

*Published in proceedings of National Conference on Digital Library and e-Theses (NCDLET 2005) held on January 7-8, 2005 at Jadavpur University, Kolkata*

## **UGC-INFLIBNET INITIATIVES IN E-JOURNAL CONSORTIA AND DIGITAL LIBRARY OF DOCTORAL THESES FOR INDIAN UNIVERSITIES**

**T. A. V. Murthy**  
**V. S. Cholin**  
**J. K. Vijayakumar**

INFLIBNET Centre, An IUC of University Grants Commission  
PB 4116, Navrangpura, Ahmedabad – 380 009  
<http://www.inflibnet.ac.in>

### **0. INTRODUCTION**

Information and Library Network (INFLIBNET) is an autonomous inter-university centre of the University Grants Commission (UGC) located at Gujarat University Campus, Ahmedabad. It is directed towards modernization of libraries and information centers for information transfer and access, to support scholarship, learning and academic pursuits by establishing a national network of libraries and information centres in universities, institutions of higher learning and R & D institutions in India. It is basically a co-operative endeavour in resource development, sharing and its utilization at national level. Since May 1996 it is an independent autonomous Inter-University Centre under UGC, and it is set out to be a major player in promoting scholarly communication among academicians and researchers in India.

### **1. UGC-INFONET – E-JOURNALS CONSORTIUM**

The University Grants Commission (UGC) has initiated a programme to provide electronic access over the Internet to scholarly literature in all areas of learning to the university sector in India. The programme is wholly funded by the UGC. All universities which come under UGC's purview will be members of the programme, and it will gradually be extended to colleges as well. The programme is being executed by Director, Information and Library Network (INFLIBNET) Centre, Ahmedabad which is an autonomous institution under the UGC. Access to various E-Journals has started from January 1, 2004.

The programme will increase in a very fundamental way the resources available to the universities for research and teaching. It will provide the best current and archival periodical literature, from all over the world, to the university community. The programme will go a long way in mitigating the severe shortage of periodicals faced by university libraries for many years, due to the ever widening gap between the growing demand for literature, and the limits of available resources.

The E-Journals programme is a cornerstone of the UGC-INFONET effort, which aims at addressing the teaching, learning, research, connectivity and governance requirements of the Universities. The E-Journals programme demonstrates how communication networks and computers can be used to stretch and leverage available funds in furthering these aims. The programme has been made possible due to the close and understanding cooperation between the UGC, ERNET, the Inter-University Centres IUCAA, INFLIBNET and CEC, and national and international publishers.

## 1.1 CONSORTIUM

The consortium will cover all the universities in India which come under the purview of the UGC, and will gradually be extended to the colleges as well. The first phase of the programme covers more than 50 universities and additional 40-50 universities join the program from August 2004 with actual subscription starts from September 2004 at a much cheaper cost as the major cost was paid for the first 50 universities. The UGC provides funds for the programme, which will be cost free for the universities.

## 1.2 COVERAGE

The E-Journals programme aims at covering all fields of learning of relevance to various universities including:

- Arts, Humanities and Social Sciences
- Physical and Chemical Sciences
- Life Sciences
- Computer Science, Mathematics, Statistics

The literature made available will include journals covering research articles, reviews and abstracting databases. Access is provided to current as well as archival literature. Portals are provided which will enable users to navigate easily through all the literature that is made available.

## 1.3 OPERATION

INFLIBNET administer and monitor the programme and have independent electronic access to all the publications to help with the process. It will be provided one free print copy of each journal from many publishers, which can be a national repository at Ahmedabad on the Gujarat University Campus. A web site has been created to provide all needed information to consortium members about the status of the programme at <http://web.inflibnet.ac.in/econ/index.htm>. INFLIBNET conduct various training programmes at different places to spread awareness and to develop expertise in the university community in the use of E-Resources. Special training programmes, seminars are conducted on different University campuses by publishers of complex databases.

## 1.4 CURRENT STATUS

As of now agreements have been reached with the following publishers and **UGC-Infonet E-Journals Consortium** subscribes to:

<b>Name of the Publisher</b>	<b>No. of Journals / Database</b>	<b>No. of Universities</b>
1. American Chemical Society	31	50
2. Royal Society of Chemistry	23 Journals + 6 Databases	50
3. Chemical Abstracts Services (Sci-finder Scholar)	One Database	10
Chemical Abstracts – STN service	One Database	100
4. Nature Publishing Group	One Journal	50

5. Institute of Physics Publishing (IOPP)	36 Journals	50
6. Cambridge University Press	72 Journals	50
7. Project Muse	222 Journals	50
8. Biological Abstracts – BIOSIS	One database	50
9. Encyclopedia Britannica	National site Licensing	All academic Institutions
10. JSTOR – Archival Access	317 Journals (Arts & Science I & II, III including Languages & Linguistics)	24
11. American Institute of Physics	19 Journals including AIP society package-II titles	50
12. American Physical Society	8 Journals	50
13. Science Online	One Journal	50
14. Springer and Kluwer Publications	Subscriptions to 200 Journals but the access for all 1200 Journals in the initial one year	50 + 50 Universities will have trial access
15. Elsevier Science-Life Sciences	34 Journals in current trends, opinions, cell press	50
16. Emerald Library Science Collections	28 Journals	30
17. Annual Reviews	29 Journals	50
18. Gateway Portals	Cover more than 10,000 journals up to abstract level	56 universities for one year

From January 2005, remaining universities are provided access to e-Journals and access to new titles from Cambridge University Press Humanities and Social Science, Taylor and Francis all titles, MathSciNet database and Portland Press collections. Discussions are in progress with several other publishers and their publications are expected to become available in stages. Number of user awareness training programs have been conducted at more than 35 universities and the national seminars are conducted at different regions.

### 1.5 E- JOURNAL PRINTS GATEWAY ARCHIVAL LIBRARY

The INFLIBNET Library has also maintaining a National Archive for the print version of e-journals subscribed under UGC-Infonet in its “E-Journal Gateways and Archival Library”. Archiving a vital part of the post production work flow process allows uncommitted projects to be saved for future use ensuring that they can be revisited without having to redo the whole post production process, saving time and effort. The intention of Archiving is preservation and they remain accessible even as technology changes. It has to be flexible to adopt the new technological generations. The need for providing guidance and assistance on creation, maintenance, use and deposition of e-journal archiving is the need of the hour. The responsibility of archiving printed journals lies with the libraries. Further, the related issues like security, mirror sites and CDs are also a kind of new archiving methods that are adopted with the help of technology. The Librarians have to adopt new ventures of forming consortia for this purpose. With the above venture the INFLIBNET Library is maintaining a National Archive. The journals are received from the publisher like The Royal society of chemistry (RSC) The Institute of Physics (IOP) and Cambridge University Press (CUP). You can access this database on your desktop by using the web-site

## **1.6 FUTURE PLANS**

Many more resources will be made available to the universities through a continuous process which will bring in literature covering an ever increasing number of fields from a wide range of publishers all over the world. Programmes will be initiated to digitise and make electronically accessible literature which is present only in the print form, often unpublished, in various institutes and universities in India. Appropriate packages of the literature will be developed for use by students and teachers in various colleges. The community of teachers, library professionals and students from the university system will be consulted on a continuing basis in the development of the programme so that it remains up to date and useful. Several national seminars, workshops, users awareness training programs are planned. Centre has already conducted specialized programme on access to Chemical Abstracts using STN with the support of different universities through which the chemical abstracts access is given to all the universities having departments in chemistry and allied subjects. The program is being extended to colleges from this year and subcommittee is working on the modalities of providing e-journal access. This will be started on a pilot basis for 200 colleges very soon.

The UGC-Infonet is a major initiative of University Grants Commission (UGC) to make use of the benefits of Information and communication Technology (ICT) to all the universities and colleges across the country. Under this program the universities have been provided connectivity with the assistance of ERNET. INFLIBNET Centre is a nodal agency to monitor, decide, the connectivity and provide content over the network. Universities have been provided the bandwidth ranging from 128 Kbps to 2 Mbps depending on the perceived needs of the specific university and the infrastructure available. Recently it was decided to increase minimum bandwidth to 256 KBPS for small universities and upto 2 MBPS based on the actual usage. More than 115 universities have already got the connectivity under the scheme during the last one year.

## **2. UNION CATALOGUE OF DOCTORAL THESES AT INFLIBNET**

Development of Union databases of Indian University Libraries is one of the major activities of INFLIBNET and participating Universities are supposed to provide the Data to INFLIBNET as per the MoU signed. As per UGC-INFLIBNET Programme, 142 Universities are funded for creation of databases of doctoral theses along with Books and Serials collection available in each University, as per the MoU. For meeting the objective of database creation, a separate specialized database management group, comprises of experts from computer and library sciences, is exclusively working since its inception. The group has succeeded in creating and hosting Books database (around 26.5 Lakhs records), Theses Database (around 1.5 Lakhs records ), Serials Database(around 22,000 records). These databases are constantly updated with the contribution from participating Universities and made available on the website <http://www.inflibnet.ac.in> for free access. In this regard, an online database of doctoral Theses awarded by Indian Universities is created by INFLIBNET.

### **2.1 HIGHLIGHTS OF DOCTORAL THESES DATABASE**

After receiving the data of doctoral theses from Universities, it is validated with INFLIBNET Standard Guidelines formulated based on UNESCO's Common Communication Format (CCF), which was suggested by the experts committee of INFLIBNET Programme constituted by UGC. Validated data is used for compilation of cataloguing information of doctoral theses at INFLIBNET, so that submission of cataloguing information in a standardized and accepted format is entered into the centralized database for online access.

The highlights of the efforts are given below;

- The development has initiated in **1994**.
- It contains the record starting from the year **1905**.
- It covers **Doctoral Dissertations**, i.e., Ph Ds.
- It contains **metadata of 1,50,000+** (more than 1.5 Lakhs) unique bibliographic records.
- It contains records from all **subject areas**.
- Data has been contributed / collected by / from **more than 200 universities/institutions** from all over India, since its initiation.
- Participating libraries are sending the records in electronic format (ISO).
- Direct data entry at INFLIBNET from the following sources.
  - 1- Theses of the Month column of AIU “University News”(Weekly).
  - 2- AIU Bibliography of Doctoral Dissertations from beginning to 1991 (Stopped).
  - 3- Data collected in hard copy from universities.
  - 4- Official Communication from Registrars/Controller of University.
  - 5- Personal communication from University Academic Department and individual Faculty Members.

The concept of METADATA and Catalogue are used in context with the type of item to be described. The idea of Catalogue was introduced especially for the printed items without taking care of electronic form. Union catalogue of Doctoral Theses created by INFLIBNET has already mapped the important description of Metadata based on ETD-MS Metadata elements. INFLIBNET is maintaining this Metadata of Indian Ph D Theses since 1994 (last 10 years), which can easily transponder to any Meta Data standards like ETD-MS, Dublin Core, MARC 21 etc and can be used for Retrospective conversion of Metadata.

### **3. DIGITAL LIBRARY OF INDIAN THESES AND DISSERTATION: THE NEXT STEP**

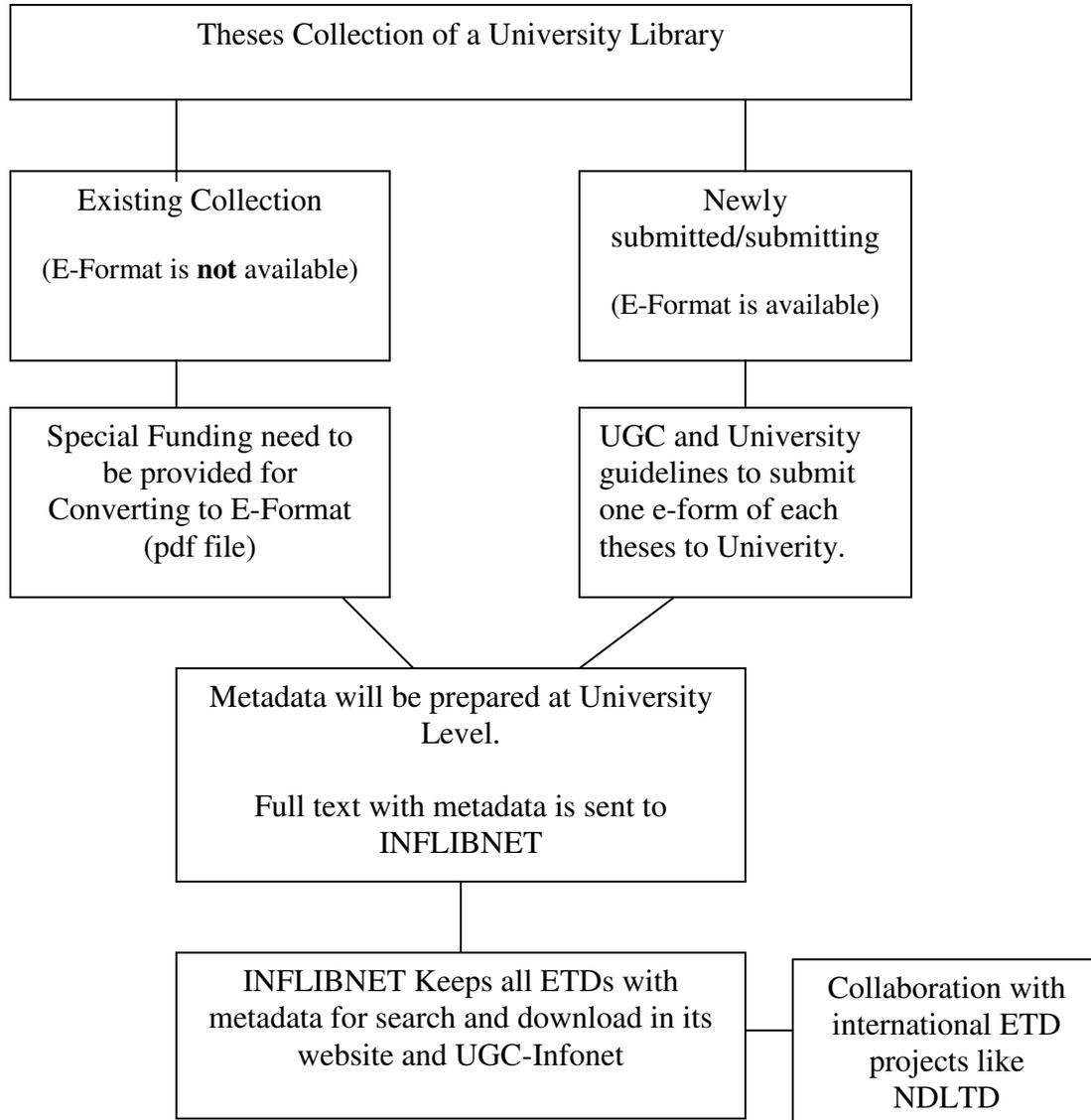
As part of ongoing international efforts to construct a networked digital library of theses and dissertations, Indian University Libraries can also develop a digital library for Electronic Theses and Dissertations (E T Ds). This can be done in two ways. While E T Ds are owned and maintained by the institutions at which they were produced or archived, it is possible to give searchers the appearance of a single collection by gathering all the metadata (title, author, etc.) into a central search engine. Then, when a potentially relevant document is found, the user will be redirected to the institution that contains the actual document.

UGC’s new initiative **UGC Infonet** will have a data center with large server capacity is being set up, where content of common interest can be maintained. This repository will host e-resources like e-journals, e-books etc for the fair use of Indian academic and research community. Digital content like E-Theses can be well maintained in this server, which can be well maintained by INFLIBNET for the better use. This will definitely serve the UGC’s objective to make UGC-Infonet as the online education repository and promoting scholarly publication and communication.

The open source system, **DSpace** developed by MIT and HP can be used for creating E-Thesis repositories in all Universities and at National Centre. Through this system, Metadata can be filled-in by researcher or university library staff, and the forms can be fixed according our choices. DSpace is being used for E-Thesis repositories in various universities and organizations worldwide. INFLIBNET already implemented this system for its institutional repository (visit

<http://dspace.inflibnet.ac.in>) and started popularizing this software through various training programmes. Our expertise can be utilized for creating E-Thesis repositories at University level and create a national level repository at UGC-Infonet or INFLIBNET.

Figure: Two Parallel Components of Proposed ETD System



The idea of E- Theses and Dissertations (ETD) is coming up in International scenario, which can be delivered over the web. In India also, most researchers are already writing their theses in electronic format using standard word-processing, desktop publishing and graphics software. A plan for creating a digital library for Indian Doctoral Theses with two parallel components (see the figure 1), such as the digitisation of theses as part of the normal University submission process, and the digitisation of a selected number of frequently requested existing theses could be considered. As the first step, we can seek the electronic format of theses from different universities, while researchers submitting them. The same format can be put in website in pdf format with a Metadata index to the full text. Eventually this will become one of the world's largest digital libraries of theses (ETD), where the effort will be in format changing, indexing and hosting.

Since a few universities have got the facilities to host the e-content through their websites it will be better to hold the full text with INFLIBNET. Theses in e-form can be sent to INFLIBNET, where it can host them, and allow users to browse through and download them. INFLIBNET has already hosted an online database of Theses containing around 1.5 lakhs of bibliographic records of Ph Ds submitted to Indian Universities. Full text of existing theses collection can also be made available by converting them in to digital form. Metadata will be centralized in a common database at the coordinator institution site where, *ETDs will be accessed through a single-web gateway, ie, INFLIBNET at UGC-Infonet.*

## **CONCLUSION**

Keeping in view the above facts and experience in creating union catalogue, INFLIBNET may be considered as the centralized agency to implement the framework regulations in technical and data standards forms and formats required etc. We have already included **Electronic Theses** as a part of our various training programmes at INFLIBNET and popularizing the concept of e-publication of theses at Universities. It is a matter of fact that a lot of Indian universities already started collecting electronic form of thesis submitted to respective universities for archiving purposes. INFLIBNET as a body of UGC has the responsibility for helping them in creating repositories of e-theses and provide wide availability of Indian research.

*Published in proceedings of National Conference on Digital Library and e-Theses (NCDLET 2005) held on January 7-8, 2005 at Jadavpur University, Kolkata*