., and their correlation to showcase the important of access to scholarly content to policy makers and academic administrators. He delved into the possible activities, features and services that the INFLIBNET Centre can offer to maintain its relevance in the evolved academic structure. He emphasized that libraries should evolve tools and technologies that facilitates collation of data and scholarly content in a touch screen environment in order to continue to be relevant to the society.

Dignitaries on the dais released proceedings of International CALIBER 2011 in print, on CD, abstracts booklet on poster presentations, N-LIST Compendium and Convention souvenir published on the occasion as Shown in Figure 31. Dr. Gopakumar, Librarian, Goa University and Organizing Secretary of the Convention extended a warm vote of thanks. Prof. AK Bardol, Chairman, Department of Library and Information Science, Mangalore University was the Convention Director and Dr. M.P. Tapaswi, Librarian, NIO, Goa was the Rapporteur General of the Convention. Shri Manoj Kumar K, Scientist D (CS) and Shri Rajesh Chandrakar, Scientist B (LS) were the Convener and Joint-Convener of the Convention, respectively.

8.1.2 Tutorials

Two tutorials, namely, ETD and Shodhganga, and SOUL 2.0 and N-LIST, were organised for the benefit of delegates of the Convention. The tutorial on "ETD and Shodhganga: A reservoir of Indian theses" was delivered by Shri Yatrik Patel, Scientist B (CS), INFLIBNET Centre which was chaired by Shri Rajesh Chandrakar, Scientist B (LS), INFLIBNET Centre. The tutorial on "SOUL 2.0 and N-LIST Programme" was delivered by Shri Ashok Kumar Rai, Scientist D (CS), INFLIBNET Centre which was chaired by Shri Prem Chand, Librarian, Indian Institute of Advanced Studies, Shimla. Registrations for both the tutorials were free.

8.1.3 Technical Sessions

The following theme papers were presented by the experts during the convention (details given in Table 20):

Sr.	Name of the Theme paper	Name of the experts
1	Knowledge Discovery: Tools and Techniques	Dr. John Berrie, USA and Mrs. Ashleigh Bell, UK
2	Web Resource Management and Semantic Web	Dr. T S Kumbar, DAICT, Gandhinagar; and Dr. Gordon Dunsire, UK
3	Information Literacy	Prof. Uma Kanjilal, IGNOU, New Delhi
4	Measuring Research Productivity and ROI	Shri N V Sathyanarayana, Informatics (India) Ltd., Bengaluru

Table 20: Invited Experts with their Topics of Presentations

There were total 9 technical sessions held during the convention, wherein 49 presentations were made including the presentations on the theme papers.

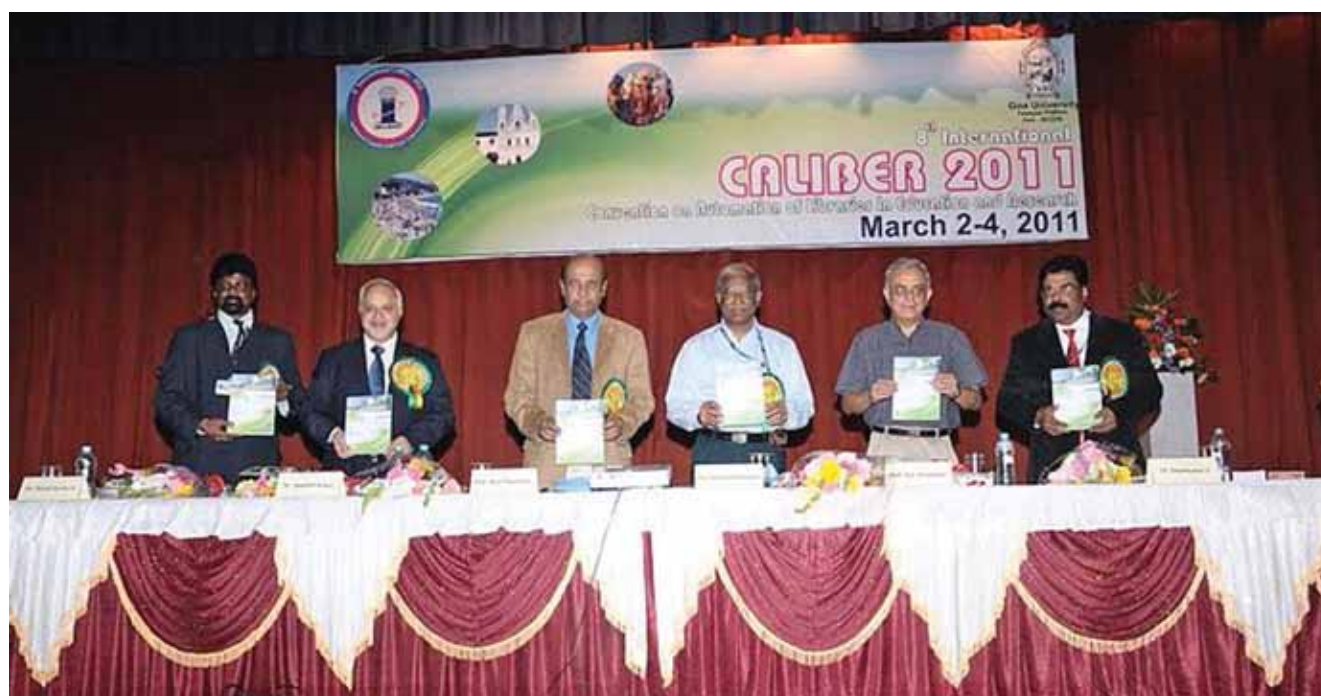


Fig. 31: Prof. Arun Nigvekar, former Chairman, UGC releasing the Convention Proceedings of the International CALIBER 2011

Technical Session	Theme of the Session	Chairperson	Rapporteur	No. of Papers	No. of Papers Presented
Session 1	Knowledge Discovery: Tools and Techniques (Part-1)	Dr. Samyuktha Ravi	Dr. Vishala B K	6	4
Session 2	Knowledge Discovery: Tools and Techniques (Part-2)	Dr. Samyuktha Ravi	Dr. Karlos Fernandes	8	7
Session 3	Web Resource Management and Semantic Web (Part-1)	Dr. R K Chadha	Shri Yatrik Patel	8	6
Session 4	Web Resource Management and Semantic Web (Part-2)	Dr.P.K.Gupta	Shri Ashok Kr. Rai	8	6
Session 5	Web Resource Management and Semantic Web (Part-3)	Dr. T R Kem	Shri Umesha Naik	6	5
Session 6	Information Literacy (Part-1)	Dr. M.K. Bhandi	Dr. Maya Verma	9	7
Session 7	Information Literacy (Part-2)	Dr. C V Rajan Pillai	Dr. Kannappanavar B.U.	7	5
Session 8	Measuring Research Productivity and ROI (Part-1)	Dr. T S Kumbar	Dr. Anuradha V.	7	5
Session 9	Measuring Research Productivity and ROI (Part-2)	Dr. M S Rana	Shri Dinesh Pradhan	8	4
Poster Session	All themes	Dr. M. P. Tapaswi		120	30

Table 21: Chairpersons and Rapporteur of the Sessions

8.1.4 Panel Discussion

The panel discussion on the theme of the convention was held prior to the Valedictory session. Dr. Koteswara Rao, Librarian, University of Hyderabad, Dr. H S Siddamalaiah, NIMHANS, Dr. M K Bhandi, Librarian, Mangalore University, Dr. Pawan K Gupta, Director, Central Library, Rajasthan University, Jaipur, Dr. R K Chadha, Joint Secretary, Lok Sabha, Dr. AK Bardol, Head, DLIS, Mangalore University, Mangalore were panelists for the session.

Dr Koteswara Rao emphasized that the role of the libraries and librarians are changing. The librarians should also take additional role of publishing the scholarly content of their respective institutions through institutional repositories. Dr. Siddamalaiah mentioned that the information aggregators are taking the role of the librarians by aggregating the scholarly content in various subject fields and offering through a single integrated platform, just as the libraries do. Dr. Bhandi emphasized that the consortium subscribed e-resources that have led to increase in quantity and quality of research publications. Dr. Gupta emphasized that the strength of librarians are in the knowledge organizations, he therefore, suggested that the librarians should contribute to development of ontology and semantic web. Dr. Bardol informed that the supplementary courses such as 'information literacy' should not be included into the curriculum as its content are already overcrowded. Dr. Chadha, Chair of the Panel, summed up the discussions stating that the library is a service organization, and therefore, the user participation and feedback are most important in its development. He said that one must look for an opportunity to serve the users with additional, but, relevant information that may or may not confine to the documents. Figure 32 depicts participants who had attended the 8th International CALIBER 2011.



Fig. 32: Participants of the 8th International CALIBER 2011

8.1.5 Suggestions on the INFLIBNET Products and Services

- ▶▶ SOUL 2.0 is due for next upgradation with Web 2.0 technologies and federated search imbedded in it;
- ▶▶ Shodhganga uses DSpace which is Unicode compliant, therefore, the titles of the thesis displayed in Shodhganga should also be in the native language; and
- ▶▶ One additional metadata field 'Place of work' may be added into Shodhganga for research scholars who gets their Ph.D. from a university, and actually do their research work from a research institution, such as NCL, Pune, etc.

8.1.6 Recommendations of the Convention

Following recommendations emerged from the discussions and deliberations during the 3-day convention:

- ▶▶ Libraries should develop knowledge portals to handle complex information requirements;
- ▶▶ Subject-wise analysis of e-resources offered by the consortium may be provided to assess availability of e-resources in different subject domain;
- ▶▶ Subject gateways are useful resources of information; it provides a great insight into a subject. The INFLIBNET Centre may build such subject gateways targeting Indian content;
- ▶▶ Development of subject portals may be assigned as topics of dissertations for the library and information science students;
- ▶▶ The encoding of the open source software developed by the INFLIBNET should be made available on open platforms;
- ▶▶ INFLIBNET's online copy cataloguing system is a very useful tool and needs more visibility by way of training programmes and other promotional media;
- ▶▶ There is a need to extend online and copy cataloguing facility beyond SOUL, Koha and NewGenLib software; and
- ▶▶ INFLIBNET and IGNOU may partner to develop content for "digital information literacy programme".

8.1.7 Resolutions

The following resolutions were made during the convention:

- ▶▶ Libraries should be renamed as Knowledge Resource Centres (KRCs) considering their current services and activities;
- ▶▶ CALIBER should serve as a platform to provide interaction between library professionals and academic personnel to develop better synergy within the academic system;
- ▶▶ The technology today facilitates convergence and consolidation. As such, the INFLIBNET urges its members to act as its representatives to advocate the activities and facilities at institutional and regional level among the user community instead of forming independent networks at regional and local level;
- ▶▶ Libraries have greater opportunities for creating digital archives and, therefore, they should not limit their activities to creation of bibliographic databases alone. Libraries should explore the liberal policies of Govt. of India to fund digitization projects;
- ▶▶ Library professionals should develop proficiency in case of e-resources and impart training to the users on information literacy;
- ▶▶ Good libraries make good universities. The libraries should use metrics and impact factor to derive ROI;
- ▶▶ Libraries should take-up the additional role of publishing via institutional repositories and open access journals.

9. Central Facilities

The Centre maintains facilities such as Library, Computer Laboratories and Computer Servers to support essential activities of the Centre. A brief description of such central facilities is given below:

9.1. Library

The INFLIBNET Centre has a small, specialized library having unique collection on library and information science, computer, communication and information technology. The library is fully computerized using SOUL 2.0 integrated library management software. The entire print & e-book collection of the library is available online through the Web OPAC (<http://indcat.inflibnet.ac.in/soulopac/main.aspx>) as shown in Figure 33.

The INFLIBNET Library plays a vital role in the collection development and dissemination of scientific and technical information to meet the present and future needs of the Centre. The Library maintains databases of i) participants who have attended various training programs at INFLIBNET Centre; ii) SOUL installations; and iii) Universities and its contact details including e-mail and website addresses. These databases are accessible through the INFLIBNET Website.



Fig. 33: Library and WebOPAC

9.1.1 Library Services

The library provides following services to its users:

- ▶▶ Reference Service
- ▶▶ Document Delivery Service

- »» Current Awareness Service
- »» Inter Library Loan Service
- »» Electronic Information Service
- »» Reprographic Service

9.1.2. Access to Online Database

The Centre subscribes to web edition of the Ulrich's International Periodical Directory, the web-based bibliographic database of periodicals that is being used for authentication of bibliographic records in union catalogues and for other activities. The database accessible on INFLIBNET's IPs is also accessible to visiting users. Besides, the Centre, as executing and monitoring agency for the UGC INFONET Digital Library Consortium and NLIST programme has access to all e-journals, e-books and bibliographic database subscribed under these two programmes.

9.1.3. Institutional Repository @ INFLIBNET (<http://ir.inflibnet.ac.in/>)

The IR @ INFLIBNET was set-up to host full-text of research publications of technical staff as well as other publications of the Centre using Dspace, open source digital library software developed by the Massachusetts Institute of Technology. The papers published in CALIBER and PLANNER proceedings have been uploaded in to the IR @ INFLIBNET in PDF format. The Institutional Repository also includes course materials, newspaper clippings, annual reports etc. The repository has 1,262 full-text articles.

9.1.4. Institutional Members:

The Centre has institutional membership of following national and international organizations:

- »» American Library Association (ALA)
- »» National Information Standards Organization (NISO)
- »» Indian Library Association (ILA)
- »» Indian Association of Special Libraries and Information Centres (IASLIC)
- »» ADINET (Ahmedabad Library Network)
- »» British Library, Ahmedabad

9.1.5. E-Journals Archival Library (Print Version)

The Centre has received issues of 286 journal titles from different publishers. During the year under report, issues of 100 journals each were received from the Taylor and Francis, Blackwell, Oxford University Press, Cambridge University Press, Institute of Physics and Royal Society of Chemistry.

9.2. Computer and Network Infrastructure

Computer and Network Infrastructure provides powerful computing environment for providing support for diversified applications for dissemination of content hosted and maintained by INFLIBNET Centre to academic community and member Institutions. Hosting the content in a secured computing environment is of paramount importance while setting up of various servers and to protect them from external attacks and hacking attempts. While the ICT setup comprises of a multi layered architecture, its lowest layer is made up of

personal computers and workstations. The next layer consists of firewall, anti-virus server and test servers. The third layer consists of web server, mail server, list server, DNS Server, FTP server, database servers and other high-end servers/computers required for academic requirement. Computer and network infrastructure facilities created at the Centre over the years to meet Centre’s objectives are as follows:

9.2.1. Personal Computers and Servers

The INFLIBNET Centre has its own upgrade policy to enhance the ICT infrastructure and to mediate resource sharing amongst member universities using best possible ICT infrastructure. The Centre has shifted almost all its services from old servers to Blade servers. Centre has also created clustered groups depending on the working groups with more than 20 web-enabled high-end workstations for scientists to support scientific and research activities of the Centre, and PCs to support staff and administration. Security is ensured by providing separate login IDs for all the users and access policy for different groups based on requirements. Unhealthy sites are blocked at firewall level in order to follow the rules prevailing in this regard. Laptops are issued to the technical staff and also to the senior administrative officers. USB modems are also issued to the senior level project leaders. All workstations and PCs are connected with the campus LAN on layer-2 switch with security enabled firewall. Few of the services such as NLIST etc. are collocated at the BSNL Web Hosting Services. The Centre also has 21 printers (including laser and deskjet) and 3 scanners to support various activities of the Centre. Campus LAN is secured with the UTM appliance (Cyberoam 50i) for firewall including gateway, proxy, anti-virus, anti-spam and load-balancing facilities.

9.2.2. Network at the Centre

The Centre provides most of its services through Internet 24x7 hrs on 365 days. The network infrastructure is one of the most important components used for providing efficient and effective services to the remote and local users. The Centre has replaced existing network equipment to meet increased activities and growth in manpower. The upgraded network infrastructure connects all division, laboratories and offices of the Centre with 10/100 Mbps structured cabling, Rack, I/Os, Jack panels, etc. on layer 2 switches. The LAN is extended to all the buildings of the Centre using manageable switches and the network diagram is shown below Figure 34:

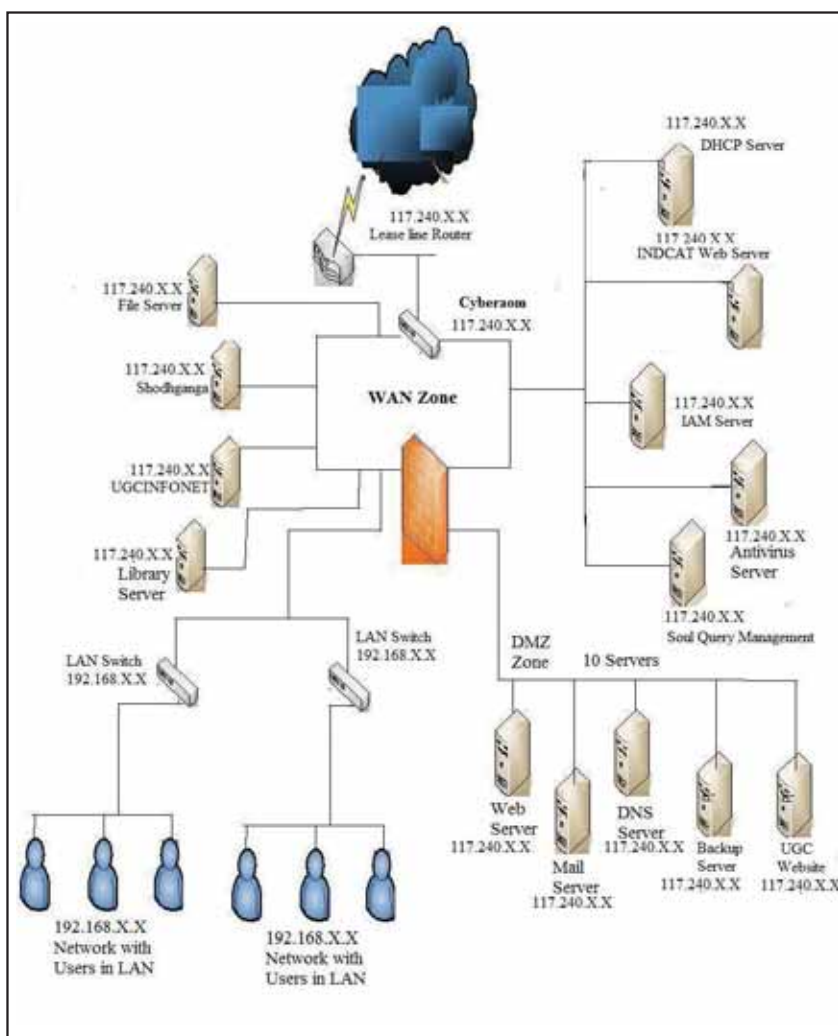


Fig. 34: Network at INFLIBNET Centre

9.2.3. UGC-Infonet Internet Connectivity to the Centre

Seamless Internet connectivity is very important for the Centre to extend access to the content hosted at the Centre. As part of the UGC Infonet Connectivity programme, the INFLIBNET Centre receives 10 Mbps (1:1) Internet connectivity from BSNL on OFC. 32 IP addresses are also allocated to the Centre for hosting various content. Tools for constant monitoring of the link are also used to ensure the seamless network connectivity.

9.2.4. NKN for INFLIBNET

The INFLIBNET Centre has requested NIC to include the Centre as one of institutions of higher learning for NKN connectivity with 1 Gbps bandwidth. Request is approved by the NKN Committee and Dr. B K Gairola, Director General; National Informatics Centre who is incharge of teh NKN project has informed the decision of inclusion of the INFLIBNET Centre into NKN. The responsibility of establishing the link is given to National Long Distance (NLD) ISP M/s. Power Grid Corporation Ltd. Establishing of link between NIC, Gandhinagar (nearest PoP) and INFLIBNET Centre is done by laying optical fiber cable. Centre is waiting for the router and related equipment to establish the connectivity.

9.2.5 Software @INFLIBNET Centre

INFLIBNET Centre is using a wide variety of operating systems such as LINUX, CentOS, Windows NT Server, Windows Vista, Windows XP Professional, Windows 2000 Server, etc. A wide range of latest software tools and office automation packages such as Visual Studio.NET, Netbeans, Eclipse, Java, Apache HTTP server, Tomcat, Ant, Lucene, Nutch, PHP, MySQL, Postgress, MSSQL, Open Office, Adobe Photoshop, CorelDraw, Pagemaker, etc. have been made available for the scientists as well as for staff for the application development and office use.

10. Publications

The INFLIBNET Centre has two major publications i.e. Quarterly Newsletter and Annual Report. Both publications were brought out and distributed to the academic community in the country. The copies of the newsletters and annual reports in PDF format are available on the INFLIBNET website at <http://www.inflibnet.ac.in/publication/>. Copies of annual reports, papers published in PLANNER and CALIBER proceedings are also available through the Institutional Repository (IR) in PDF format. The course materials of various training programmes and workshops, lecture notes, presentations, and newspaper clippings are made available in the IR of the Centre at <http://ir.inflibnet.ac.in>. The repository has 1262 full-text articles as on 31st March 2011 for access.

During the period under the report, the Centre published two conference proceedings, a Compendium on N-LIST Programme, ten articles in conferences proceedings, three articles in journals and newsletters, and one chapters in books by the scientists of the Centre. The list of the publications is given below.

10.1 Conference Proceedings and Compact Disc

- i) Towards Building a Knowledge Society: Library as Catalyst for Knowledge Discovery and Management: Proceedings of the 8th International CALIBER 2011 (eds. Jagdish Arora, et al). Ahmedabad, INFLIBNET, 2011. 729 p.
- ii) Towards Building a Knowledge Society: Library as Catalyst for Knowledge Discovery and Management: Abstracts of the papers accepted for the poster session in the 8th International CALIBER 2011 (eds. Jagdish Arora et al). Ahmedabad, INFLIBNET, 2011. 729 p.

- iii) National Library and Information Services Infrastructure for Scholarly Content (N-LIST): User Guide and Tutorials on E-resources Subscribed under the N-LIST Programme (comp. Jagdish Arora, et al). Ahmedabad: INFLIBNET Centre, 2010. 120p.

10.2. Articles in Journals and Newsletters

- i) Chandrakar, Rajesh and Arora, Jagdish. National research productivity in library and information science. INFLIBNET Newsletter, 17(4), 15-20, 2010.
- ii) Chandrakar, Rajesh and Arora, Jagdish. Open Journals System: An INFLIBNET initiative. INFLIBNET Newsletter, 17(2-3), 19-22, 2010.
- iii) Arora, Jagdish and Prakash, P. ICT-enabled services and activities of the INFLIBNET Centre. University News, 49(12), 2011, 19-23.

10.3. Papers Published in Conference Proceedings

- i) Arora, Jagdish and Trivedi, Kruti. National Library and Information Services Infrastructure for Scholarly Content (N-LIST): Extending access to e-resources to colleges. In: Proceedings of the 2nd International Symposium on Emerging Trends and Technologies in Library and Information Services (eds. Sanjay Kataria, et.al.). Noida: JIIT and JUIT, p. 100-108, 2010.
- ii) Arora, Jagdish. Digitization: methods, tools and technology. In: Developing sustainable digital libraries: socio-technical perspectives. (eds. Tariq Ashraf, Jaideep Sharma and Puja Anand Gulati). Hershey, PA, IGI Global Publishing, p. 40-63, 2010.
- iii) Arora, Jagdish and Trivedi, Kruti. National Library and Information Services Infrastructure for Scholarly Content (N-LIST): Extending access to e-resources to colleges. In: Proceedings of the Seminar on Librarian's Day 2010: Preparing New Generation Librarians for Meeting Future Challenges (ed. H. Anil Kumar) Ahmedabad: ADINET, INFLIBNET and AMA, p. 102 - 117, 2010. (Also published in Access: Asia's newspaper on electronic information products & services, 74, p. 8-9, 2010).
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- iv) Mansuri, Imran. Using RSS feeds and e-alerts to increase user awareness of e-resources in library and information centres: Proceedings of the Seminar held on Librarian's Day at AMA, Ahmedabad. In: Preparing New Generation Librarians for Meeting Future Challenges (eds. H. Anil Kumar). Ahmedabad, ADINET, p. 91-101, 2010.
- v) Kumar, Abhishek and Shah, Dharmesh. One step towards copy cataloguing: an application by INFLIBNET Centre. In: Towards Building a Knowledge Society: Library as Catalyst for Knowledge Discovery and Management: Papers and Proceedings of the 8th International CALIBER 2011: (eds. Jagdish Arora, et al). Ahmedabad, INFLIBNET, p. 342-350, 2011.
- vi) Patel, Yatrik and Patel, Swapnil. Subject gateway: knowledge discovery tool by INFLIBNET. In: Towards Building a Knowledge Society: Library as Catalyst for Knowledge Discovery and Management: Papers and Proceedings of the 8th International CALIBER 2011: (eds. Jagdish Arora, et al). Ahmedabad, INFLIBNET, p. 123-131, 2011.

- vii) Patel, Yatrik, Rayka, Dinesh and Vaghela Divyakant. Knowledge discovery of MARCXML based library databases using FOSS full text indexing tools. In: Towards Building a Knowledge Society: Library as Catalyst for Knowledge Discovery and Management: Papers and Proceedings of the 8th International CALIBER 2011: (eds. Jagdish Arora, et al). Ahmedabad, INFLIBNET, p. 113-122, 2011
- viii) Pradhan, Dinesh Ranjan, Trivedi, Kruti and Arora, Jagdish. Searching online resources in new discovery environment: A state-of-the-art review. In: Towards Building a Knowledge Society: Library as Catalyst for Knowledge Discovery and Management: Papers and Proceedings of the 8th International CALIBER 2011: (eds. Jagdish Arora, et al). Ahmedabad, INFLIBNET, p. 132-145, 2011.
- ix) Pradhan, Pallab, Panda, Saroj and Chandrakar, Rajesh. Authorship pattern and degree of collaboration in Indian chemistry literature. In: Towards Building a Knowledge Society: Library as Catalyst for Knowledge Discovery and Management: Papers and Proceedings of the 8th International CALIBER 2011: (eds. Jagdish Arora, et al). Ahmedabad, INFLIBNET, p. 691-699, 2011.

10.4. Chapters in Books

- i) Patel, Yatrik and Arora, Jagdish. Technical implementation of Shibboleth-based access management for N-LIST Programme. In: Benchmarks in ICT Applications in LIS Practice (eds. M.S. Rana, D.C. Ojha and N.K. Swain). Jodhpur, Scintific Publishers (India), p. 289-304, 2011.

11. Awards, Honours and Distinctions

The following awards, honours and distinctions were bestowed on the Centre's project and staff member of the INFLIBNET Centre during the period under report:

Awards to the NLIST Project, INFLIBNET Centre

- ▶▶ Jury Choice Award e-INDIA 2010 in the Category Digital Learning through ICT in Higher Education Institute for the Year 2010 (INFLIBNET Centre) for its project entitled "National Library and Information Services Infrastructure for Scholarly Content (N-LIST); PI: Dr. Jagdish Arora and Prof. Surendra Prasad.
- ▶▶ The Manthan South Asia Award 2010 in Digital Learning Category for the Year 2010 (INFLIBNET Centre) for its project entitled "National Library and Information Services Infrastructure for Scholarly Content (N-LIST); PI: Dr. Jagdish Arora and Prof. Surendra Prasad.

Dr. Jagdish Arora, Director, INFLIBNET Centre

- ▶▶ "Digital Library Initiatives at the INFLIBNET Centre". Lecture Delivered to the Participants of the International Workshop on the INDO-ASEAN S & T Digital Library, April 10, 2010, IIIT Allahabad, UttarPradesh ;
- ▶▶ Chairman, Human Resource Development Plan, IGNOU Library System (2011);
- ▶▶ Member, Editorial Board, Indian Science Abstracts, NISCAIR (2011-2013);
- ▶▶ Member, Research Council, NISCAIR, CSIR, New Delhi (2010 – 2013);
- ▶▶ Member, Library Advisory Committee, Oxford University Press, Oxford, (2010-2013);
- ▶▶ Member, Programme Committee, International Conference on Digital Library Management (ICDLM-2011), January 11-13, 2011, Kolkata ;
- ▶▶ Member, Board of Studies in Library and Information Science, University of Kashmir, Srinagar (2010 - 2013) ;

- ▶▶ Chairman, Negotiation Committee and Nodal Officer's Committee, DBT's Electronic Library Consortium (DeLCON), National Brain Research Centre (NBRC), Manesar, Haryana, 2007 – ;
- ▶▶ Delivered an invited lecture on NLIST in the "Online Information and education Conference", 2010, organized by Suan Dusit Rajabhat University, Bangkok, Thailand, 11-12th Nov., 2010 ; and
- ▶▶ Member, EBSCO's Academic Advisory Board, Singapore, 14-15th Nov., 2010.

12. Academic Interaction with Universities and other Research Institutions

Although the Centre receives a large number of applications from engineering colleges in Gujarat and neighbouring states for the training at the INFLIBNET, the Centre selects limited student trainees. Four students of B.E. from engineering colleges in Gujarat had undergone practical training at the INFLIBNET Centre during the year under report. Facilities are also extended to the library science students of IGNOU as well as Gujarat University, Ahmedabad to avail library internship at the Centre. Besides, Shri Nityananda Pathak from Gauhati University was trained under the Attachment Training Programme (ATP) for six months from 14th June 2010 to 13th December 2010 during the period under report.

13. Project @ INFLIBNET Centre

13.1. N-LIST (National Library and Information Services Infrastructure for Scholarly Content)

"National Library and Information Services Infrastructure for Scholarly Content (N-LIST)" is one of the major initiatives taken by INFLIBNET Centre to serve higher education community in India by providing access of e-resources to Govt. / Govt. aided colleges, universities and technical institutions. The programme is funded by Ministry of Human Resource Development (MHRD) under its National Mission on Education through ICT. The N-LIST was formally launched by Honourable Union Minister of Human Resource Development Shri Kapil Sibal on 4th May, 2010 at Shastri Bhawan, New Delhi. The programme provides access to more than 2,100 e-journals and 55,100 e-books to all colleges recognized under 12(B) and 2(F) Section of the UGC Act. Besides, it also provides for cross subscription to e-resources subscribed by the UGC-INFONET Digital Library Consortium and INDEST-AICTE Consortium for the members of the two consortia. The programme consists of four distinct components, i.e. i) to subscribe and provide access to selected UGC-INFONET e-resources to technical institutions (IITs, IISc, IISERs and NITs); ii) to subscribe and provide access to selected INDEST e-resources to selected universities; iii) to subscribe and provide access to selected e-resources to 6,000 Govt./ Govt.-aided colleges; and iv) to act as a Monitoring Agency for colleges and evaluate, promote, impart training and monitor all activities involved in the process of providing effective and efficient access to e-resources to beneficiary institutions.

The INDEST-AICTE Consortium and the UGC-INFONET Digital Library Consortium are jointly responsible for activity listed at i) and ii) above. The UGC-INFONET Digital Library Consortium, INFLIBNET Centre, Ahmedabad is responsible for activities listed at iii) and iv) above. The INFLIBNET Centre is also responsible for developing and deploying appropriate software tools and techniques for authenticating authorized users from colleges so as to enable them to access e-resources.

13.1.1. Governance

The N-LIST is being jointly executed by the UGC-INFONET Digital Library Consortium, INFLIBNET Centre and the INDEST-AICTE Consortium, IIT Delhi under the overall guidance of a National Steering Committees of the two Consortia that guide and steer the activities of the N-LIST programme. Decisions on policy issues are taken in the joint Meeting of the NSCs of two Consortia under overall policy directions of the National Mission on Education through ICT. The Joint Committee of the NSC and sub-committees appointed by it take decision on e-resources to be subscribed from various publishers and their accessibility to beneficiary institutions. The INFLIBNET Centre acts as a Monitoring Agency for implementation, monitoring and execution of the entire programme.

Besides National Steering Committees, a Joint Negotiation Committee, with representations from both the Consortia, is constituted for negotiating rates of subscription to e-resources with publishers.

13.1.2. Beneficiary Institutions

The following four sets of institutions are benefitting from the N-LIST Project:

- i) 100 Universities covered under Phase I & II of the UGC-INFONET Digital Library Consortium can now access Web of Science.
- ii) IITs, IISc, IISERs and selected NITs (i.e. 35 core members of the INDEST-AICTE Consortium) can now access selected e-resources namely Annual Reviews, Project Muse and Nature.
- iii) 6,000 Govt. / Govt.-aided colleges covered under 12(B) and 2(F) section of UGC Act are eligible to access selected electronic resources including electronic journals, electronic books and bibliographic databases. These resources include more than 2100 e-journals and 55,100 e-books.
- iv) Colleges not covered under 12(B) and 2(F) Section of UGC Act, can benefit from the N-LIST Programme by joining the programmes as its Associate. These colleges are required to pay a fixed amount towards annual subscription to e-resources.

13.1.3. Number of Beneficiary Colleges

The NLIST Programme offers access to cross-subscribed e-resources to 35 technical institutions (IITs, IISc, IISERs, NITs) that are core members of INDEST-AICTE Consortium and 100 universities that are core members of UGC-INFONET Digital Library Consortium. However, out of 6,000 colleges that are eligible to join the programme, 1236 colleges have joined the programme as on 31st March, 2011.

The NLIST Programme started providing access to e-resources to around 600 colleges in Feb 2010 on trial basis. The total number of colleges enrolled for the programme grew to 703 on May 4, 2010, when it was formally launched by Shri Kapil Sibal, Honourable Union Minister of Human Resource Development. Figure 35 given below reflects consistent increase in number of colleges who joined the NLIST Programme during the Financial Year April 2010 to March 2011. The number of colleges that have joined the NLIST Programme has increased from 703 in April 2010 to 1236 by the end of March 2011.



Fig. 35: Increase in Registration of Colleges for the Period 2010– 2011

13.1.4. Electronic Resources Subscribed under the N-LIST Programme

13.1.4.1. Full-text Electronic Resources

Full-text electronic resources contain complete articles along with their bibliographic details. The N-LIST programme subscribes to full-text e-resources from academic societies, commercial publishers and aggregators like American Institute of Physics, American Physical Society, Oxford University Press, Royal Society of Chemistry, Cambridge University Press, H W Wilson, etc. All full-text resources subscribed under the N-LIST programme contain electronic journals as revealed in the Table 22 given below.

13.1.4.2. Electronic Books

Sl. No.	E-resources	Publishing Country	No. of Journals	Backfiles from
1	American Institute of Physics	USA	18	Ten yrs.
2	American Physical Society	USA	13	Ten yrs.
3	Annual Reviews	USA	33	Ten yrs.
4	Cambridge University Press	UK	224	Ten yrs.
5	Economic and Political Weekly (EPW)	India	1	1966+
6	Indian Journals	India	150	2007+
7	Institute of Physics	UK	46	Vol. 1+
8	Oxford University Press	UK	206	1996+
9	Royal Society of Chemistry	UK	29	Ten yrs.
10	Wilson Omnifile	USA	1420	1982+
	Total		2140	

Table 22: Full-text Electronic Resources

Electronic books are either subscribed on annual subscription basis as in case of ebrary or are purchased on “one-time payment and perpetual access basis” as in case of NetLibrary and Oxford Scholarship. Total number of electronic books accessible to colleges under N-LIST programme exceeds 53838 as revealed below in the Table 23 reproduced below.

13.1.4.3. Bibliographic Database

Sl. No.	E-resource	Publishing Country	No of Books	No of Publishers
1	Ebrary	USA	52,000+	250
2	Oxford Scholarship	UK	902	1
3	NetLibrary	USA	936	44
	*NetLibrary (open access books)		3,500	1
	Total		53,838	296

Table 23: Electronic Book

Bibliographic database contain references to articles published in journals, conference proceedings or chapters in books. Most bibliographic databases contain abstracts of the articles along with links to their full-text. N-LIST subscribes to MathSciNet (American Mathematical Society) that covers reviews of articles in mathematics from 1944 onwards.

13.1.5. Cost-effectiveness of the N-LIST Programme

The cost-effectiveness of N-LIST programme can be judged by factors such as number of beneficiary colleges, full-time potential users in these colleges, cost of e-resources subscribed and expenditure on e-resources per college and per potential user. The N-LIST programme is a cost-effective proposition because of large number of colleges with larger number of potential users and potential for growth. These factors are discussed below in detail.

13.1.5.1. Number of Members under the N-LIST Programme and Potential of Growth

The N-LIST programme has attracted the best possible price and terms of agreement from the publishers with increase in number of colleges. The rates of subscription to e-resources for most publishers are comparatively high for first 600-1000 colleges being covered in the year 2010. However, rates of subscription would be lower by 26% once the number of colleges grows from 1,000 to 4,000. The rates of subscription would further decrease by 30% once numbers of colleges grow to 6,000.

13.1.5.2 Average Cost of E-resources Subscribed under the N-LIST Programme

13.1.5.2.1. Average Cost of Journals Per College

The N-LIST programme subscribes to a total number of 2,137 journals for its member colleges. The cost of subscription to e-resources comes down with increase in number of colleges. As such, average cost of a single journal per college computes to Rs. 10.37 in the year 2010 when only 600 to 1000 colleges were enrolled for the scheme. However, average cost of a single journal per college will come down to Rs. 5.74 and 5.41 when number of colleges increase to 4000 and 6000 respectively. Overall average cost of the journal per college is Rs. 17.92.

13.1.5.2.2. Average Cost of E-books

Most of the e-books under the N-LIST programme is purchased for all existing 1,200 colleges on “one-time purchase and perpetual access basis” except Ebrary which is subscribed on annual subscription basis. The average cost of books per college varies from Rs. 4,800 in case of McGraw Hill to Rs. 15,332 in case of Net Library. Average cost per book per college varies from Rs. 0.21 in case of Ebrary to Rs. 15.55 in case of Net Library. The average expenditure incurred on each college for purchase of 48,296 e-books is Rs. 24,390.54 and average cost per college per book is Rs. 0.51.

13.1.5.2.3. Average cost of E-journal and E-books per User

If the total number of full-time users in one college is taken as 1,000, the average cost per title (e-journals and e-books) per user varies from Rs. 1.00 in case of EPW to Rs. 15.33 in case of NetLibrary for the year 2010.

13.1.6. Analysis of Usage

It is important to ensure that the resources offered to the colleges are being used optimally and steps are taken to promote usage of e-resources wherever required. A brief analysis of usage of e-resources by the beneficiary college is given below.

13.1.6.1. Publisher wise Usage

Figure 36 given below shows the number of articles downloaded by the users from each publisher during the financial year 2010 - 2011. It was observed that E-brary is highly used resource followed by Indian Journals and Oxford University Press. The usage of EPW, Oxford Scholarship and MathSciNet could not be analysed due to lack of usage data from the publishers.

13.1.6.2. Month wise Usage

Figure 37 given below reflects month wise increase in usage. It can be observed that there is consistent increase in usage from April 2010 to March 2011.

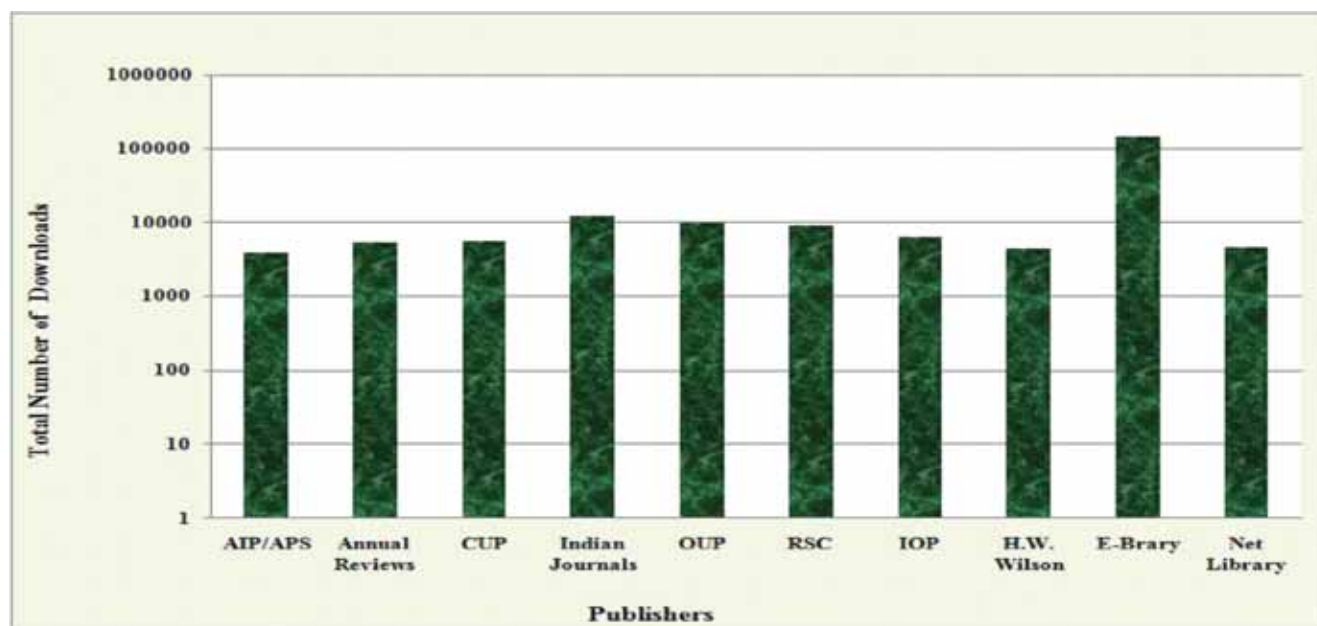


Fig. 36: Publisher wise Usage 2010 – 2011

*Usage of AIP/APS for the period October 2010 to Dec 2010 is not available.

13.1.6.3. Month wise Unique Visitors

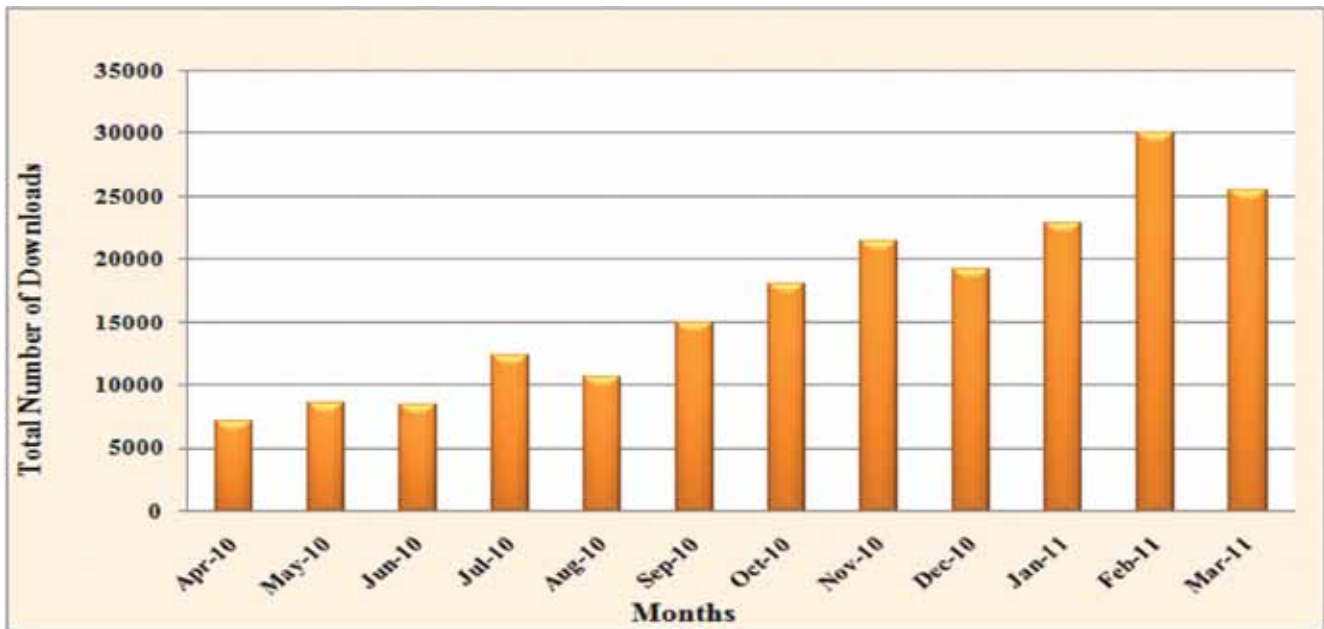


Fig. 37: Month wise Usage of E-resources from April 2010 – March 2011

Since the access of e-resources is provided through a proxy server set up at the INFLIBNET Centre, it is difficult to analyse usage of e-resources by a given college. As such the Centre is using AW stats, a powerful open source tool that generates statistics from the local proxy server. The centre has used this tool to analyze log files of N-LIST Proxy Server. Figure 38 given below shows month wise unique visitors of N-LIST Programme. The graph shows average 3500 monthly users from 1236 member colleges.

13.1.6.4. Month wise Pages Viewed

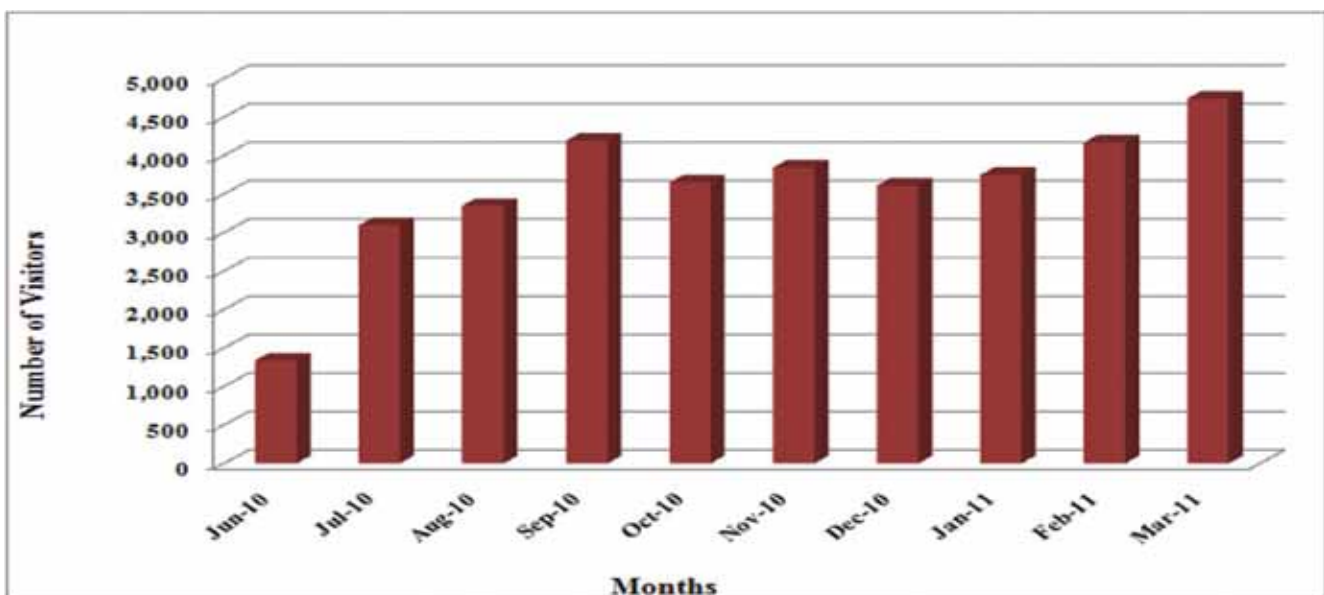


Fig. 38: Month wise Unique Visitors of the N-LIST Programme 2010 – 2011

A total number of 1,25,108 pages have been viewed by the user in member colleges from the subscribed e-resources. Figure 39 given below depicts month wise increase in number of pages viewed by the users in member colleges.

13.1.7. Economics of N-LIST Programme



Fig. 39: Month wise Pages Viewed 2010 -2011

Cost recovery, cost avoidance and (lower) rates of subscription are factors that determine economic viability and cost-effectiveness of consortia-based subscription to e-resources. These factors are discussed below briefly.

13.1.7.1. Cost Recovery

The recovery of cost incurred on e-resources subscribed through the N-LIST Programme can be judged in terms of intensity of use of resources. The cost recovery is calculated on the presumption that if the electronic resources were not available through the N-LIST programme, articles downloaded from these resources by the member colleges would have been sourced on inter-library loan or through document delivery services at a cost of US \$ 15.00 per article. (Average cost of article taken from a study conducted by the American Research Libraries (ARL). As is evident from the figure 40 given below, the N-LIST Programme has recovered the cost incurred on subscription for all e-resources.

The total cost that has been recovered for the financial year April 2010- March 2011 amount of Rs. 3.85 crores as against the total expenditure of Rs. 2.09 crores with Rs. 1.75 crores as the cost of articles downloaded in excess. The ratio between expenditure on e-resources and cost-recovered is 2.1:3.8 for the year 2010 - 2011.

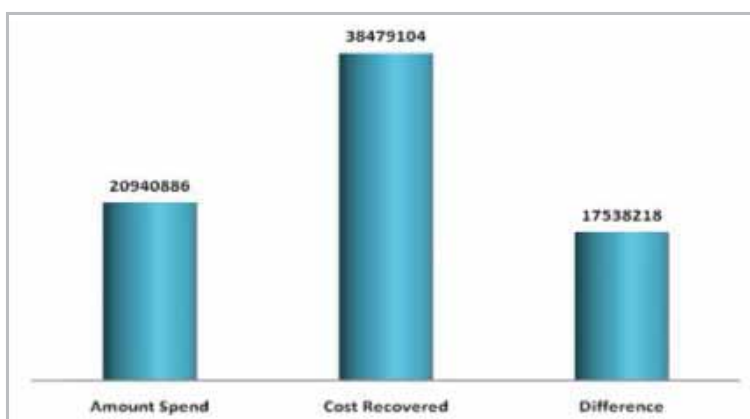


Fig. 40: Cost Recovery Factor of E-journals Subscribed under the N-LIST Programme 2010-2011

13.1.7.2. Lower Rates of Subscription

The N-LIST Programme has used a highly innovative pricing model for subscription to e-resources wherein one subscription (equivalent to one subscription paid for a university in the UGC-INFONET Digital Library Consortium) is paid for a set of 200 colleges given the fact that extending the prevalent pricing models to college would have been highly expensive, unaffordable and impractical for the college component of the N-LIST Programme.

13.1.7.3. Cost Avoidance

Cost avoidance is calculated in terms of difference in cost paid by the N-LIST programme for colleges and list price of e-resources including e-journals and e-books. Figure 41 given below shows that there is a notional savings of Rs. 5376.17 crores considering the fact that the same sets of resources on list price would have cost Rs. 5388.41 crores as against Rs. 12.24 crores spent under the N-LIST programme for the year 2010 for 1236 colleges.

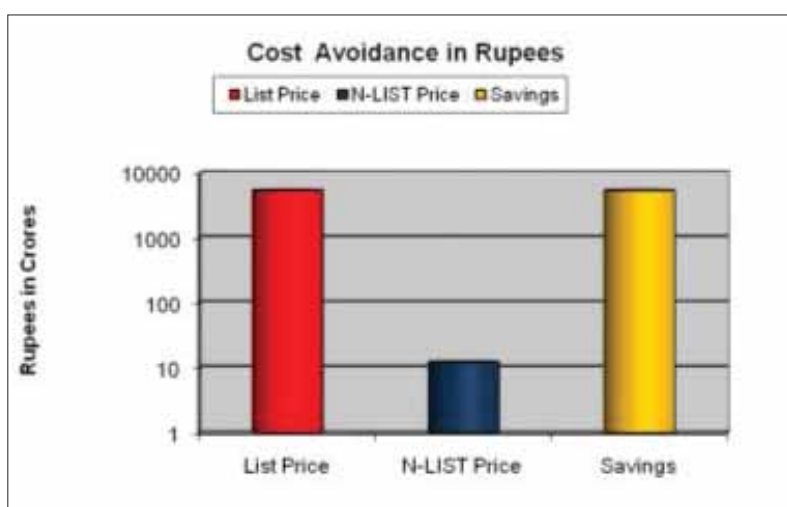


Fig. 41: Cost Avoidance 2010

13.1.7.4. Annual Increase in Rates of Subscription

Annual increase in rates of subscription is restricted from 0 to 5% as against the usual increase in price of e-resources from 10 to 15%.

13.1.8. Implementation Methodology

E-resources identified for cross- subscription for universities and technical institutions are being made accessible to the beneficiary institutions on their respective IPs. However, since most of the colleges registered under the NLIST Programme do not have static IP addresses, access to e-resources based on IP filtering cannot be implemented for colleges. Moreover, most of the publishers were reluctant to handle authentication of users from more than 6,000 colleges who had to be allowed to enroll themselves for the N-LIST Programme at anytime during the year as well as during the project period.

As such, the INFLIBNET Centre took the responsibility of authenticating users from registered colleges through proxy server deploying appropriate authorization and authentication mechanism. Individual users from colleges can directly access and download articles from journals and chapters from books directly from publisher's website once they are duly authenticated as authorized users through the authentication mechanism deployed at the INFLIBNET Centre.

After closely examining all the access management technologies, the Centre has decided to implement Shibboleth as the authentication mechanism. However, implementation of Shibboleth is a time consuming process requiring intensive software configuration, cooperation and collaboration amongst participating institutions, INFLIBNET as Identity Provider (IDP) and publishers as service provider (SP). While the Centre is working towards implementation of Shibboleth, meanwhile EZ-Proxy from OCLC has been implemented for authenticating registered users.

13.1.9. User Awareness/Training Programmes

Being a monitoring agency, the Centre has already taken initiative to promote the programme by organizing awareness / training programmes for the colleges. All member universities have been requested to conduct training programme for colleges affiliated with them. Subsequently, more than 10 awareness / training programmes had been conducted in collaboration with various universities during the period under report. The list of training programme is given in Table 24.

Sr.	University Name	Date
1	SNDT University	25th Aug 2010
2	Guru Nanak Dev University	6th Sept 2010
3	South Campus, Delhi University	17th Sept 2010
4	UGC - South Eastern Regional Office, Hyderabad	8th Oct 2010
5	Karnataka University	10-11th Nov 2010
6	Mizoram University	15-16th Nov 2010
7	Gangadhar Meher College, Sambalpur	29th Oct 2010
8	Mangalore University, Mangalore	23-24th Oct 2010
9	Hemchandracharya North Gujarat University	19th Oct 2010
10	Manonmaniam Sundarnar University	11th Feb 2011

Table 24: List of Awareness / Training Programmes

It has been observed that there is a consistent increase in number of registration as well as number of users from colleges affiliated to above universities. The increase in usage of e-resources has also been noticed after these programmes.

13.1.10. Current Status

As on March 31, 2011, a total number of 1759 colleges have registered themselves with the N-LIST programme including 1236 Govt. / Govt.-aided colleges that are getting access of e-resources subscribed under the N-LIST Programme. More than 1,30,000 faculty members and students in 1236 registered colleges have been given User ID and Password to access e-resources subscribed under the N-LIST Programme. Group login ID and passwords have been given to colleges awaiting details of their actual users. Remaining colleges are being advised to join the initiative as N-LIST Associates.

The N-LIST Programme was awarded "Jury Choice Award e-INDIA 2010" and Manthan South Asia Awards 2010 in the category "Digital Learning through ICT in Higher Education Institute".

14. Other Notable Activities and Events

14.1. Independence Day Celebration

The INFLIBNET staff and their families celebrated 64th Independence Day of the Nation at the Centre on 15th August 2010. Dr. Jagdish Arora, Director of the Centre hoisted the national flag and addressed the gathering consisting of staff and their family members.

14.2. INFLIBNET Celebrated Navratri Garba

The INFLIBNET Centre celebrated Navratri Garba festival on its campus on 10th November 2010. The INFLIBNET staff and their families along with Director and his family joined the celebration. The function began with pooja of Goddess Durga. Every one present in the campus participated in the pooja and Garba. Prizes were distributed to children and staff members for best Garba, best traditional dress, etc. Mrs. Anita Arora, NIC, Delhi and Ms. Shilpa Vaidya, Teacher, Ahmedabad International School, Ahmedabad were jury for the programme as shown in Figure 42. Dinner was served at the end of function.



Fig. 42: Dr. Jagdish Arora, Director along with Jury Members Mrs. Anita Arora and Ms. Shilpa Vaidya

14.3. Republic Day Celebration

The Centre celebrated 63rd Republic Day of the Nation on Tuesday, 26th January 2011 in its campus. Dr. Jagdish Arora, Director of the Centre hoisted the national flag and addressed the gathering (shown in Figure 43). Staff members of the Centre with their families attended the function. A number of social events were organised during the event. All staff members and their children participated in the events.



Fig. 43: 63rd Republic Day

15. Right to Information (RTI) Act

In order to promote transparency and accountability in the working of public authority and to empower the citizens to secure access to information under control of each public authority, the Government of India has brought out “the Right to Information Act, 2005”. In accordance with the provisions of section 4(1) (b) of this Act, the INFLIBNET has put information and guidance of the stakeholders and the general public and hosted the same on the website of the Centre at <http://www.inflibnet.ac.in>. In terms of section 5(2) of the Right to Information Act, 2005, the Director of the INFLIBNET Centre has been designated as Appellate Authority / Nodal Officer for all matters concerning to the Centre. The detailed information about RTI and responsible officers appointed for are available on the Centre’s website at <http://www.inflibnet.ac.in>.

16. Financial Status

The Audited Annual Accounts of INFLIBNET Centre for the financial year 2010-2011 is given in the Appendix XVII.

Building Committee

(As on 31st March, 2011)

Prof. S K Khanna (Chairman)

Chairman, Governing Board
INFLIBNET Centre
Jaypee Institute of Information
Technology
A-10, Sector 62, Noida

Dr. Parimal H Trivedi (Member)

Vice-Chancellor
Gujarat University
Navrangpura
Ahmedabad

Dr. Jagdish Arora (Member)

Director
INFLIBNET Centre
Ahmedabad

Dr. R K Chadha (Member)

Joint Secretary, Lok Sabha
New Delhi

Shri Y P Pathak (Member)

Dy. Exe. Engineer – R&B
Sr. Civil /Executive Engineer
(Capital Project)
PWD, Ghandhinagar

Prof. H A Ranganath (Member)

Director, NAAC
2/4, "Aragini Bhavana"
Dr. Rajkumar Road, P.O. Box 1075
Rajajinagar
Bengaluru

Prof. M N Patel (Member)

Principal
L D Engineering College
Ahmedabad

Mr. Rajeev Kathpalia (Member)

Vastu-Shilpa Consultants
"Sangath" Thaltej Road
Ahmedabad

Ashok Kumar Rai (Member)

Scientist-D (CS)
INFLIBNET Centre
Ahmedabad

Shri C K Shah (Convener)

Admn. Officer (P&A)
INFLIBNET Centre
Ahmedabad

Governing Council

(As on 31st March, 2011)

Ex. Officio Members

Prof. Ved Prakash

President
Council-INFLIBNET & Chairman (Actg.),
University Grants Commission
Bahadur Shah Zafar Marg
New Delhi

Prof. Ved Prakash

Vice-Chairman
University Grants Commission
Bahadur Shah Zafar Marg
New Delhi

Prof. S S Mantha

Chairman (Acting)
All India Council for Technical Education
7th Floor, Chanderlok Building
Janpath
New Delhi

Dr. Samir K Brahmachari

Director General
C S I R, Anusandhan Bhawan
2, Rafi Marg,
New Delhi

Prof. S K Thorat

Chairman
Indian Council of Social Science
Research
(Ministry of HRD)
JNU Institutional Area
Aruna Asaf Ali Marg
New Delhi

Dr. Swapan Chakravorty

Director
National Library
Belvedr, Kolkatta

Dr. Jagdish Arora

Director
INFLIBNET Centre
Near. Gujarat University Guest House
PB No.4116, Navrangpura
Ahmedabad

Nominated Members

Prof. B P Sanjay

Vice-Chancellor
Central University of Tamil Nadu
C/o Collectorate Annexe
Tiruvarur
(Term 3 years – November 23, 2009
(Term Expires – November 22, 2012)
(In place of: Dr. Kamlakar Singh)

Dr. V G Talawar

Vice-Chancellor
University of Mysore
Crawford Market
Mysore
(Term 3 years: 19.02.2009)
Term Expires: 18.02.2012)
(Eminent Library Scientist)

Dr. T R Kem

Director
Consortium for Educational Commun.
IUAC (NSC) Campus
Aruna Asaf Ali Marg
New Delhi
(Term 3 years: 19.02.2009
Term Expires: 18.02.2012)
(Eminent IT)

And All GB Members

Governing Board

(As on 31st March, 2011)

Ex.Officio**Prof. S K Khanna**

Chairman, GB, INFLIBNET
Jaypee Institute of Inf. Tech Campus
A-10, Sector – 62
Noida

Prof. Ved Prakash

Vice-Chairman
University Grants Commission
Bahadur Shah Zafar Marg
New Delhi

Dr. (Ms.) Niloufer Adil Kazmi

Secretary
University Grants Commission
Bahadur Shah Zafar Marg
New Delhi

Dr. Parimal Trivedi

Vice Chancellor
Gujarat University
Navrangpura
Ahmedabad

Shri M K Hada

Member Secretary
A I C T E
7th Floor, Chanderlok Building
Janpath
New Delhi

Dr. Jagdish Arora (Member Secretary)

Director
INFLIBNET Centre
Near. Gujarat University Guest House
Navrangpura
Ahmedabad

Nominated Members:**Prof. R K Kale**

Vice-Chancellor
Central University of Gujarat
Sector-30, Gandhinagar

Prof. N Prabhu Dev

Vice-Chancellor
Bangalore University
Bengaluru

Dr. D P Kothari

Advisor to Chancellor
VIT University
Vellore, Tamil Nadu

Dr. R K Chadha

Joint Secretary, Lok Sabha
New Delhi
(Eminent Librarian)

Prof. J P Gupta

Vice-Chancellor
Jaypee Institute of Information
Technology Universty
A-10, Sector-62
Noida
(Computer Expert)

Shri R S Mani

Scientist-F (Operations and Routing Unit)
Dept. of Information Technology
Ministry of Communication and IT
National Informatics Centre
Lodhi Road, New Delhi
(Communication Expert)

Prof. H A Ranganath

Director
National Assessment and Accreditation
Council
Bengaluru

Finance Committee

(As on 31st March, 2011)

Ex.Officio Members**Prof. S K Khanna**

Chairman
Jaypee Institute of Inf.Tech Campus
A-10, Sector – 62, Noida

Dr. Jagdish Arora

Director
INFLIBNET Centre
Navrangpura, Ahmedabad

Dr. (Ms.) Niloufer Adil Kazmi

Secretary
University Grants Commission
Bahadur Shah Zafar Marg
New Delhi

Manoj Kumar K

Scientist-D (CS)
INFLIBNET Centre
Ahmedabad

Mr. A K Dogra

Jt.Secretary/FA
University Grants Commission
Bahadurshah Zafar Marg
New Delhi

Shri C K Shah (Non-Member Secretary)

Admn. Officer (F)

Nominated Member:**Dr. P Prakash**

Addl. Secretary (IUC) &
Director (Admn.)
University Grants Commission
Bahadur Shah Zafar Marg
New Delhi

Prof. J P Gupta

Vice-Chancellor
Jaypee Institute of Information
Technology University
A-10, Sector-62, Noida

Technical, Administrative and Supporting Staff

(As on 31st March, 2011)

Scientific & Technical Staff

Sr.	Name of the employee	Designation
1.	Dr. Jagdish Arora	Director
2.	Shri Manoj Kumar K.	Scientist-D (CS)
3.	Shri Prem Chand	Scientist-D (LS) (on lien from 30.03.2009)
4.	Shri Ashok Kumar Rai	Scientist D (CS)
5.	Shri Yatrik R. Patel	Scientist-C (CS)
6.	Shri Swapnil P. Patel	Scientist- B (CS)
7.	Shri Divyakant Vaghela	Scientist- B (CS)
8.	Shri H. G. Hosamani	Scientist-B (LS)
9.	Shri Rajesh Chandrakar	Scientist-B (LS)
10.	Shri Abhishek Kumar	Scientist-B (CS)
11.	Mrs. Vaishali. A. Shah	S.T.O – I (LS)
12.	Shri Dinesh Ranjan Pradhan	S.T.O – I (LS)
13.	Mrs. Hema Cholin	STA-II (LS)
14.	Ms. Kruti J. Trivedi	STA- I (LS)
15.	Shri Saroja Panda	STA- I (LS)

Administrative & Support Staff

1.	Shri C. K. Shah	Admn. Officer (P&A)
2.	Shri Ashok P. Achtani	Section Officer (P)
3.	Shri Sanjay R. Shah	Office Assistant-II
4.	Shri S.F. Vanikar	Office Assistant-II
5.	Smt. S. M. Munshi	Personal Assistant
6.	Mrs. Yamini J. Dave	Clerk-cum- Typist
7.	Mrs. R. B. Pendharkar	Clerk-cum- Typist
8.	Shri Ankur B. Parikh	Clerk-cum- Typist
9.	Shri Shyam T. Yadav	Helper
10.	Shri Vinod B. Dantani	Helper
11.	Shri Bakul M. Parmar	Lab Attendant

Contractual Staff in Computer Science

Sr.	Name of the employee	Designation
1.	Shri. Ramiz Malik	Project Officer (CS)
2.	Ms. Rachna Shelat	Project Officer (CS)
3.	Ms. Daksha Halpati	Project Associate (CS)
4.	Shri Mayur Gohel	SOUL Technical Assistant (CS)
5.	Shri Dharmesh kumar A. Shah	Project Assistant (CS)
6.	Shri Vijaykumar M Shrimali	SOUL Technical Assistant (CS)
7.	Ms. Nabila Shaikh	SOUL Technical Assistant (CS)
8.	Shri Mohit Kumar	Project Assistant (CS)
9.	Ms. Leena Parmar	Project Assistant (CS)

Contractual Staff in Library Science

1.	Ms. Roma Shahdadpuri	Project Officer (LS)
2.	Mrs. Priti Sharma	Project Officer (LS)
3.	Ms. Reshma S. Panchal	Project Assistant (LS)
4.	Ms. Kanchan Chavda	Project Assistant (LS)
5.	Ms. Archita Muchhadia	Project Assistant (LS)
6.	Ms. Seema Chavda	Project Assistant (LS)
7.	Shri Kamlesh Vegad	Technical Assistant (LS)
8.	Shri Imran Mansuri	Project Assistant (LS)
9.	Shri Pallab Pradhan	Project Associate (LS)
10.	Ms. Jigisha N. Pandya	Trainee (Office Assistant DEO)

No. of Records Contributed by the Participating Universities to the Books and Theses Databases of the Centre

Sr.	Name of the University	Books Records	Theses Records
1	Acharya N G Ranga Agricultural University, Nagarjunanagar, AP		258
2	Acharya Nagarjuna University, Guntur, Andhra Pradesh	32794	661
3	Alagappa University, Karaikudi, Tamil Nadu	43635	90
4	Aligarh Muslim University, Aligarh, Uttar Pradesh	162157	9613
5	All India Institute of Medical Sciences, New Delhi		208
6	Amravati University (Sant Gadge Baba Amravati Univ.), Amravati, Maharashtra		133
7	Andhra University, Vishakhapatnam, Andhra Pradesh	216049	6105
8	Anna University, Chennai, Tamil Nadu	98640	1113
9	Annamalai University, Annamalai Nagar, Tamil Nadu	473810	2242
10	Arunachal University (Now, Rajeev Gandhi University), Doimukh, Arunachal Pradesh		67 80
11	Assam Agricultural University, Jorhat, Assam		87
12	Assam University, Silchar, Assam	20000	125
13	Avinashilingam Institute for Home Science & Higher Education for Women, Coimbatore, Kerala	82452	117
14	Awadesh Pratap Singh Vishwavidyalaya, Rewa, MP		1059
15	B N Mandal University, Madhepura, Bihar		341
16	Babasaheb Bhimrao Ambedkar Bihar University, Muzaffarpur, Bihar		873
17	Babasaheb Bhimrao Ambedkar University, Lucknow, UP	15850	20
18	Banaras Hindu University, Varanasi, UP	445000	14734
19	Banasthali Vidyapith, Banasthali, Rajasthan	75620	109
20	Bangalore University, Bangalore, Karnataka	130000	1647
21	Barkatullah Vishwavidyalaya, Bhopal, Madhya Pradesh		1032
22	Bengal Engineering and Science University, Howarha, WB		5
23	Berhampur University, Berhampur, Orissa		379
24	Bharathiar University, Coimbatore, Tamil Nadu	87115	69
25	Bharathidasan University, Tiruchirapalli, Tamil Nadu	21180	125
26	Bharati Vidyapeeth, Pune, Maharashtra	20215	35
27	Bhavnagar University, Bhavnagar, Gujarat	36213	683
28	Bidhan Chandra Krishi Vishwavidyalaya, Nadia, WB		407
29	Birla Institute of Technology Mesra, Ranchi, Jharkhand		5
30	Birla Institute of Technology & Science, Pilani, Rajasthan	72015	265
31	Birsa Agricultural University, Ranchi, Jharkhand		95

32	Burdwan University, Burdwan, West Bengal	45000	
33	Central Drug Research Institute, Lucknow, UP		45
34	Central Institute of English & Foreign Languages, Hyderabad	50000	108
35	Central Institute of Fisheries Education, Mumbai		1
36	Chaudhary Charan Singh Haryana Agricultural University, Hissar, Haryana		1047
37	Ch. Charan Singh University, Meerut, UP		1924
38	Ch. Sarwan Kumar Himachal Pradesh Krishi Vishwavidyalaya, Palampur, Himachal Pradesh		395
39	Chandra Shekhar Azad University of Agriculture & Technology, Kanpur, UP		371
40	Chhatrapati Shahu Ji Maharaj Kanpur University, Kanpur, UP	5000	2075
35	Central Institute of Fisheries Education, Mumbai 1		
36	Chaudhary Charan Singh Haryana Agricultural University, Hissar, Haryana		1047
37	Ch. Charan Singh University, Meerut, UP 1924		
38	Ch. Sarwan Kumar Himachal Pradesh Krishi Vishwavidyalaya, Palampur, Himachal Pradesh		395
39	Chandra Shekhar Azad University of Agriculture & Technology, Kanpur, UP		371
40	Chhatrapati Shahu Ji Maharaj Kanpur University, Kanpur, UP	5000	2075
41	Cochin University of Science & Technology, Kochi, Kerala	72693	1141
42	Dakshina Bharat Hindi Prachar Sabha, Chennai, Tamil Nadu		23
43	Dayalbagh Educational Institute, Agra, Uttar Pradesh		143
44	Deccan College Post Graduate & Research Institute, Pune, Maharashtra	140000	102
45	Deen Dayal Upadhyaya Gorakhpur University, Gorakhpur, UP	15992	1632
46	Defence Science Centre, Delhi		13
47	Dev Sanskrit Vishwavidyalaya, Dehradun, Uttaranchal		1
48	Devi Ahilya Vishwavidyalaya, Indore, Madhya Pradesh	18000	2510
49	Dhirubhai Ambani Institute of Information Communication Technology, Gandhinagar, Gujarat		5
50	Dibrugarh University, Dibrugarh, Assam	57466	590
51	Dr Babasaheb Ambedkar Marathwada University, Aurangabad, UP	36015	2068
52	Dr Bhim Rao Ambedkar University, Agra, UP	133000	3677
53	Dr Harisingh Gour Vishwavidyalaya, Sagar, Madhya Pradesh		2301
54	Dr Panjabrao Deshmukh Krishi Vidyapeeth, Akola, Maharashtra		195
55	Dr Ram Manohar Lohia Awadh University, Faizabad, UP		365
56	Dr Y S Parmar University of Horticulture & Forestry, Solan, HP		405
57	Dravidian University, Kuppam, Andhra Pradesh		1
58	Fakir Mohan University, Balasore, Orissa		25
59	Forest Research Institute, Dehradun, Uttaranchal		316
60	Gandhigram Rural Institute, Gandhigram, Tamil Nadu	166196	243
61	Gauhati University, Guwahati, Assam	10000	2558

62	Goa University, Goa 133	109886	133
63	Gokhle Institute of Political & Economics, Pune, Maharashtra	246000	4
64	Govind Ballabh Pant University of Agriculture & Technology, Pant Nagar, Uttaranchal		622
65	Gujarat Agricultural University, Anand, Gujarat		152
66	Gujarat Ayurved University, Jamnagar, Gujarat		185
67	Gujarat University, Ahmedabad, Gujarat	250000	1341
68	Gujarat Vidyapith, Ahmedabad, Gujarat	441872	52
69	Gulbarga University, Gulbarga, Karnataka	84964	400
70	Guru Angad Dev Veterinary and Animal Science University, Hissar, Haryana		10
71	Guru Ghasidas University, Bilaspur, Chhattisgarh	30895	1823
72	Guru Gobind Singh Indraprasth University, Delhi	17374	
73	Guru Jambheshwar University, Hissar, Haryana	17507	112
74	Guru Nanak Dev University, Amritsar, Punjab	122302	596
75	Gurukula Kangri Vishwavidyalaya, Haridwar, Uttaranchal	90372	127
76	Hemchandracharya North Gujarat University, Patan, Gujarat 590	60397	838
77	Hemwati Nandan Bahuguna Garhwal University, Pauri, Garhwal, Uttaranchal		457
78	Himachal Pradesh University, Shimla, Himachal Pradesh	46582	1273
79	Indian Agricultural Research Institute , New Delhi		2000
80	Indian Institute of Advanced Study, Shimla, Himachal Pradesh	69693	
81	Indian Institute of Science, Bangalore, Karnataka		2175
82	Indian Institute of Technology Bombay, Mumbai, Maharashtra		1160
83	Indian Institute of Technology Roorkee, Roorkee, UP	70000	2456
84	Indian Institute of Technology Madras, Chennai, Tamil Nadu		1695
85	Indian Institute of Technology Delhi, New Delhi		2651
86	Indian Institute of Technology Kanpur, Kanpur, UP		1059
87	Indian Institute of Technology Kharagpur, Kharagpur, WB		1448
88	Indian Institute of Tropical Meteorology, Pune, Maharashtra		2
89	Indian School of International Studies, New Delhi		47
90	Indian School of Mines, Dhanbad, Jharkhand		376
91	Indian Statistical Institute , Kolkata, WB		125
92	Indian Veterinary Research Institute, Izatnagar, UP		111
93	Indira Gandhi National Open University		2
94	Indira Kala Sangit Vishwavidyalaya, Khairagarh, Chhattisgarh	13697	136
95	Indian Institute of Toxicology Researrch (Industrial Toxicology Research Center), Lucknow, UP		9
96	International Institute of Population Science, Mumbai	51139	121
97	Jadavpur University, Jadavpur, West Bengal	223670	1306
98	Jai Narian Vyas University, Jodhpur, Rajasthan	4823	1426

99	Jai Prakash Vishwavidyalaya, Chapra, Bihar		15
100	Jain Vishva Bharati Institute, Ladnun, Rajasthan	4715	57
101	Jamia Hamdard University, Delhi	37487	323
102	Jamia Milia Islamia, New Delhi	64177	622
103	Jaypee University of Information Technology		2
104	Jawaharlal Nehru Institute of Postgraduate Medical Education and Research		1
105	Jawaharlal Nehru Krishi Vishwavidyalaya, Jabalpur, MP		204
106	Jawaharlal Nehru Technological University, Hyderabad		88
107	Jawaharlal Nehru University, New Delhi	311067	3621
108	Jiwaji University, Gwalior, Madhya Pradesh	25000	1445
109	Kakatiya University, Warangal, Andhra Pradesh	56837	2208
110	Kameshwar Singh Darbhanga Sanskrit University, Darbhanga, Bihar	1351	230
111	Kannada University, Hampi, Karnataka	34877	193
112	Kannur University, Kannur, Kerala		65
113	Karnataka State Open University, Mysore, Karnataka		49
114	Karnataka University, Dharwad, Karnataka	145111	2656
115	Kavikulguru Kalidas Sanskrit Vishwavidyalaya, Ramtek, Nagpur, Maharashtra		2
116	Kerala Agricultural University, Ernakulam, Kerala		173
117	Konkan Krishi Vidyapeeth, Dapoli, Maharashtra		24
118	Kota Open University, Kota, Rajasthan		42
119	Kumaun University, Nainital, Uttaranchal	5000	970
120	Kuruksheetra University, Kuruksheetra, Haryana	200000	4289
121	Kuvempu University, Kuvempu, Karnataka	46693	845
122	Lalit Narayan Mithila University, Darbhanga, Bihar		176
123	Laxmibai National Institute of Physical Education, Gwalior, MP		3
124	M J P Rohilkhand University, Bareilly, Uttar Pradesh		1524
125	Madhya Pradesh Bhoj (Open) University, Bhopal, MP		10
126	Madurai Kamraj University, Madurai, Tamil Nadu	194525	953
127	Magadh University, Bodhgaya, Bihar		1114
128	Maharaja Sayajirao University of Baroda, Vadodara, Gujarat	429722	2889
129	Maharana Pratap University of Agriculture and Technology, Udaipur, Rajasthan		131
130	Maharashtra Animal & Fishery Science University, Mumbai		3
131	Maharshi Dayanand Saraswati University, Ajmer, Rajasthan		48
132	Maharshi Dayanand University, Rohtak, Haryana	27095	1675
133	Maharshi Mahesh Yogi Vedic University, Noida, Uttar Pradesh		2
134	Mahatma Gandhi Chitrakoot Gramodaya Vishwavidyalaya	5000	4
135	Mahatma Gandhi Kashi Vidyapeeth, Varanasi, Uttar Pradesh		142
136	Mahatma Gandhi University, Kottayam, Kerala	70439	524
137	Mahatma Phule Krishi Vidyapeeth, Rahuri, Maharashtra		457

138	Makhanlal Chaturvedi National University of Journalism, Bhopal		14
139	Manglore University, Mangalore, Karnataka	35649	577
140	Manipal University, Manipal, Karnataka		20
141	Manipur University, Imphal, Manipur	64916	1120
142	Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu 43	42344	60
143	Marathwada Krishi Vidyapeeth, Parbhani, Maharashtra		497
144	Maulana Azad National Urdu University, Hyderabad, Andhra Pradesh	9261	
145	Mizoram University, Aizwal	19585	45
146	Mohanlal Sukhadia University, Udaipur, Rajasthan	107621	921
147	Mother Teresa Women's University, Kodaikanal, Kerala	34113	7
148	Nagaland University, Kohima, Nagaland	15556	37
149	Rashtrasant Tukadoji Maharaj Nagpur University, Maharashtra	202803	10388
150	Narendra Deva University of Agricultural & Technology, Faizabad, UP		118
151	National Botanical Research Institute, Lucknow, UP		3
152	National Brain Research Centre, Manesar, Gurgaon, Haryana		6
153	National Chemical Laboratory, Pune, Maharashtra		19
154	National Dairy Research Institute, Karnal, Haryana		170
155	National Institute of Mental Health & Neuro Sciences, Bangalore, Karnataka		215
156	National Institute of Pharmaceutical Education and Research, Hyderabad, Mohali		88
157	National Institute of Technology Rourkela, Jharkhand		3
158	National Institute of Technology, Silchar, Assam		9
159	National Institute of Technology, Hamirpur		1
160	National Institute of Technology Warangal		5
161	National Sugar Institute, Kanpur, Uttar Pradesh		3
162	North-Eastern Hill University, Shilong	84523	951
163	North Maharashtra University, Jalgaon, Maharashtra	35000	306
164	North Orissa University, Mayurbhanj, Orissa		5
165	Orissa University of Agriculture & Technology, Bhubneswar, Orissa		104
166	Osmania University, Hyderabad, Andhra Pradesh	102741	7104
167	Pandit Ravishanker Shukla University, Raipur, Chhattisgarh	156564	1038
168	Punjab Agricultural University, Ludhiana, Punjab		1683
169	Panjab University, Chandigarh	205168	3755
170	Patna University, Patna, Bihar		727
171	Pondicherry University, Pondicherry	37174	472
172	Post Graduate Institute of Medical Education and Research, Chandigarh		328
173	Potti Sreeramulu Telugu University, Hyderabad, AP	25936	122
174	Punjabi University, Patiala, Punjab	34254	1066
175	Rabindra Bharati University, Howarha, West Bengal	16924	425
176	Rajasthan Agricultural University, Bikaner, Rajasthan		167

177	Rajendra Agricultural University, Samastipur, Bihar		160
178	Rajiv Gandhi Proudyogiki Vishwvidyalaya, Bhopal, MP		54
179	Rajiv Gandhi University, Itanagar, Arunachal Pradesh	25000	
180	Raman Research Institue, Bangalore, Karnataka		14
181	Ranchi University, Ranchi, Jharkhand	60554	336
182	Rani Durgavati Vishwavidyalaya, Jabalpur, Madhra Pradesh	20000	1803
183	Rashtriya Sanskrit Sasthan, Janakpuri, New Delhi		39
184	Rashtriya Sanskrit Vidyapeetha, Tirupathi, Tamil Nadu	16690	98
185	Sambalpur University, Sambalpur, Orissa	32993	905
186	Sampurnanand Sanskrit Vishwavidyalaya, Varanasi, UP	10000	80
187	Sant Gadge Baba Amravati University, Amravati, Maharashtra	115909	
188	Sardar Patel University, Vallabh Vidyanagar, Anand, Gujarat	222240	928
189	Satyabhama University (Satyabhama Institute of Science and Technology), Chennai, Tamil Nadu		2
190	Saurashtra University, Rajkot, Gujarat	20965	1442
191	School of Planning and Architecture, Indraprastha Estate, New Delhi		3
192	Sher-e-Kashmir University of Agricultural Science and Technology Jammu		14
193	Sher-e-Kashmir University of Agricultural Sceince and Technology, Srinagar		29
194	Shivaji University , Kolhapur, Maharashtra	60506	1375
195	SNDT University, Mumbai, Maharashtra	70577	669
196	Shri Jagannath Sanskrit Visvadyalaya, Puri, Orissa		62
197	Shanmugha Arts, Science, Technology & Research Academy University (SASTRA University)		1
198	Sido Kanhu Murmu Univesity, Dumka, Jharkhand		3
199	Sikkim-Manipal University of Health, Medical & Technological Sciences, Gangtok, Sikkim		4
200	South Gujarat University (Veer Narmad South Gujarat University), Surat, Gujarat		235
201	Sree Chitra Tirunal Institute for Medical Science and Technology, Travancore, Kerala		7
202	Sree Sankaracharya University of Sanskrit, Kalady, Kerala		1
203	Sri Chandrasekharendra Saraswathi Viswa Mahavidyalaya		2
204	Sri Krishnadevaraya University, Anantapura, Andhra Pradesh	35167	343
205	Sri Padmavati Mahila Visvavidyalayam, Tirupathi, AP	37088	30
206	Sri Sathya Sai University (Sri Sathya Sai Institute of Higher Learning), Anantpur, Andhra Pradesh	28937	37
207	Sri Venkateswara University, Tirupathi, Andhra Pradesh	88864	2588
208	Swami Ramanand Teerth Marathwad University, Nanded, Maharashtra	44651	465
209	Tamil University, Thanjavur, Tamil Nadu	7222	
210	Tamil Nadu Agricultural University, Coimbatore, Kerala		404

211	Tamil Nadu Dr. Ambedkar Law University		1
212	Tamil Nadu Dr M G R Medical University, Anna Salai, Chennai		3
213	Tamil Nadu Veterinary and Animal Sciences University, Chennai		170
214	Tata Institute of Fundamental Research, Mumbai		20
215	Tata Institute of Social Sciences, Mumbai	56423	78
216	Tezpur University, Tezpur, Assam	25888	87
217	Thapar University (Thapar Institute of Engineering and Technology), Patiala, Punjab	16806	45
218	Tilak Maharashtra Vidyapeeth, Pune, Maharashtra	63777	5
219	Tilka Manjhi Bhagalpur University, Bhagalpur, Bihar	3147	418
220	Tripura University, Suryamaninagar, Tripura		51
221	University of Agricultural Sciences, Bangalore, Karnataka		330
222	University of Agricultural Sciences, Dharwad, Karnataka		75
223	University of Allahabad, Allahabad, Uttar Pradesh	5300	1956
224	University of Bundelkhand, Bundelkhand, Uttar Pradesh	30110	300
225	University of Burdwan, Burdwan, West Bengal		3400
226	University of Calcutta, Kolkata, West Bengal	15690	8757
227	University of Calicut, Calicut, Kerala	27801	875
228	University of Delhi, Delhi	688174	16837
229	University of Hyderabad, Hyderabad, Andhra Pradesh	376217	501
230	University of Jammu, Jammu, J&K	110643	4889
231	University of Kalyani, Kalyani, West Bengal	4323	347
232	University of Kashmir, Srinagar, J&K	310853	412
233	University of Kerala, Thiruvananthapuram, Kerala	131249	1538
234	University of Lucknow, Lucknow, Uttar Pradesh		2725
235	University of Madras, Chennai, Tamil Nadu	50000	3950
236	University of Mumbai, Mumbai, Maharashtra	827773	6014
237	University of Mysore, Mysore, Karnataka	129945	1045
238	University of North Bengal, Jalpaigaudi, West Bengal	178357	1097
239	University of Pune, Pune, Maharashtra	35592	3145
240	University of Rajasthan , Jaipur, Rajasthan		7176
241	Utkal University, Bhubneswar, Orissa		1864
242	Utkal University of Culture, Bhubneswar, Orissa		1
243	Uttar Pradesh Technical University, Lucknow, Uttar Pradesh		37
244	Vardhaman Mahaveer Open University,		42
245	Veer Kunwar Singh University, Ara, Bihar	200567	66
246	Vellore Institute of Technology, Vellore, Tamil Nadu		3
247	Vidyasagar University, Vidyasagar, West Bengal	41320	207
248	Vikram University, Ujjain, Madhra Pradesh		2010
249	Vinoba Bhave University, Hazaribag, Jharkhand		342

250	Visvesvaraya National Institute of Technology, Nagpur		65
251	Visva Bharati University, Shanti Niketan, West Bengal	24336	525
252	Yashwantrao Chavan Maharashtra Open University, Nasik	39475	68
	Total	1,19,13,637	2,37,393

List of Universities who signed MoU for Shodhganga

Sr.	University Name	State	Signed On
1	Mahatma Gandhi University, Kottayam	Kerala	19th March 2010
2	Pondicherry University, Puducherry	Pondicherry	30th August 2010
3	Central University of Rajasthan, Ajmer	Rajasthan	13th September 2010
4	Cochin University of Science & Technology, Cochin	Kerala	20th October 2010
5	Sri Venkateswara University, Tirupati	Andhra Pradesh	25th October 2010
6	Guru Nanak Dev University, Amritsar	Punjab	28th October 2010
7	Tamil University, Thanjavur	Tamil Nadu	2nd November 2010
8	Institute of Chemical Technnology, Mumbai	Maharashtra	20th November 2010
9	Bharathidasan University, Tiruchirappally	Tamilnadu	25th November 2010
10	Sri Krishnadevaraya University, Anantpur	Andhra Pradesh	12-11-10
11	Calicut University, Kerala	Kerala	3rd January 2011
12	Manonmaniam Sundaranar University, Tirunelveli	Tamilnadu	3rd January 2011
13	Guru Ghasidas Vishwavidyalaya, Bilaspur	Chattisgarh	20th February 2011
14	North-Eastern Hill University, Shillong	Meghalaya	9th March 2011
15	Tata Institute of Social Sciences, Mumbai	Maharashtra	9th March 2011
16	University of Hyderabad, Hyderabad	Andhra Pradesh	14th March 2011
17	V.B.S Purvanchal University, Jaunpur	Uttar Pradesh	15th March 2011
18	Manipur University, Imphal	Manipur	17th March 2011
19	Periyar University, Salem	Tamilnadu	28th March 2011
20	University of Kashmir, Srinagar	Jammu and Kashmir	30th March 2011

Universities with no. of Full-text Theses submitted to Shodhganga

Sr.	University Name	No of Theses contributed
1	Avinashilingam Deemed University For Women	7
2	Bharathiar University	1
3	Bharath University	20
4	Cochin University of Science & Technology	241
5	Jawaharlal Nehru University	1
6	Mahatma Gandhi University	517
7	Mangalore University	4
8	Manonmaniam Sundaranar University	19
9	Mizoram University	5
10	Nirma University	2
11	Pondicherry University	448
12	Saurashtra University	61
13	Tamil University	5
14	University of Calicut	12
15	University of Hyderabad	339
16	University of Madras	1
	Total	1683

Members of Central Connectivity Monitoring Committee (CCMC)

(As on 31st March 2011)

Prof. D G Kanhere

Professor of Physics
Department of Physics,
University of Pune,
Ganeshkhind, Pune
(Chairman)

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INFLIBNET Centre, Ahmedabad
(Convenor Ex. officio)

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Raipur, Chattisgarh
(Nominee State University)

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Prof. & Head of Department,
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Rollwala Computer Centre
Gujarat University
Ahmedabad, Gujarat
(Nominee State University)

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PO NEHU, Mawkyntroh Umshing
Shillong, Meghalaya
(Nominee NE Region)

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(Nominee IUCs Invitee)

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Computer Science and Engineering
Deptt.
Indian Institute of Technology, Bombay
Mumbai
(Member IITs/IISc/Institute of Higher
Learning)

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(Member GB, INFLIBNET Centre)

Shri Manoj Kumar K

Scientist-D (CS)
INFLIBNET Centre
Ahmedabad, Gujarat
(Member: Sr.Scientist)

Universities where UGC –Infonet Connectivity was withdrawn after getting NKN/NME-ICT Connection

UGC-Infonet Connectivity was not given to the following Universities since they already had NKN/NME-ICT connectivity

1	Dayalbaugh Educational Institute, Agra, UP
2	University of Delhi, Delhi
3	Aligarh Muslim University, Aligarh, UP
4	University of Rajasthan, Jaipur, Rajasthan

UGC Infonet Connectivity was withdrawn for the following universities after they get NKN/NME-ICT connection

S.N	University Name	Disconnected on
1	Acharya Nagarjuna University, Nagarjunanagar, Guntur, Andhra Pradesh	31st December 2010
2	Andhra University, Visakhapatnam, AP	31st December 2010
3	Anna University, Tamil Nadu	31st December 2010
4	Assam University, Silchar, Assam	31st December 2010
5	Avinashilingam University for Women, Coimbatore, Tamil Nadu	31st December 2010
6	Banasthali Vidyapith, Banasthali, Rajasthan	31st December 2010
7	Barkatullah University, Bhopal, Madhya Pradesh	31st December 2010
8	Bengal Engineering & Science University, Howrah, West Bengal	31st December 2010
9	Bharathiar University, Coimbatore, Tamil Nadu	31st December 2010
10	Bhavnagar University, Bhavnagar, Gujarat	31st December 2010
11	Bundelkhand University, Jhansi, UP	31st December 2010
12	Central Institute of Higher Tibetan Studies, Varanasi, UP	31st December 2010
13	Chaudhary Charan Singh University, Meerut, UP	31st December 2010
14	Chhatrapati Shahu Ji Maharaj Kanpur University, Kanpur, UP	31st December 2010
15	Cochin University of Science & Technology, Cochin, Kerala	31st December 2010
16	Gujarat University, Ahmedabad, Gujarat	31st December 2010
17	Gulbarga University, Gulbarga, Karnataka	31st December 2010
18	Guru Nanak Dev University, Amritsar, Punjab	31st December 2010
19	Jai Narain Vyas University, Jodhpur, Rajasthan	31st December 2010
20	Kakatiya University, Warangal, Andhra Pradesh	31st December 2010
21	Kannada University, Kamalpur, Karnataka	31st December 2010
22	Kannur University, Kannur Dist., Kerala *	31st December 2010
23	Karnatak University, Dharwad, Karnataka	31st December 2010
24	Kumaun University, Nainital, Uttranchal	31st December 2010
25	Kurukshetra University, Kurukshetra, Haryana	31st December 2010
26	Maharaja Sayajirao University of Baroda, Vadodara, Gujarat	31st December 2010

27	Maharshi Dayanand University, Rohtak, Haryana	31st December 2010
28	Mangalore University, Mangalore, Karnataka	31st December 2010
29	MJP Rohilkhand University, Bareilly, UP	31st December 2010
30	North Eastern Hill University, Shillong, Meghalaya	31st December 2010
31	Punjabi University, Patiala, Punjab	31st December 2010
32	Rashtriya Sanskrit Vidyapeeth, Tirupati, Andhra Pradesh	31st December 2010
33	Sant Gadge Baba Amravati University, Amravati, Maharashtra	31st December 2010
34	Sardar Patel University, Vallabh Vidyanagar, Gujarat	31st December 2010
35	Saurashtra University, Rajkot, Gujarat	31st December 2010
36	Shivaji University, Kolhapur, Maharashtra	31st December 2010
37	Shri Padmavati Mahila Vishvavidyalayam, Chittoor, Andhra Pradesh	31st December 2010
38	Sri Chandresekharendra Saraswati Viswa Mahavidyalaya, Kanchipuram, TN	31st December 2010
39	Sri Venkateswara University, Tirupati, Andhra Pradesh	31st December 2010
40	Swami Ramanand Teerth Marathwada University, Nanded, Maharashtra	31st December 2010

UGC Infonet 2.0 Connected Universities

Sr.	University Name
1	Annamalai University, Annamalainagar, Tamil Nadu
2	B.N. Mandel University, Madhepura, Bihar *
3	Babasaheb Bhimrao Ambedkar University, Lucknow, UP
4	Bangalore University, Bengaluru, Karnataka
5	Bharati Vidyapeeth, Pune, Maharashtra
6	Bharatidasan University, Tiruchirapalli, Tamil Nadu
7	Birla Institute of Technology & Science, Pilani, Rajasthan
8	Deccan College Post Graduate & Research Institute, Pune, Maharashtra
9	Gauhati University, Gauhati, Assam
10	Goa University, Goa
11	Gokhale Institute of Politics & Economics, Pune, Maharashtra
12	Gujarat Vidyapith, Ahmedabad, Gujarat
13	Guru Ghasidas University, Bilaspur, Chhatisgarh
14	Guru Gobind Singh Indraprastha University, Delhi
15	Guru Jambheshwar University, Hisar, Haryana
16	Gurukula Kangri Vishwavidyalaya, Hardwar, Uttranchal
17	Hemwati Nandan Bahuguna Garhwal University, Srinagar, Uttranchal
18	Himachal Pradesh University, Shimla, Himachal Pradesh
19	Indira Kala Sangeet Vishwavidyalaya, Khairagarh, Chattisgarh
20	Jadavpur University, Kolkata, West Bengal
21	Jain Vishwa Bharati Institute, Ladnun, Dist. Nagaur, Rajasthan
22	Jammu University, Jammu Tawi, J & K
23	Jawaharlal Nehru University, New Delhi
24	Kameshwara Singh Darbhanga Sanskrit University, Darbhanga, Bihar
25	Magadh University, Bodh Gaya, Bihar
26	Maharshi Dayanand Saraswati University, Ajmer, Rajasthan
27	Mahatma Gandhi Kashi Vidyapeeth, Varanasi, UP
28	Manipur University, Imphal, Manipur
29	Mizoram University, Aizwal, Mizoram
30	Mohanlal Sukhadia University, Udaipur, Rajasthan
31	Potti Sreeramulu Telugu University, Hyderabad, Andhra Pradesh
32	Pt. Ravishankar Shukla University, Raipur, Chhattisgarh
33	Rajasthan Vidyapith, Udaipur, Rajasthan
34	Rajiv Gandhi University, Itanagar, Arunachal Pradesh
35	Ranchi University, Ranchi, Jharkhand
36	Rani Durgavati Vishwavidyalaya, Jabalpur, Madhya Pradesh
37	Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur, Maharashtra
38	Sambalpur University, Sambalpur, Orissa
39	Sampurnanand Sanskrit University, Varanasi, UP
40	Shri Jaganath Sanskrit Visvadyalaya, Puri, Orissa

Members of the National Steering Committee (NSC)

(As on 31st March 2011)

Prof. Ajit Kembhavi (Chairman)
Director, IUCAA
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Dr. P Prakash
Jt. Secretary (IUC)
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Bahadur Shah Zafar Marg
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Director of Culture & Cultural Relations
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Karnataka

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Dept. of Physics
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(As on 31st March 2011)

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Shri C K Shah

Admin Officer (Personal & Finance)
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Ahmedabad, Gujarat

Shri Ashok Achtani

Section Officer (P & S)
INFLIBNET Centre
Ahmedabad, Gujarat

**Universities and IUCs that are Provided Access to E-resources
under UGC-INFONET Digital Library Consortium**

Sr.	University Name	No of Res
Phase I Universities		
1	Aligarh Muslim University, Aligarh	25
2	Andhra University, Visakhapatnam	24
3	Anna University, Chennai	23
4	Avinashilingam University For women, Coimbatore	21
5	Banaras Hindu University, Varanasi	25
6	Bangalore University, Bangalore	25
7	Birla Institute of Technology and Science, Pilani	22
8	Calcutta University, Calcutta	25
9	Cochin University of Science and Technology, Cochin	23
10	Devi Ahilya University, Indore	22
11	Gauhati University, Gauhati	25
12	Goa University, Goa	25
13	Guru Nanak Dev University, Amritsar	25
14	Jadavpur University, kolkata	25
15	Jamia Hamdard University, New Delhi	20
16	Jamia Millia Islamia University, New Delhi	23
17	Jammu University, Jammu Tawi	23
18	Jawaharlal Nehru University, New Delhi	23
19	Jiwaji University Gwalior, Gwalior	23
20	Karnatak University, Dharwad	24
21	Kurukshetra University, Kurukshetra	24
22	Kuvempu University, Shankaraghatta	23
23	Madurai Kamraj Univeristy, Madurai	25
24	Mahatma Gandhi University, Kottayam	24
25	Mangalore University, Mangalore	24
26	Manipur University, Imphal	23
27	North Eastern Hill University, Shillong	24
28	Osmania University, Hyderabad	25
29	Panjab University, Chandigarh	25
30	Pondichery University, Pondicherry	25
31	Pt. Ravishankar Shukla University, Raipur	24
32	Punjabi University, Patiala	24
33	Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur	24
34	Sardar Patel University, Vallabh Vidyanagar	24

35	Shivaji University, Kolhapur	25
36	Tezpur University, Tezpur	23
37	Thapar University, Patiala	22
38	The Maharaja Sayajirao University of Baroda, Vadodara	25
39	University of Allahabad, Allahabad	24
40	University of Calicut, Kozhikode	23
41	University of Delhi, Delhi	25
42	University of Hyderabad, Hyderabad	24
43	University of Kashmir, Srinagar	24
44	University of Kerala, Thiruvananthapuram	24
45	University of Madras, Chennai	25
46	University of Mumbai, Mumbai	24
47	University of Mysore, Mysore	24
48	University of North Bengal, Darjeeling	23
49	University of Pune, Pune	25
50	University of Rajasthan, Jaipur	25

Phase II Universities

51	Acharya Nagarjuna University, Nagarjunanagar	15
52	Annamalai University, Annamalainagar	18
53	Assam University, Silchar	21
54	Awadhesh Pratap Singh University, Rewa	14
55	Banasthali Vidyapith, Banasthali	17
56	Berhampur University, Berhampur	13
57	Bharathiar University, Coimbatore	17
58	Bharatidasan University, Tiruchirapall	17
59	Bhavnagar University, Bhavnagar	17
60	Birla Institute of Technology, Ranchi	16
61	Bundelkhand University, Jhansi	17
62	Chaudhary Charan Singh University, Meerut	16
63	Chhatrapati Shahu Ji Maharaj Kanpur University, Kanpur	15
64	Dayalbaugh Educational Institute, Agra	16
65	Dibrugarh University, Dibrugarh	21
66	Dr. Babasaheb Ambedkar Marathwada University, Aurangabad	18
67	Dr. Ram Manohar Lohia Avadh University, Faizabad	13
68	Gujarat University, Ahmedabad	15
69	Gulbarga University, Gulbarga	17
70	Guru Gobind Singh Indraprastha University, Delhi	16
71	Guru Jambheshwar University of Science & Technology, Hisar	16
72	Gurukula Kangri vishwavidyalaya, Haridwar	15
73	Hemchandraacharya North Gujarat University, North Gujarat	16

74	Hemwati Nandan Bahuguna Garhwal University, Srinagar	15
75	Himachal Pradesh University, Shimla	18
76	Jawaharlal Nehru Technological University, Hyderabad	15
77	Kakatiya University, Warangal	14
78	Kalyani University, Kalyani	16
79	Kumaun University, Nainital	15
80	Maharshi Dayanand University Rohtak, Rohtak	16
81	Manonmaniam Sundaranar University, Tirunelveli	16
82	Mohanlal Sukhadia University, Udaipur	17
83	Nagaland University, Kohima	21
84	North Maharashtra University, Jalgaon	16
85	Rajiv Gandhi University, Itanagar	20
86	Rani Durgavati Vishwavidyalaya, Jabalpur	14
87	Sambalpur University, Sambalpur	18
88	Sant Gadge Baba Amravati University, Amravati	16
89	Saurashtra University, Rajkot	19
90	Sri Sathya Sai Institute of Higher Learning, Anantapur	16
91	Sri Venkateswara University, Tirupati	18
92	Tripura University, Agartala	21
93	University of Burdwan, Burdwan	18
94	University of Lucknow, Lucknow	17
95	Utkal University, Bhubaneswar	17
96	Veer Narmad South Gujarat University, Surat	17
97	Vidyasagar University, Midnapore	17
98	Visva-Bharati, Birbhum	18
99	Alagappa University, Dist-Sivanganga	13
100	Babasaheb Bhimrao Ambedkar University, Lucknow	4

Phase III Universities

101	Barkatullah University	10
102	Bengal Engineering & Science University, Howrah	5
103	Bharati Vidyapeeth	7
104	Central Inst. of Higher Tibetan Studies, Varanasi	4
105	Central University of Bihar, Patna	8
106	Central University of Gujarat, Gandhinagar	8
107	Central University of Haryana, Dist- Mahendergarh	6
108	Central University of Himachal Pradesh, Dist Kangra	5
109	Central University of Jharkhand, Ranchi	9
110	Central University of Karnataka, Gulbarga	9
111	Central University of Kashmir, Srinagar	9
112	Central University of Kerala, Kasaragod	6

113	Central University of Punjab, Bhatinda	7
114	Central University of Rajasthan, Jaipur	9
115	Central University of Tamilnadu, Tiruvarur	5
116	Deccan College Post-Graduate and Research Institute	4
117	Deendayal Upadhyaya Gorakhpur University	5
118	Dr. Bhim Rao Ambedkar University, Agra	7
119	Dr. Harisingh Gaur Vishwavidyalaya., Sagar	7
120	Gandhigram Rural University, Dindigul	9
121	Gokhale Institute of Politics and Economics, Pune	9
122	Gujarat Vidyapith, Ahmedabad	5
123	Guru Ghasidas University, Bilaspur	8
124	Indira Kala Sangeet Vishwavidyalaya, Khairagarh	4
125	Institute of Chemical Technology, Mumbai	9
126	Jai Narain Vyas University, Jodhpur	4
127	Jain Vishwa Bharati University, Dist. Nagaur	5
128	Janardan Rai Nagar Rajasthan Vidyapeeth University, Udaipur	4
129	Kameshwara Singh Darbhanga Sanskrit University, Darbhanga	6
130	Kannada University, Kamalpura; Bellary District	5
131	Kannur University, Kannur	5
132	Lalit Narayan Mithila University, Darbhanga	5
133	Magadh University	5
134	Maharshi Dayanand Saraswati University, Ajmer	4
135	Mahatma Gandhi Antarrashtriya Hindi Vishwavidyalaya, Wardha	5
136	Mahatma Gandhi Chitrakoot Gramoday Vishwavidyalaya, Chitrakoot	6
137	Mahatma Gandhi Kashi Vidyapeeth	4
138	Maulana Azad National Urdu University, Hyderabad	4
139	Mizoram University, Aizwal	21
140	MJP Rohilkhand University, Bareilly	4
141	Mother Teresa Womens University	5
142	Periyar University, Salem	5
143	Potti Sreeramulu Telugu University, Hyderabad	4
144	Rabindra Bharati University, Kokatta	4
145	Ranchi University, Ranchi	8
146	Rashtriya Sanskrit Vidyapeeth	4
147	Sampurnanand Sanskrit University, Varanasi	4
148	Shri Lal Bahadur Shastri Rashtriya Sanskrit Vidyapeeth, Katwaria Sarai	4
149	Shri Padmavati Mahila Vishwavidyalayam, Chittoor	4
150	Sikkim University, Gangtok	21
151	SNDT Women's University, New marine Line ; Mumbai	7
152	Sree Sankaracharya University of Sanskrit, Ernakulam	5

153	Sri Chandrasekharendra Saraswathi Viswa Maha Vidyalaya, Kanchipuram	4
154	Sri Krishnadevraya University, Anantapur	7
155	Swami Ramanand Teerth Marathwada University, Nanded	6
156	Tamil University, Thanjavur	4
157	Tata Institute of Social Sciences, Deonar ; Mumbai	10
158	The English And Foreign Languages University, Hyderabad	9
159	Tilak Maharashtra University, Pune	4
160	VBS Purvanchal University, Jaunpur	4
161	Vikram University	6
162	West Bengal University of Technology, Saltlake	6
163	Yashwantrao Chavan Maharashtra Open University, Nashik	4

IUCs & Other Institutions

164	Indian Institute of Advanced Studies, Shimla	6
165	Inter University Accelerator Centre, New Delhi	7
166	Inter University Centre for Astronomy and Astro Physics, Pune	7
167	UGC-DAE Consortium for Scientific Research., Indore	8

E-Resources Subscribed under the UGC-Infonet Digital Library Consortium

Sr.	Electronic Resources	URL	No. of Jrnls.	No.of Univ.
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Full-text Resources

1	American Chemical Society	http://www.pubs.acs.org/	37	103
2	American Institute of Physics	http://www.scitation.org/	18	105
3	American Physical Society	http://www.scitation.org/	10	105
4	Annual Reviews	http://arjournals.annualreviews.org/	33	103
5	Wiley-Blackwell	http://www3.interscience.wiley.com/	908	102
6	Cambridge University Press	http://journals.cambridge.org/	224	115
7	ScienceDirect (10 subject collection)	http://www.sciencedirect.com/	1036	60
8	Economic & Political Weekly	http://epw.in/	1	All
9	Emerald – Lib. Sci.	http://www.emeraldinsight.com/	29	67
10	Institute of Physics	http://www.iop.org/EJ/	46	113
11	JSTOR	http://www.jstor.org/	1401	106
12	Nature	http://www.nature.com/	1	56
13	Oxford University Press	http://www.oxfordjournals.org	206	118
14	Portland Press	http://www.portlandpress.com/ pp/ default.htm	8	57
15	Project Euclid	http://projecteuclid.org/	22	57
16	Project Muse	http://muse.jhu.edu/journals	411	101
17	Royal Society of Chemistry (RSC)	http://www.rsc.org/Publishing/Journals/	29	104
18	SIAM Journals	http://epubs.siam.org/	14	50
19	Springer Link	http://www.springerlink.com/	1389	171
20	Taylor & Francis	http://www.informaworld.com/	1365	124

Bibliographic Databases

21	JCCC	http://jccc-infonet.informindia.co.in/		All
22	MathSciNet	http://www.ams.org/mathscinet		57
23	ISID	http://isid.org.in/		All
24	SciFinderScholar	http://www.cas.org/SCIFINDER/ SCHOLAR/index.html		23
25	Web of Science (through NLIST Programme)	http://www.isiknowledge.com/		50
26	RSC Databases (6 Databases)	http://www.rsc.org/		104

State-Wise list of the SOUL Installation

Sr.	Name of the State	Installation	1st April, 10 to 31st March, 11	Total
1.	Jammu & Kashmir	46	1	47
2.	Himachal Pradesh	29	12	41
3.	Punjab	114	3	117
4.	Haryana	32	9	41
5.	Uttaranchal	14	3	17
6.	New Delhi	30	4	34
7.	Uttar Pradesh	45	14	59
8.	Rajasthan	41	7	48
9.	Gujarat	541	169	710
10.	Daman	2		2
11.	Madhya Pradesh	160	7	167
12.	Bihar	10	2	12
13.	Chhattisgarh	12	2	14
14.	Jharkhand	5		5
15.	Maharashtra	263	35	298
16.	Goa	3		3
17.	Andhra Pradesh	204	9	213
18.	Karnataka	28	1	29
19.	Kerala	119		119
20.	Tamil Nadu	26	1	27
21.	Pondicherry	3		3
22.	Orissa	8		8
23.	West Bengal	76	11	87
24.	North Eastern States	191		191
25.	Assam (Paid)	11	8	19
26.	Meghalaya	1		1
27.	Mizoram	1	7	8
26.	Nepal	1		1
	Total	2016	305	2321

Financial Status

DEEPAK JAYANTILAL SHAH & CO.
CHARTERED ACCOUNTANTS

T-12/A, Vikram Chambers
Ashram Road,
Ahmedabad - 380 009
Telephone No.: 079 -27546279

Information and Library Network centre
(An Autonomous Inter-University centre of UGC)
Ahmedabad-380 009

BALANCE SHEET AS AT 31st MARCH, 2011

		(Amount - Rs.)	
	Schedule No.	F.Y. 2010-2011 (Current Year)	F.Y. 2009-2010 (Previous Year)
CORPUS/CAPITAL FUND AND LIABILITIES			
TRUST'S FUNDS OR CORPUS(INCOME & EXPENDITURE A/C)	01	235,820,585.39	220,224,083.39
OTHER EARMARKED FUNDS	02	751,106,625.00	33,119,244.00
U.G.C GRANTS FOR CONSTRUCTION OF INSTITUTIONAL BUILDING	03	97,892,000.00	31,750,000.00
CURRENT LIABILITIES		44,623,011.50	10,731,711.50
TOTAL :		1,129,542,231.89	295,825,038.89
ASSETS			
FIXED ASSETS	04 - A	56,679,707.00	55,988,641.00
PERMANENT INSTITUTIONAL BUILDING CONSTRUCTION A/C.	04 - B	65,665,561.00	15,727,700.00
INVESTMENT-FROM EARMARKED/ENDOWMENT FUNDS	05	963,686,088.70	207,790,369.70
CURRENT ASSETS	06	43,071,797.19	15,864,250.19
SUNDRY DEPOSITS	07	429,078.00	474,078.00
TOTAL :		1,129,542,231.89	295,825,038.89

The above Balance Sheet to the best of

our

As per our report of even date attached.

For Deepak Jayantilal Shah&Co.
Chartered Accountants

Sd/-
[Deepak J. Shah]
Proprietor
FRN : 113625W
MEM. NO. : 14364

Place : Ahmedabad
Date :30.06.2011

Sd/-
[C.K.Shah]
Admn. Officer-P&A

Place : Ahmedabad
Date : 30.06.2011

Sd/-
[Dr. Jagdish Arora]
Director

believe contains a true account of the Funds and Liabilities and Properties & Assets of the Institution.

DEEPAK JAYANTILAL SHAH & CO.
CHARTERED ACCOUNTANTS

T-12/A, Vikram Chambers
Ashram Road,
Ahmedabad - 380 009
Telephone No.:079 -27546279

Information and Library Network centre
(An Autonomous Inter-University centre of UGC)

Ahmedabad-380 009

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED ON 31st MARCH, 2011

INCOME	Schedule No.	F.Y. 2010-2011 (Current Year)	(Amount - Rs.)	
			F.Y. 2009-2010 (Previous Year)	
GRANTS-IN-AIDS RECEIVED FROM U.G.C., NEW DELHI ADDITIONAL GRANTS EARNED AS INTEREST ON INVESTMENTS	08	10,275,000.00	29,025,000.00	
MISCELLANEOUS INCOME	09	24,482,792.00 12,396,008.00	20,589,301.00 9,962,623.00	
TOTAL (A) :		47,153,800.00	59,576,924.00	
EXPENDITURE				
EXPENDITURE IN RESPECT OF PROPERTIES	10	71,990.00	188,143.00	
EXPENDITURE ON THE OBJECT OF THE TRUST	11	31,453,298.00	27,948,642.00	
AUDIT FEES		32,000.00	20,000.00	
TOTAL (B) :		31,557,288.00	28,156,785.00	
BALANCE BEING EXCESS OF INCOME OVER EXPENDITURE (A- B)		15,596,512.00	31,420,139.00	
TOTAL :		47,153,800.00	59,576,924.00	

As per our report of even date attached.

For Deepak Jayantilal Shah & Co.

Chartered Accountants

Sd/-

[Deepak J. Shah]

Proprietor

FRN : 113625W

MEM. NO. : 14364

Place : Ahmedabad

Date : 30.06.2011

Sd/-

[C.K. Shah]

Admn. Officer-P&A

Sd/-

[Dr. Jagdish Arora]

Director

Place : Ahmedabad

Date : 30.06.2011

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SCHEDULE FORMING PART OF BALANCE SHEET AS AT 31st MARCH,2011

	F.Y. 2010-2011 (Current Year)		F.Y. 2009-2010 (Previous Year)	
SCHEDULE – 1 CORPLUS/CAPITAL FUND :				
Balance at the beginning of the year		220,224,083.39		188,803,944.39
Add : Balance of net income transferred from the Income & Expenditure Account.	15,596,512.00		31,420,139.00	
BALANCE AS AT YEAR – END		235,820,595.39		220,224,083.39

(Amount-Rs.)

SCHEDULE FORMING PART OF BALANCE SHEET AS AT 31st MARCH,2011

	FUNDS-WISE BREAK UP					TOTALS	
	Networking Grants-in-Aids	UGC-INFONET Grants-in-Aids	E-Subscription Grants-in-Aids	North Eastern Region	F.Y. 2010-2011 (Current Year)	F.Y. 2009-2010 (Previous Year)	
SCHEDULE – 2 EARMARKED FUNDS :							
Opening balance of the funds	5,000,000.00	632,354.00	5,396,001.00	22,060,889.00	33,119,244.00	57,641,164.00	
Add : Grant received during the year	0.00	150,000,000.00	1,296,000,000.00	0.00	1,446,000,000.00	321,050,000.00	
Less : Grant utilized during the year	0.00	86,083,063.00	638,117,714.00	3,811,842.00	728,012,619.00	345,571,920.00	
BALANCE AS AT YEAR – END	5,000,000.00	64,549,291.00	663,278,287.00	18,279,047.00	751,106,625.00	33,119,244.00	

(Amount-Rs.)

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ACCOUNT HEAD	Receipt & Payment				(Amount-Rs.)	
	F.Y. 2010-2011 (Current Year)		F.Y. 2009-2010 (Previous Year)			
	Receipt	Payment	Receipt	Payment	Receipt	Payment
Cash on Hand(Op. Balance)	32,000.00	0.00	32,000.00	0.00	32,000.00	0.00
Bank Balance(Op. Balance)SBI,Guj. Uni.Br.-A/c No. 10298781250	1,906,847.77	0.00	2,693,417.77	0.00	2,693,417.77	0.00
Bank Balance(Op. Balance)SBI,Guj. Uni.Br./A/c No. 10298782049	2,074,758.42	0.00	2,717,805.92	0.00	2,717,805.92	0.00
Cash on Hand(CI Balance)	0.00	32,000.00	0.00	0.00	32,000.00	0.00
Bank Balance (CI Balance)SBI,Guj. Uni.Br.-SB A/c-10298781250	0.00	8,577,762.77	0.00	0.00	0.00	1,906,847.77
Bank Balance (CI Balance)SBI,Guj. Uni.Br.-SB A/c-10298782049	0.00	4,701,661.42	0.00	0.00	0.00	2,074,758.42
10 th - 11 th Plan Expert Committee Meeting Exps.	0.00	0.00	310,944.00	0.00	0.00	0.00
Advertisement Exps.	0.00	335,414.00	0.00	0.00	0.00	126,776.00
Associate Members A/c.	22,109,102.00	23,060,134.21	22,021,827.50	14,827,694.00	14,827,694.00	0.00
Associate Membership Fee	450,000.00	25,000.00	440,000.00	0.00	0.00	0.00
Audit Fee	0.00	32,000.00	0.00	0.00	20,000.00	0.00
Automation of Gujarat University Library	200,075.00	78,697.00	799.00	58,556.00	58,556.00	0.00
Bank Charges	0.00	14,313.00	0.00	0.00	20,184.00	0.00
Bonus	0.00	33,101.00	0.00	0.00	31,086.00	0.00
Books & Journals	0.00	102,490.00	0.00	0.00	165,784.00	0.00
Building Committee Meeting Exps.	0.00	206,713.00	5,901.00	301,135.00	301,135.00	0.00
Building Maintenance	0.00	58,490.00	0.00	0.00	74,643.00	0.00
CALIBER - 2011	22,039.00	562,839.00	0.00	0.00	0.00	0.00
C.C.A(Technical Staff)	0.00	0.00	0.00	0.00	240.00	0.00
CALIBER- 2008	0.00	0.00	0.00	0.00	7,825.00	0.00
CALIBER- 2009	0.00	0.00	0.00	0.00	29,634.00	0.00
Canteen Account	82,614.00	81,539.00	54,355.00	57,699.00	57,699.00	0.00
Canteen Subsidy	0.00	32,045.00	0.00	0.00	23,992.00	0.00
Car Loan Advance	35,000.00	180,000.00	63,000.00	0.00	0.00	0.00
Cash Contra Advance	681,698,263.00	681,698,263.00	22,435,857.00	22,435,857.00	22,435,857.00	0.00
Cochin University of Science & Technology	1,772,370.00	1,704,831.00	0.00	0.00	0.00	0.00
Computer Software	0.00	31,500.00	0.00	0.00	278,950.00	0.00
Computers	0.00	475,381.00	0.00	0.00	1,356,450.00	0.00
Conference & Symposium	0.00	142,485.00	0.00	0.00	319,285.00	0.00
Consumable,Stores&Spares	0.00	142,362.00	0.00	0.00	231,974.00	0.00
Conveyance Charges	0.00	4,380.00	0.00	0.00	2,756.00	0.00
Dearness Allowance(Admn. Staff)	0.00	1,039,312.00	0.00	0.00	596,232.00	0.00
CARRIED FORWARD	710,383,069.19	723,352,713.40	50,775,907.19	44,980,358.19	44,980,358.19	44,980,358.19

DEEPAK JAYANTILAL SHAH & CO.
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T-12/A, Vikram Chambers
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ACCOUNT HEAD	Receipt & Payment		(Amount-Rs.)	
	F.Y. 2010-2011 (Current Year)		F.Y. 2009-2010 (Previous Year)	
	Receipt	Payment	Receipt	Payment
BROUGHT FORWARD	710,383,069.19	723,352,713.40	50,775,907.19	44,980,358.19
Dearness Allowance (Technical Staff)	0.00	1,619,444.00	0.00	965,719.00
Dearness Pay (Technical Staff)	0.00	0.00	0.00	12,500.00
Earnest Money deposit	1,189,520.00	1,189,520.00	13,680,942.00	13,687,092.00
Electrical Maintenance	1,310.00	16,586.00	196.00	20,530.00
Electricity charges	0.00	867,427.00	0.00	841,896.00
Entertainment Exps.	0.00	124,277.00	0.00	111,844.00
Equipment Maintenance	0.00	331,942.00	0.00	219,832.00
E-Subscription	0.00	0.00	3,570,382.00	2,847,582.00
ETD A/c.	0.00	25,000.00	0.00	174,207.00
Festival Advance	27,000.00	27,000.00	27,600.00	27,600.00
Foreign Travelling Expenses	0.00	37,474.00	0.00	0.00
Franking Machine Advance	169,883.00	179,530.00	164,011.00	148,236.00
Furniture & Fixture	0.00	0.00	0.00	74,805.00
G.B.Meeting Exps.	0.00	738,839.00	21,561.00	390,224.00
Garden Exps.	0.00	3,230.00	0.00	9,250.00
General Advance	2,606,237.00	12,872,067.00	13,340,158.00	13,889,872.00
General Repairs & Maintenance	10,937.00	116,796.00	9,998.00	36,336.00
Grade Pay(Admn. Staff)	0.00	501,600.00	0.00	472,800.00
Grade Pay/Special Allowance (Tech. Staff)	0.00	729,600.00	0.00	718,600.00
Group Insurance Saving Scheme	50,579.00	50,579.00	46,556.00	32,920.00
GRUH Finance LTD.	37,788.00	37,788.00	36,666.00	36,666.00
Guest House Caretaking charges	454.00	55,454.00	0.00	58,500.00
Honorarium Exps.	0.00	96,300.00	0.00	32,000.00
Hostel charges	15,745.00	2,800.00	7,390.00	0.00
Hostel Maintenance	18,000.00	24,454.00	0.00	2,812.00
House Building Advance	35,400.00	0.00	35,400.00	0.00
House Rent Allowance (Admn. Staff)	0.00	587,304.00	0.00	448,918.00
House Rent Allowance(Technical Staff)	0.00	455,796.00	0.00	540,612.00
Income Tax	5,804,605.00	5,804,605.00	2,537,314.00	2,537,314.00
Excess amount of Associate Members Subscription A/c.	3,201,471.21	0.00	638,144.00	0.00
INFLIBNET Centre Employees P F Account	2,838,058.00	2,845,611.00	1,377,350.00	1,371,564.00
CARRIED FORWARD	726,390,056.40	752,693,736.40	86,269,575.19	84,690,589.19

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	F.Y. 2010-2011 (Current Year)		F.Y. 2009-2010 (Previous Year)			
	Receipt	Payment	Receipt	Payment	Receipt	Payment
BROUGHT FORWARD	726,390,056.40	752,693,736.40	86,269,575.19	84,690,589.19		
INFLIBNET Employees Co-Op. Credit Society Ltd.	287,891.00	287,891.00	261,135.00	261,135.00		
INFLIBNET Sports & Recreation club	1,420.00	1,420.00	1,440.00	1,440.00		
Institutional Membership Fee	0.00	88,570.00	0.00	120,548.00		
Interest A/c.	24,482,792.00	0.00	22,727,235.00	2,137,934.00		
Interest on Car Loan	0.00	0.00	69,144.00	0.00		
Interest on Retirement Benefit	0.00	0.00	0.00	340,618.00		
Interest on Scooter Loan	2,004.00	0.00	0.00	0.00		
Investment in Fix Deposits	443,976,132.00	1,199,881,851.00	473,513,090.00	503,865,596.00		
Katira construction	1,484,045.00	1,484,045.00	0.00	0.00		
Land revenue Exps.	0.00	13,500.00	0.00	13,500.00		
Leave Encashment	7,983.00	292,198.00	0.00	167,543.00		
Leave Salary Contribution	148,451.00	0.00	6,600.00	6,240.00		
Legal & Professional Exps.	0.00	19,750.00	0.00	0.00		
L.I.C of India	110,016.00	110,016.00	119,349.00	120,413.00		
LTC Advance	502,190.00	546,340.00	232,314.00	233,314.00		
LTC Expenses	0.00	690,982.00	0.00	249,722.00		
Manpower Hiring charges	0.00	2,329,842.00	0.00	1,425,980.00		
Medical Facility Contribution	0.00	0.00	900.00	900.00		
Miscellaneous Income	64,834.00	51,740.00	26,035.00	0.00		
Miscellaneous Exps.	0.00	12,541.00	0.00	6,254.00		
Mobilization Advance	4,050,000.00	0.00	0.00	9,240,000.00		
Material Advance	3,479,894.00	5,587,535.00	0.00	0.00		
Newsletter Publication Exps.	0.00	300,855.00	0.00	177,819.00		
Newspaper & Periodicals Exps.	0.00	251,593.00	0.00	185,328.00		
NIAS Project	0.00	0.00	30,000.00	50,700.00		
N-LIST A/c.	26,423,500.00	1,941,979.00	75,051,934.00	74,250,837.00		
Office Equipments	0.00	101,695.00	0.00	161,680.00		
Office Expenses	0.00	77,027.00	0.00	123,650.00		
Office Rent	0.00	1,030,000.00	0.00	772,500.00		
Overtime Allowance(Admn. Staff)	0.00	216.00	0.00	324.00		
P.F. Contribution	0.00	235,105.00	1,246,826.00	180,106.00		
CARRIED FORWARD	1,231,411,208.40	1,968,030,427.40	659,555,577.19	678,784,670.19		

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	F.Y. 2010-2011 (Current Year)		F.Y. 2009-2010 (Previous Year)			
	Receipt	Payment	Receipt	Payment	Receipt	Payment
BROUGHT FORWARD	1,231,411,208.40	1,968,030,427.40	659,555,577.19	678,784,670.19		
Pay Commission Arrears	0.00	738,558.00	0.00	1,559,404.00		
Penal Charges paid to Govt. Of Gujarat	0.00	0.00	0.00	100,000.00		
Pension & Gratuity	98,771.00	1,460,595.00	6,000.00	1,922,507.00		
Permanent Institutional Building Construction	26,270,527.00	76,208,388.00	0.00	8,012,848.00		
Petrol Exps.	0.00	70,280.00	0.00	45,520.00		
PLANNER – 2010	0.00	9,128.00	0.00	432,747.00		
Postage & Telegram Exps.	0.00	265,845.00	0.00	218,419.00		
Professional Fees	0.00	0.00	0.00	81,730.00		
Professional Tax	93,430.00	93,430.00	82,970.00	83,090.00		
R & D Panel	0.00	84,297.00	0.00	0.00		
R.A. Advance	29,317,546.00	39,970,450.00	0.00	0.00		
Recruitment Exps.	0.00	276,391.00	0.00	180,766.00		
Regional Training	29,880.00	383,139.00	854.00	248,857.00		
Reimbursement Of Medicines	3,130.00	1,013,795.00	2,200.00	1,316,073.00		
Rent for Director Residence	30,199.00	445,518.00	0.00	376,355.00		
Retention Money	5,142,393.00	0.00	0.00	0.00		
Revenue Stamps	529.00	529.00	504.00	504.00		
Sir Ratan TATA Trust (SRTT)	0.00	0.00	471,050.00	194,719.00		
Salaries (Admn. Staff)	26,400.00	2,166,974.00	24,858.00	1,900,318.00		
Salaries (Technical Staff)	24,316.00	4,703,698.00	31,767.00	5,437,235.00		
Salaries payable	11,584,521.00	11,584,521.00	9,426,690.00	9,426,690.00		
Scooter Loan	35,725.00	30,000.00	52,481.00	24,860.00		
Security Deposit	249,942.00	249,942.00	14,000.00	6,000.00		
Security Expenses	0.00	1,151,770.00	0.00	703,512.00		
Service Charges to AES Hostel for trainees	0.00	475,000.00	0.00	356,250.00		
Service Charges to Director's Residence	0.00	0.00	0.00	3,706.00		
SOUL Expenses	14,655,350.00	2,860,836.00	10,829,928.00	2,501,254.00		
Staff welfare	0.00	19,090.00	0.00	3,200.00		
Stationery & Printing Exps.	42,582.00	535,615.00	47,420.00	429,335.00		
Stipend to Trainees,(for Database Development,Activities)	0.00	0.00	0.00	141,000.00		
Stock	57,614.00	54,829.00	111,577.00	71,614.00		
CARRIED FORWARD	1,319,074,063.40	2,112,883,045.40	680,657,876.19	714,563,183.19		

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	F.Y. 2010-2011 (Current Year)		F.Y. 2009-2010 (Previous Year)		
	Receipt	Payment	Receipt	Payment	
BROUGHT FORWARD	1,319,074,063.40	2,112,883,045.40	680,657,876.19	714,563,183.19	
Subscription for Technical Journals	0.00	85,416.00	0.00	0.00	0.00
Sundry Deposit	150,000.00	105,000.00	0.00	0.00	0.00
TDS Receivable	0.00	0.00	0.00	1,904.00	1,904.00
Telephone & Trunk call Exps.	87.00	256,129.00	0.00	283,643.00	283,643.00
Tata Institutional Fundamental research - Mumbai	3,050,535.00	2,934,302.00	0.00	0.00	0.00
Tender Fee	0.00	0.00	16,000.00	0.00	0.00
Transport Allowance(Admn. Staff)	1,620.00	339,740.00	0.00	292,068.00	292,068.00
Transport Allowance(Technical Staff)	0.00	435,680.00	0.00	402,464.00	402,464.00
Travelling Advance	289,911.00	269,027.00	296,549.00	240,201.00	240,201.00
Travelling Exps.	25,534.00	2,160,180.00	36,747.00	936,491.00	936,491.00
U.G.C. Grants	10,275,000.00	0.00	29,025,000.00	0.00	0.00
U.G.C. Grants for E- Subscription	1,296,000,000.00	638,117,714.00	221,050,000.00	216,677,964.00	216,677,964.00
U.G.C. Grants for North Eastern Region	0.00	3,811,842.00	0.00	4,418,597.00	4,418,597.00
U.G.C. Grants for Bulding	66,242,000.00	0.00	31,750,000.00	0.00	0.00
University of Hyderabad	1,754,275.00	141,249.00	1,810,500.00	1,668,285.00	1,668,285.00
U.G.C. INFONET	150,000,000.00	86,083,063.00	100,000,000.00	124,475,359.00	124,475,359.00
U.G.C. INFONET(Training)	0.00	0.00	0.00	200,000.00	200,000.00
University of Delhi	1,303,000.00	102,351.00	1,264,895.00	1,200,649.00	1,200,649.00
Vehicle Hire Charges	0.00	533,738.00	2,304.00	531,891.00	531,891.00
Vehicle Insurance Exps.	0.00	12,798.00	0.00	16,972.00	16,972.00
VIT University	1,810,080.00	1,704,831.00	0.00	0.00	0.00
BALANCE	2,849,976,105.40	2,849,976,105.40	1,065,909,671.19	1,065,909,671.19	1,065,909,671.19



Information and Library Network Centre

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