

# **Expanding Digital Footprints**

## **Role of Libraries & Information Centres**

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**The Power of Many  
The Power of Partnerships**

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# Consortia Based Resource Sharing for DBT Institutions in India: A Developmental Perspectives of DeLCON Consortium

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## Abstract

The approach of library consortia to serve the library users is a positive trend. However, there are some issues related to library consortia that need to be addressed. Libraries are now being challenged by a new atmosphere, which demands alteration in their style of operation, efficiency and attitudes towards new information handling. Because of exponential growth of published documents and budget cuts, no library is self-sufficient to procure all the information, which may be demanded by its users. It is not possible to meet the required demands of all the clientele from the stock of information of a particular library. This paper attempts to highlight how the Department of Biotechnology (DBT) taken initiatives for formation of a library consortium i.e. DeLCON. The consortium helps libraries in overcoming the fund crunch. Further, study also discusses that how the DBT Institutions benefited with the Resources Sharing & Networking through Consortium.

## 1. What is Consortium

A group formed to undertake an enterprise beyond the resources of any one member. Basically, a consortium means group of libraries coming together with common interest. One of the libraries or agencies works as coordinator for: identification of libraries for each publisher, negotiation, legal matters etc. The aim of consortia is to achieve the goal which the individual member of the group cannot achieve it. Oxford Advanced Learner's Dictionary describes 'Consortium' as "A group of People, Countries, Companies etc who are working

together on a particular project". A consortium is said to be a cooperative arrangement among groups or institutions or an association of society. Consortia are commonly formed to increase the purchasing power of the collaborating institutions to expand the resource availability and to offer automated services

## 2. Library Consortium

It is a cooperative association of Libraries. Its purpose is to share human and information resources so that the collective strengths of the organizations enable the research and learning of the

members constituents. A consortium supports resource sharing and offers services to users through programmes in cooperative acquisition, access to electronic resources, access to physical collections, improved interlibrary loan and document delivery.

The 'Library Consortia' is a community of value creating entities, producing value through an aggregation of library units within and across Institutions. The value creation could be enhanced through resource sharing processes, products and service offering of the participating library units in a consortium.

### 3. Need for Consortium

With the information revolution brought about by development of Internet and World Wide Web, libraries at all levels graduated themselves from traditional storehouse of information to information providers. Users were beginning to expect speedy delivery of their requests in full text. User expectations rose with the enhancement of technological changes that occurred. Libraries had to meet these users' requirements with advanced capabilities of fall by the wayside. The financial limitations forced libraries to provide the scholarly publications cooperatively. This gave rise to resource sharing and providing services through a common gateway. These are the major reasons for the need of Library Consortium :

- ❖ The annual cost of information access is still rising with limited budget.
- ❖ To maximize the opportunities for comparative collection building and for resource sharing over the long term
- ❖ Consortia make the library services easier to accommodate the use levels for the different groups

4. Consortia help to achieve greater value for money by purchasing the titles that receives actual use.

### 4. Advantages of Consortium

- ❖ It provides each organization with the ability to share resources without sacrificing the individuality of each member library
- ❖ The collection of the consortium libraries enable each member library to support scholarly research for its users
- ❖ Cooperative research and growth in application of information technology improves service and realizes cost efficiencies.

❖ Staff growth and interaction improves the quality of service

❖ By forming a consortium reduction in cost is achieved. The consortium acts as an agent for all member libraries and negotiates a purchase price that is lower than that available to any individual institutions. Thus as a result end user can gain the benefits of more resources than would be available through one library.

❖ Improved library services are provided with an emphasis on access to new electronic resources including databases and services offered through the internet and world wide web.

❖ Expediting inter library borrowing at lower cost is possible.

❖ Uncertainties in legal issues are handled with more confidence.

### 5. Resource Sharing and Networking

Resource sharing is defined in the Glossary of Library and Information Science

as a broader term covering a variety of activities engaged in joining by a group of libraries for the purpose of improving services and / cutting budgets. Resource sharing & Networking may be taken up by formal or casual agreement or by contract at a local, regional, national and international scale. The resource shared may be physical documents, online/web resources, bibliographic data, people, processes, technology, network, etc. The organizations or departments in resource sharing process from the consortia networks. The consortia networks share common objectives, processes and systems for the common benefits.

The eSS consortium currently providing access to current and archival 15,000 e-journals and databases and extending the benefit to 139 - State universities, 40 - central universities, 22 -deemed universities, 15 - law universities, 6 of IUCs of UGC, 72 - AICTE funded colleges, 4000 colleges and IITs, IIMs, IISc etc. Available in the e-Shodh Sindhu Collection 135000 E -Books, 40 Resources, 16 databases and 15000+ Electronic resources.

Other than these at present, there are many Consortium working at national level (e.g. NKRC-CSIR (National Knowledge Research Consortia) Consortium, DAE (Department of Atomic Engineering) Consortium, DRDO Consortium, DeLCON Consortium, HELINET (Health Sciences Library and Information Network) Consortium, FORSA Consortium for the Astronomy & Astrophysics Library, MCIT (Ministry of Communication and Information Technology) Library Consortium, ISRO (Indian Space Research Organization) Consortium, ERMED Consortium, CeRA Consortium, Rajiv Gandhi University of Health Sciences and the ICICI etc.). A number of regionally focused (some as in metropolitan areas e.g. ADINET in Ahmedabad, and PUNENET

Library

Now, the latest and biggest Consortium is e-Shodh Sindhu, which was formed by Ministry of Human Resources and Development (MHRD) with merging of these major consortia initiatives, namely UGC-INFONET Digital Library

in Pune) and city level consortia are also slated to emerge, having been convinced of the success rates of the ongoing library consortia in the Country.

#### 7. Introduction about DeLCON Consortium

The Department of Biotechnology (DBT), under the Ministry of Science and Technology in 1986 gave a new motivation to the development of the field of modern biology and biotechnology in India. In more than a decade of its existence, the department has encouraged and enhanced the pace of development of biotechnology in the country. Through several R&D projects, demonstrations and formation of infrastructural facilities a clear visible impact of this field has been seen. The department has made substantial accomplishments in the growth and application of biotechnology in the broad areas of agriculture, health care, animal sciences, environment, and industry.

To meet the increasing R&D information needs of the DBT Institutes, the DBT's Electronic Library Consortium (DeLCON), a major project of the Department of Biotechnology (DBT) to bring qualitative change in its research institutions was launched in January 2009. It is a national initiative for providing access to scholarly electronic resources including full-text and bibliographic databases in all the life science subject disciplines to DBT organizations in the country to improve teaching, learning and research.

The access to all major e-resources was given to 10 DBT Institutions in the beginning of the year 2009. It was extended to 17 more DBT Institutions in the 2<sup>nd</sup> phase in the year 2010 and another 7 members were added in the 3<sup>rd</sup> phase the year 2011.

The DeLCON provides current as well as archival access to more than 1171 core and peer-reviewed journals in different disciplines from 21 publishers and some of aggregators.

The DeLCON Consortium provides integrated library services and facilitate other cooperative projects that yield excellent quality and value to its members. The DeLCON consortium continuing to strive to bring together a partnership of DBT Institutional libraries of all types to enable patrons to access and obtain high quality information resources they need to enhance and enrich their lives. The DeLCON consortium also continuing to bring new technologies, new services, and new resources to its member libraries to enabling the communities that they serve to achieve their economic, educational, and cultural goals. The DeLCON patron's demands are more efficient, easy to use resources and services. The DeLCON consortium experiments with new models of service and resources in response to that need and to keep pace with the ever changing technology in the library environment.

#### 8. Objectives of DeLCON

The main objective of the DBT's e-Library Consortium (DeLCON) is to provide access to qualitative electronic resources including full-text and bibliographic databases to DBT institutions at a lower rates of subscription. The major aims and objectives of the DBT's e-Library Consortium (DeLCON) are as follows:

- ❖ To provide access to a high-quality and scholarly electronic resources to a large number of DBT institutions including research Institutions, universities and colleges at substantially lower rates of

subscription and at most favorable terms and conditions;

- ❖ To promote rapid and efficient access to scholarly content to the users and to create and promote use of DeLCON in teaching and learning in research organizations, universities, and colleges in India;

- ❖ To extend the benefit of Consortium to its associate members

- ❖ To impart training to the users, librarians, research scholars and faculty members of the institutions in use of electronic resources with an aim to optimize their usage;

- ❖ To promote use of e-resources with gradual decrease in print subscription;

- ❖ To promote interaction and inter-library cooperation amongst the participating DeLCON members;

- ❖ To evaluate the usage of the subscribed resources and to identify new resources that are required to be subscribed under the DeLCON Consortium;

- ❖ To bring qualitative change in teaching, learning and research with an aim to meet the ever growing challenges of globalization of higher education; and

- ❖ To increase the research productivity of the institutions both in terms of quality and quantity of publications

#### 9. Concept of DeLCON Consortium & Initiatives

The concept of DeLCON (DBT Electronic Library Consortium) originated in a "DBT Director's Meeting" of DBT held at "Rajiv Gandhi Centre for Biotechnology (RGCB), Thiruvananthapuram" in the

month of 'January 2008'. The NBRC approached to Directors of all DBT institutions requested them to provide the inputs on list of journals subscribed currently and also required journals.

#### 10. Formation of DeLCON Consortium

It was indeed a herculean task for the National Brain Research Centre (NBRC) to constitute a National Level Library Consortium in the field of Life Sciences & Biotechnology but the Challenges was accepted by the National Brain Research Centre (Nodal Centre) in the year 2008 and successfully implemented and made it functioning in the year 2009.

All the DBT Institutions (at that time 09 DBT Institutions) had provided the inputs regarding their subscribed Journals and their required Journals. Based on the inputs of subscribed Journals and desired Journals, NBRC (Nodal Centre) had compiled a 'Union Catalogues' and 'shorted' it on 'publishers wise' and then asked the proposals from the Publishers.

The publishers have submitted their proposals for the 'Biotech Consortium' for 09 DBT Member Institutions (including DBT H.Q.) in the month of May-June 2008. The 'International Centre for Genetics and Engineering Biotechnology (ICGEB)' then approached to the DBT and shown the interest to be a part of 'Biotech Consortium'. Now, the DBT had requested NBRC to include the ICGEB also as another member of the Biotech Consortium and now the members were becoming 10 members.

The NBRC has again approached to the publishers and wrote them to include the ICGEB as a member for the 'Biotech Consortium' further the name changed as "DBT's Electronic Library Consortium (DeLCON Consortium). All the publishers

have revised their proposals for 10 members and provided the revised proposals including 'consortium discount'.

A total consolidated list was then compiled by the NBRIC. In month of March, April, 2008, quotations were invited from 19 publishers for 708 journals and databases (636 online journals, 71 e-books and 1 SCOPUS Data base). The initial received quotations were then forwarded to DBT for review. It was clearly mentioned the following points :

1. The Journals needed to be examined on the basis of requirement, utilization and budget.
2. Prices had to be re-negotiated with the publisher.

The DBT had constituted a negotiation committee comprising 8 members (including Consortia experts) from various Institutions in the year 2008.

The committee discussed the pattern of fund sharing by the institutions for the consortium and recommended that the institutions shall share the expenditure in proportionate to their annual budget allocation by the DBT. These shared funds would be pooled by DBT and released as one sanction to the coordinating institute every year. This budget sharing model has also been agreed by the Director's Meeting held at National Institute of Immunology in the year 2008, which was chaired by Secretary, DBT.

The Department of Biotechnology (DBT), Ministry of Science and Technology, Government of India launched its e-Library Consortium in January 2009 and it has been functioning quite well. The consortium commenced with 10 DBT core research institutions including DBT (HQ) and

ICGEB, New Delhi in the year 2009. The aim of DeLCON is to maximize access to a large number of high impact 'Life Science' journals to the Scientist in the member institutions.

The 'DBT's Electronic Library Consortium (DeLCON)' is major project of the 'Department of Biotechnology (DBT)' to bring qualitative change in their research Institutions. It was launched in January, 2009 with the 10 DBT member Institutions (including DBT H.Q. & ICGEB) with a large number of high impact online journals. It is a national initiative for providing access to scholarly electronic resources including full-text and bibliographic databases in all the life science subject disciplines to DBT Institutional community. It facilitates access to high quality e-resources to DBT research Institutions in the country to improve teaching, learning and research.

#### 11. Main Advantages of 'DeLCON Consortium'

Some of the important advantages of the DeLCON consortium are as follows :

- ❖ Consortia-based subscription to electronic resources provides access to wider number of electronic resources at substantially lower cost;
- ❖ Optimum utilization of funds.
- ❖ Facilities to build up digital libraries
- ❖ Helpful to provide better library services like CAS and SDI
- ❖ Cost Sharing for Technical and training support
- ❖ Electronic Journals demand neither library space nor shelving costs nor can they be stolen from the library
- ❖ The DeLCON consortium have been offered better terms of licenses for use, archival access and preservation of

subscribed electronic resources, which would not have been possible for any single institution; and

- ❖ Available 24 hours a day, 7 days a week i.e. called 24x7 access

- ❖ Economy in maintaining

#### 12. Necessity and Purpose of DeLCON Under DBT Institutions

Thorny problems like shrinking budgets, growing patron needs, increasing costs of books and periodicals led to the crystallization of such a concept for the Library & Information Systems. The primary aim of Library Consortium is to share information resources, which means the Books, Periodical, e-journal, e-books so and so forth. Advances in Computer, information and telecommunication technologies have revolutionized the way in which information is acquired, stored, accessed and transferred. Sharing electronic resources has rapidly become another important goal for library consortia.

Users of Library and Information Services Systems of life sciences & biotechnology are widely spread throughout India and located in different locations. A number of research and development works are going on regularly and the users requires a daily updates. However, they get the information after a big gap of time in the hard copy form.

#### 13. Salient Features of DeLCON Consortia

The consortia-based subscription to e-resources is a viable solution for rising the access to electronic resources across DBT institutions at a lower rate of subscription. Major benefits of DeLCON Consortium are as follows:

- ❖ The DeLCON Consortium acts as a single-window service for a large number of DBT Institutions with their diverse research and academic interest;
- ❖ The DeLCON Consortium, with its collective strength of participating institutions, attracts highly discounted rates of subscription with most favourable terms of agreement for a wider range of e-resources. Most of the e-publishers have responded positively to the call of the Consortium. The rates offered to the consortium are lower by 60% to 99% depending upon the category of DBT institutions;
- ❖ The DeLCON Consortium is expected to trigger remarkable increase in sharing of electronic resources amongst participating DeLCON members
- ❖ The research productivity of DBT institutions is expected to improve with increased access to international full-text resources (Journals and database);
- ❖ Users have immediate access to material previously not subscribed to, at no incremental cost for accessing back files;
- ❖ It improves the existing library services and reduced the subscription cost;
- ❖ The DeLCON Consortium has been opened-up to add more DBT institutions through its next phase of extension and other DBT institutions can also join the DeLCON Consortium and get the benefit of not only highly discounted rates of subscription but

also the favourable terms and conditions;

- ❖ The DeLCON Consortium is offered better terms of agreement for use, archival access and preservation of subscribed electronic resources, which would not have been possible for any single institutions;
- ❖ Members of the DeLCON Consortium have the benefit of cap on the annual increase in the rates of subscription. While the usual increase in price of e-resources vary from 15 % to 20%, but the DeLCON consortium members enjoys the cap on increase in price ranging from 3% to 5%; and
- ❖ Since the subscribed resources is accessible online in electronic format, the DBT institutions have less pressure on space requirement for storing and managing print-based library resources. Moreover, all problems associated with print media such as their wear and tear, location, shelving, binding, organizing, etc. are not an issue for electronic resources.

#### 14. Growth of DeLCON Consortium and its Member Institutions

The 'DBT's Electronic Library Consortium (DeLCON)' is major project of the 'Department of Biotechnology (DBT)' to bring qualitative change in their research Institutions. It was launched in January, 2009 with the 10 DBT member Institutions (including DBT H.Q. & ICGEB) with a large number of high impact online journals. It is a national initiative for providing access to scholarly electronic resources including full-text and bibliographic databases in all the life science subject disciplines to DBT Institutional community. It facilitates access to high quality e-resources to DBT research

Institutions in the country to improve teaching, learning and research.

The access to all major e-resources was given to 10 DBT Institutions in the beginning of the year 2009. It was extended to 17 more DBT Institutions in 2<sup>nd</sup> phase of extension in this year 2010 and further 07 members added in the 3<sup>rd</sup> phase of extension in the Year 2011. The 'DeLCON Consortium' provides current as well as archival access to more than 1171 core and peer-reviewed journals and one bibliographic database (SCOPUS Database) in different disciplines from 21 Foreign publishers and some of aggregators.

The Faculties, Scientists, Research Scholars, Students and Project Assistants of Institutions covered under DeLCON are the primary beneficiaries. DBT sponsored the entire expenses for DBT organizations for providing e-Journals access through 'DeLCON Consortium'.

The DeLCON comprises the currently following 34 Member Institutions which the phase wise details are given below :

#### 14.1 DeLCON Members Phase-Wise:

##### DeLCON Member (2009) as Phase - I

- ❖ National Brain Research Centre (NBRC), Manesar
- ❖ Department of Biotechnology (DBT), New Delhi
- ❖ National Institute of Plant Genome Research (NIPGR) - New Delhi
- ❖ National Institute of Immunology (NII) - New Delhi
- ❖ National Centre for Cell Science (NCCS) - Pune
- ❖ Institute of Life Sciences (ILS) - Bhubaneswar

- ❖ Institute of Bioresources and Sustainable Development (ISBD) - Imphal
- ❖ Centre for DNA Fingerprinting and Diagnostics (CDFD) - Hyderabad
- ❖ Rajiv Gandhi Centre for Biotechnology (RGCB) - Thiruvananthapuram.
- ❖ International Centre for Genetics and Engineering Biotechnology (ICGEB), New Delhi

#### 14.2 DeLCON Members (2010) as Phase -II

- ❖ The Wellcome Trust-DBT India Alliance, Hyderabad (further excluded in the year 2011)
- ❖ Dibrugarh University (DU), Assam
- ❖ Assam University (AU), Silchar
- ❖ North Eastern Regional Institute of Science & Technology (NERIST), Arunachal Pradesh
- ❖ North East Institute of Science & Technology (NEIST), Assam
- ❖ Mizoram University (MizU), Mizoram
- ❖ D.M. College of Science (DMC), Manipur
- ❖ Sikkim University (SU), Gangtok
- ❖ College of Veterinary Science, Assam Agricultural University (CVSAAU), Guwahati
- ❖ St. Anthony's College (SAC), Meghalaya
- ❖ Biotechnology Industry Research Assistance Program (BIRAP), New Delhi
- ❖ Gauhati University (GU), Assam
- ❖ Manipur University (ManU), Imphal
- ❖ College of Veterinary Science & Animal Husbandry Central

- ❖ Agricultural University (CVSAHCAU), Mizoram
- ❖ Rajiv Gandhi University (RGU), Arunachal Pradesh
- ❖ Nagaland University (NU), Nagaland
- ❖ North-Eastern Hill University (NEHU), Shillong

#### 14.3 DeLCON Members (2011) as Phase-III

- ❖ Indian Institute of Technology Guwahati (IITG), Guwahati, Assam
- ❖ National Agri-Food Biotechnology Institute (NABI), Mohali, Punjab
- ❖ National Institute of Biomedical Genomics (NIBHG), Kalyani, Kolkata
- ❖ Regional Centre for Biotechnology (RCB), Gurgaon
- ❖ Tezpur University (TU), Tezpur, Sonitpur, Assam
- ❖ Transnational Health Science & Technology, Institute, Gurgaon
- ❖ Sikkim State Council of Science and Technology (SSCST), Gangtok, Sikkim

#### 14.4 DeLCON Members (2012) as Phase-IV

- ❖ National Institute of Animal Biotechnology (NIAB), Hyderabad
- In the year 2012 all the phases were merged and the total participating members were 34 Member Institutions.
- In terms of number of users, the DBT's Electronic Library Consortium (DeLCON) is the largest Consortium in India constituted in the area of Biotechnology and life sciences with a vision and plan to reach out to all DBT Institutions departments, Research Institutions, Universities, and their colleges affiliated to the DBT, over a period of time.



### 15. Coverage of DeLCON Consortium

The DeLCON Consortium subscribes to e-resources covering all most important Life Science & Biotechnology subject discipline being taught in the DBT research Institutions, Universities & Colleges. It includes wide variety of materials e.g. e-journals, bibliographic databases, reviews published by scholarly societies, university presses, institutional and commercial publishers. The DeLCON Consortium subscribes to 1171 full-text e-resources and 01 bibliographic database from 21 renowned foreign publishers and some of aggregators. The member institutions are provided differential access to these resources based on their needs and activity profile as per the recommendation of the National DeLCON Steering Committee.

The complete list of full-text resources (e-journals) and bibliographic databases

Table 1. List of Covered Journals under DeLCON Consortium

Sl. No.	Name of Publishers / Journals	Hyperlink of the publishers	No. of Journals
1	American Association for Advancement of Science (AAAS)	<a href="http://www.sciencemag.org">http://www.sciencemag.org</a>	(3 Journal)
2	American Association for Cancer Research (AACR)	<a href="http://www.aacr.org">http://www.aacr.org</a>	(9 Journals)
3	American Chemical Society (ACS)	<a href="http://pubs.acs.org">http://pubs.acs.org</a>	(47 Journals)
4	Annual Reviews (AR)	<a href="http://www.annualreviews.org">http://www.annualreviews.org</a>	(23 Journals)
5	American Society for Biochemistry and Molecular Biology (ASBMB)	<a href="http://www.jbc.org">http://www.jbc.org</a>	(2 Journal)
6	American Society For Microbiology (ASM)	<a href="http://www.asn.org/">http://www.asn.org/</a>	(17 Journal)
7	Cold Spring Harbor Laboratory Press (CSHL)	<a href="http://www.cshl.edu">http://www.cshl.edu</a>	(4 Journals)
8	Informa Healthcare / (INFORMA HC)	<a href="http://www.informaworld.com">http://www.informaworld.com</a>	(40 Journals)
9	Lippincott William & Wilkins/ Wolter Kluwer / OVID	<a href="http://ovidsp.ovid.com">http://ovidsp.ovid.com</a>	(11 Journals)
10	Marry ANN Liebert (MAL)	<a href="http://www.liebertonline.com">http://www.liebertonline.com</a>	(92 Journals)
11	Nature Publications	<a href="http://www.nature.com">http://www.nature.com</a>	(36 Journals)
12	Oxford University Press (OUP)	<a href="http://www.oxfordjournals.org">http://www.oxfordjournals.org</a>	(22 Journals)
13	Springer India	<a href="http://www.springerlink.com">http://www.springerlink.com</a>	(339 Journals)
14	Society for General Microbiology (SGM)	<a href="http://mic.sgmjournals.org">http://mic.sgmjournals.org</a>	(3 Journals)
15	American Society for Hematology (ASH)	<a href="http://bloodjournals.hematologylibrary.org">http://bloodjournals.hematologylibrary.org</a>	(1 Journal)
16	Wiley-Blackwell	<a href="http://www3.interscience.wiley.com/cgi-bin/home">http://www3.interscience.wiley.com/cgi-bin/home</a>	(84 Journals)
17	Elsevier Science (ScienceDirect)	<a href="http://www.sciencedirect.com">http://www.sciencedirect.com</a>	(432 Journals)
18	American Society of Plant Biologist	<a href="http://www.aspb.org/">http://www.aspb.org/</a>	(2 Journals)
19	American Association of Immunologist	<a href="http://www.aai.org/">http://www.aai.org/</a>	(1 Journals)
20	Scopus Database	<a href="http://www.scopus.com">http://www.scopus.com</a>	(1 Database)
21	The New England Journal of Medicine (NEJM)	<a href="http://www.nejm.org">http://www.nejm.org</a>	(1 Journal)
22	Proceedings of National Academy of Sciences (PNAS)	<a href="http://www.pnas.org">http://www.pnas.org</a>	(1 Journal)

subscribed under the DeLCON Consortium is given in Table 1.

Above Table 1 deals with the list of publishers, their link of website and their covered number of journals.

### 15.1 Subject Areas of DeLCON

The DeLCON Consortium cover-up all the disciplines and subjects coming under Life Sciences i.e. Biotechnology, Bioinformatics, Biochemistry, Biology, Chemical Biology, Sciences, Immunology, Neuroscience, Plant Genome, Plant Biology, Microbiology, Physiology, Psychology, Physiotherapy, Psychotherapy, Genome, Gene, Genetics, Mathematics, Physics, Chemistry, Radiology, Medicines, Computational Biology, Cell Biology, Cell Sciences, Molecularbiology, Molecular and Cellular Biology, Computational Neuroscience, System Neuroscience etc.

### 16. Process of Subscriptions

The electronic resources planned for subscription are recognized, proposals invited from the publishers of e-resources / their authorized representatives. Electronic publishers / their representatives are also invited for formal negotiations on their products and services. In the formative years of the DeLCON Consortium, the 'DeLCON Steering Committee' negotiates the lowest rates of subscription and favourable terms of agreement.

Negotiation for subscription to e-resources perform by a Negotiation Committee which constituted by the Department of Biotechnology (DBT) as per the purchase policies and rules.

While the DeLCON Steering Committee takes policy decision concerning inclusion of member institutions, e-resources, etc., the Negotiation Committee is accountable for negotiating rates of subscription to e-resources with different publishers for all DBT Institutions. Once e-resources and members of DeLCON are finalized, the DeLCON places order for subscription to e-resources to the publishers as per the purchase rules.

### 17. Conclusion

India is vast country with different cultures, religious, and languages, where libraries are facing the financial crunch and not able to fulfill the requirements of their own patron's and users. In the view of the budget crunch being faced by all the DBT libraries in India, the DBT has formed a DeLCON Consortium and this DeLCON Consortium has come as a significance supportive solution for the DBT Institutions.

The DeLCON Consortium is really much useful & valuable for the faculties,

scientists, researches, students and other user community of the member Institutions. All the readers & users of DBT Institutions are extremely benefitted. As it is a known fact that some of the users are unaware about resources of DeLCON Consortium, where an awareness programme must be organized. So, DBT should spread awareness in those member Institutions through seminars and conferences to make them to provide a good library environment in those Institutions. The DeLCON was constituted by DBT for the libraries of DBT institutions in India, which providing the information & resources to meet the needs of the users. Since the year 2009, the DeLCON consortium has grown in terms of the number of resources and users. The DeLCON consortium is set to grow further in the coming years and predicts catering to all the biotechnology and life science institutes in the country.

### References

- Arora, Jagdish. (2005). Managing Electronic Resources Through Consortia: An Overview: Proceeding of the National Convention on Library and Information Networking (NACLIN 2005), pp. 144-171. PES Institute of Technology. (Bangalore. August 22-25, 2005): Delnet, New Delhi.
- Arora, Jagdish, & Agrawal, Pawan. (2003). Indian Digital Library in Engineering Science and Technology (INDEST) Consortium: Consortia-Based Subscription to Electronic Resources for Technical Education System in India: A Government of India Initiative. International Caliber (2003), pp. 271-290. INFILIBNET Centre, Ahmedabad.
- Awwal, K.M. Abdul. (2008). An Initiative for Digital Resources Consortium for University Libraries in Bangladesh. 6th Convention PLANNER-2008. (p. 430-435). Nagaland University, (Nagaland 05-07 November 2008): INFILIBNET Centre, Ahmedabad.
- Babu, B. Ramesh, & Kumar, S. K. Ashok. (2004). Public Library Consortia in India. National Seminar on Library Consortia. pp. 259-266.

- (Hyderabad, 22-23 March, 2004) : Indian Library Association & Osmania University, Hyderabad. Benerjee, Alok Kr., Chakrabarti, Biplab., Majumdar & Arunabha Basu. (2009). User Awareness Programmes on Access to e-Resources, UGC-Infonet Digital Library Consortium. INFLIBNET Newsletters; 16(4), pp. 5-7.
- Bharati, M.S.Z., & Zaidi, S. Mustafa. (2008). Use of E-Journals and E-Databases of UGC-Infonet Consortium by Faculty Members and Research Scholars of Aligarh Muslim University: A Survey. 6th International CALIBER-2008, pp. 529-540. University of Allahabad, (Allahabad, February 28-29 & March 1st, 2008) : INFLIBNET Centre, Ahmedabad.
- Bhat, Jyoti, & Joshi, Nilesh. (2009). Impact of UGC INFLIBNET Digital Library Consortium to Academic Community: A Case Study of The Maharaja Sayajirao University of Baroda. 7th International CALIBER-2009, pp. 565-571. Pondicherry University, (Puducherry, February 25-27, 2009) : InfliBnet Centre, Ahmedabad.
- Bhatnagar, Anjana, Bhatnagar, Rakesh. (2004). Trends in Library Consortia of Indian Academic Libraries. National Seminar on Library Consortia, pp. 285-291. Hyderabad. (Hyderabad, 22-23 March, 2004) : Indian Library Association & Osmania University, Hyderabad.
- Chand, Prem. (2004). Consortia Model for Academic Libraries in North East Region. National Seminar on Library Consortia, pp. 15-26. (Hyderabad, 22-23 March, 2004) : Indian Library Association & Osmania University, Hyderabad.
- Chandel, A.S., Saikia, Mukesh. (2012). Challenges and Opportunities of E-Resources. Annals of Library and Information Studies, 59(3), 148-154.
- Chandran, D., Reddy, J. Yadagiri. (2004). Library Consortia and Networks. National Seminar on Library Consortia, 22-23 March, 2004. Hyderabad: 156-164. Indian Library Association & Osmania University, Hyderabad.
- Chandrasekharan, H., Patle, Sarita, Pandey, P. S., Mishra, A. K., Jain, A. K., Goyal, Shikha., Pandey, Amit, Khenchandani Usha, & Kasrija, Rajkumari. (2012). CeRA—the e-Journal Consortium for National Agricultural Research System. Current Science, 102(6) : 847-851.
- Cholin, V.S., Thiyam, Satyabati, & Murthy, T.A.V. (2006). UGC-INFONET E-Journals consortium: Access to scholarly journals and databases for Indian academic community—A study. In T.A.V. Murthy et al. (Ed. \$) Dynamic Interoperable Web Based Information System. Ahmedabad: INFLIBNET.
- Dhanasegaran, G. (2004). Trends in Library Consortia With Special Reference to India. National Seminar on Library Consortia, pp. 181-186. (Hyderabad, 22-23 March, 2004) : Indian Library Association & Osmania University, Hyderabad.
- Dhiman, Anil Kumar. (2005). Consortium Based Library Subscription : Some Issues. 3rd International Convention PLANNER-2005, pp. 294-300. Assam University, (Silchar, 10-11 Nov. 2005) : INFLIBNET Centre, Ahmedabad.
- Gaur, Ramesh C., & Tripathi, Manorama. (2012). Role of consortia in preservation of e-journals. Annals of Library and Information Studies, 59, 204-211.
- Ghosh, Maitrayee. (2002). Indian Academic library consortia (IALC) : A Proposal for Electronic Resource Sharing. In Crenia-2002 International conference, pp. 594-600. (Sudak (Ukraine), June 8-16th 2002).
- Jayaprakash, H., & Bachalapuri, MM. (2005). Consortia Developments in Library and Information Centres : Some Issues. 3rd International CALIBER - 2005, pp. 531-538. (Cochin, 2-4 February, 2005) : INFLIBNET Centre, Ahmedabad.
- Joshi, Govind. (2005). Consortium of Plantation Crops Research Libraries for Resource Sharing - A Proposal Issues and Facts. 3rd Convention PLANNER -2005, pp. 288-293. Assam University, (Silchar, 10-11 November 2005), INFLIBNET Centre, Ahmedabad.
- K, Susan Mathew., NK, Sheeja. (2005). Use of E-Resources in a Networked Environment: A Case Study of CUSTA : Proceeding of the National Convention on Library and Information Networking (NACLIN 2005). Pp. 291-299. PES Institute of Technology. (Bangalore, August 22-25, 2005) : Delnet, New Delhi.
- Lal, D. D. (2012). Consortia based electronic information resource sharing in Department of
- Biotechnology Institutes in India. Annals of Library and Information Studies, 59, 181-186. Madhavi, K. Radha., & Khan, Tanveer Rasheed. (2004). Towards Formation of A Consortium of Rural Development Institutions. National Seminar on Library Consortia, pp. 203-208. (Hyderabad, 22-23 March, 2004) : Indian Library Association & Osmania University, Hyderabad.
- Ojedokun, Ayoku A., Botswana, Gaborone. (2003). Cooperative Electronic Networks of Academic Libraries in Southern Africa. 1st International Caliber-2003: 1-8. INFLIBNET Centre, Ahmedabad.
- Pandian, M. Paul., & Karisiddappa, C.R. (2003). Technology Issues for Library Consortia in India. Caliber-2003, pp. 01-06. Nirma Education and Research Foundation, Ahmedabad : INFLIBNET Centre, Ahmedabad.
- Parisutharaj, L., & Kanthimalathi, S. (2004). Use of e-Resource Statistics : A Case Study of NIT Tiruchirapalli Library. National Seminar on Library Consortia, pp. 137-143. (Hyderabad, 22-23 March, 2004) : Indian Library Association & Osmania University, Hyderabad.
- Pradhan, Dinesh R., Rai, Ashok Kumar & Arora, Jagdish. (2012). Implications of SUSHI for analysis of usage statistics of e-resources: A case study of UGC-INFONET Digital Library Consortium. Annals of Library and Information Studies, 59, 187-193.
- Prakash, A. Jaya. (2005). Role of E-Journals Consortium In 21st Century. 3rd Convention PLANNER -2005, pp. 393-399. Assam
- University, (Silchar, 10-11 November, 2005): INFLIBNET Centre, Ahmedabad. Rao, S. Sudarshan., Rao, N. Laxman. (2004). Transcending from Library Cooperation to Library Consortia Through Networks : Who Gains And Who Loses. National Seminar on Library Consortia, 22-23 March, 2004. Hyderabad: 285-291. Indian Library Association & Osmania University, Hyderabad.
- Ratnakar, K.V., Prema; & Satyanaryana, K. (2009). Consortia to Promote Access to Medical Information: Some Experiences of the Indian Council of Medical Research. DESIDOC Journal of Library & Information Technology, 29(5), 7-11.
- Sahoo, Bibhuti B., and Agarwal, Gopal P. (2012). INDEST-AICTE Consortium: A decade of service for engineering, science and technology community of the country. Annals of Library and Information Studies, 59, 170-180.
- Sinha, Manoj Kumar, Murthy, T.A.V., & K. Manoj Kumar. (2006). Developing E-Journals Consortium In India : A New Approach For Resource Sharing In Digital And Network Environment 4th International Convention CALIBER-2006, pp. 350-363. (Gulbarga, 2-4 February, 2006) : INFLIBNET Centre, Ahmedabad
- Varalakshmi, R.S.R., & Abbulu, G.E.P. (2004). Use of E-Journals and Consortia : Academics Perspective. National Seminar on Library Consortia, pp. 01-10. (Hyderabad, 22-23 March, 2004) : Indian Library Association & Osmania University, Hyderabad.