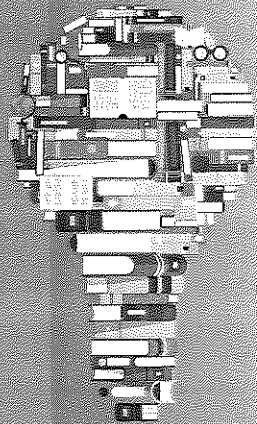


Innovative Ideas & Services in Library and Information Science



The Information Technology (IT) plays a vital role in today's global knowledge economy. The whole world is witnessing that innovations in IT sector radically transforming all the aspects of human life. Similarly, IT has transformed the role of libraries creating new challenges and opportunities. IT has an immense potential in enhancing the capabilities of libraries to increase the efficiency, productivity and effectiveness of library operations and services. Even, whatever the information resources and services are being provided by the libraries in digital form to its users can be accessed easily from anywhere anytime.

The present book deals with some of the pertinent issues of library and information science such as knowledge management practices, ethical issues in publishing, green libraries, robotics in libraries, impact and use of Internet, service quality issues of libraries, bibliometric research, impact of current pandemic situation (COVID-19) on libraries, impact of ICT on libraries, and e-learning, etc. The prime objective of this book is to help all the library and information science professionals, students, research scholars, teachers of library and information science to enlighten with the areas of information and communication technology, innovations and its widespread impact on library and information services. This book will be useful for all the stakeholders of library and information science, who want development in their professional knowledge and career.



Dr. Bhanu Parlap is presently working as Assistant Librarian in Nehru Library, CCS Haryana Agricultural University, Hisar (HR), India since July 2013. Before joining the current position, he has served many institutions situated in Punjab, Haryana, Uttarakhnad and Chandigarh between September 2005 to July 2013. He has received M.LiSc. (2005) and M.A. (Mass Comm.) (2008) from Kurukshetra University, Kurukshetra and received M.Phil. (LIS) in 2008 from Alagappa University, Karaikudi (Tamilnadu), India. He has qualified the exam of UGC-NET in June 2010 and also received the degree of Ph.D. in Library & Information Science (2018) from Kurukshetra University, Kurukshetra. He has about 15 years of professional experience in the field of librarianship. He has published more than 70 articles in the National and International Journals, conference proceedings and edited books and has also written/edited six books.



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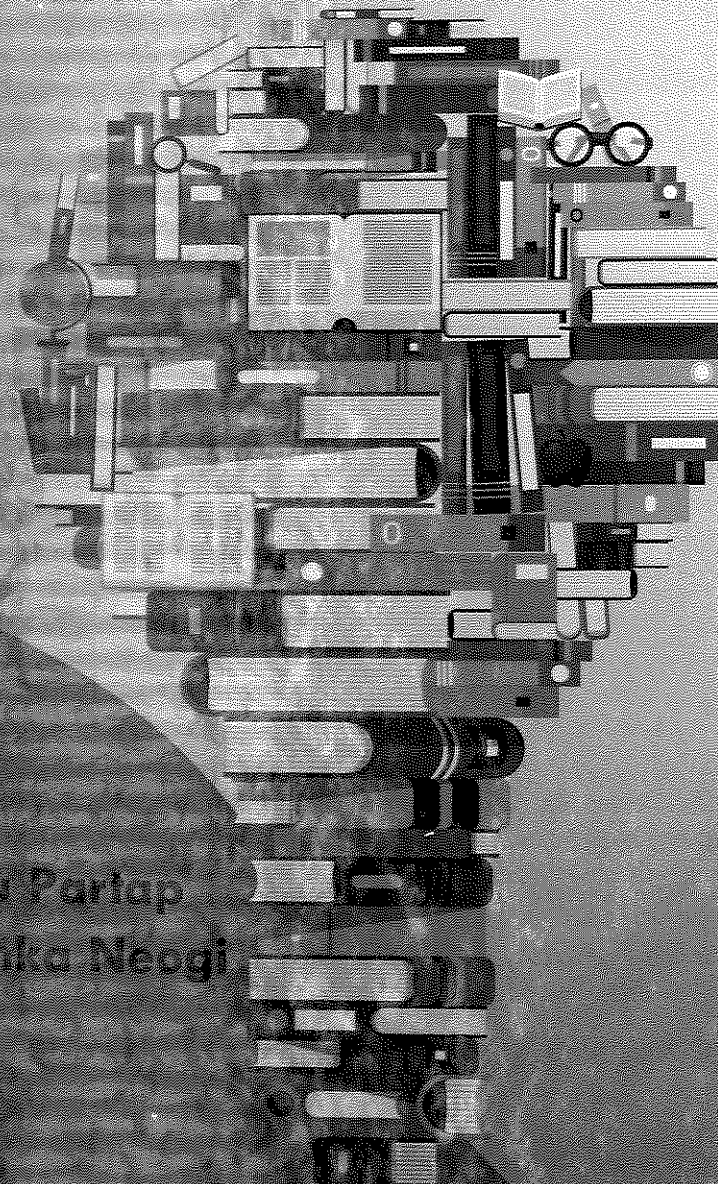
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Issues and Challenges



Bhanu Parlap

Priyanka Neogi



**Innovative Ideas and Services in
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Innovative Ideas and Services in Library and Information Science *Issues and Challenges*

Bhanu Partap

Priyanka Neogi

THE EDITORS



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Preface

Technological innovations have impacted every knowledge society worldwide in one way or the other. That is why current era is also known as digital or technological era. The growth of the Information and Communication Technology (ICT) has changed the entire library activities, i.e., from manual to automated or print to electronic. Today libraries are shifting their role from the custodian of traditional or print information resources to the service oriented centre, which are always ready to serve the users by fulfilling their actual informational demands. The implementation of information and communication technology in the various activities of libraries has provided great opportunities for sharing e-resources among the users, which can be accessed from anywhere, anytime as per the convenience of users. The modern libraries are now being procuring various electronic resources for its collection development in a better way because e-resources are easy to find and use by the users. The growing demand from the users has created new tools and techniques, which would definitely create a history in the documentation processes in the future digital libraries. The library without walls in the form of digital repositories and portals are now accessible to users without any barriers of space, location, and time. The application of information and communication technology to the library operations and services has become a key to the success in satisfying the changing information needs of users. The proper implementation and use of new technologies in library is no longer a matter of choice but a matter of survival in an era of rapidly changing technology and global knowledge society.

Extensive use of computers, increased reliance on computer networks, rapid growth of Internet and explosion in the quality and quantity of information compelled libraries to adopt new means and methods for the storage, retrieval and dissemination of information. Library automation, development of digital libraries

and application of innovative Information and Communication Technologies (ICT) have tremendously increased because it provides enhanced user satisfaction, cost effectiveness, rapid responses, and easier operational procedures. Nowadays, the libraries have the collection of vast information resources, which is available in the form of print and electronic, gives access of use to not only within its premises but also given access to remotely.

As this is the digital era, the use of digital information in the modern world is increasing at a phenomenal rate. At the same time, an increasing proportion of new information is being conceived, produced and distributed in electronic form and management of these resources has become challenge to the librarians and other information professionals. Hence, innovative ideas must be adopted to meet the technological challenges as well as to meet the rapid changing information needs of the users.

The present volume "Innovative Ideas and Services in Library and Information Science: Issues and Challenges" is a collection of selected articles written by the library and information professionals and teachers on various topics at national and international level. This book intends to present some of the crucial issues related with the library and information science such as green libraries, knowledge ecology, service quality assessment, knowledge management, human resources management practices, innovative technologies, impact of current pandemic on e-learning process, bibliometric research, scientometric research, robotics in libraries, QR code technology in libraries, web based library services, e-learning, future trends, electronic library consortium, and impact of Internet, etc. The authors have contributed the papers based on their professional experiences. So we hope that this book will be useful for library practitioners, researchers and academicians to acquaint and update with the innovative ideas and technologies in the field of library and information science.

Bhanu Partap
Priyanka Neogi

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Chapter 8

Setting-up a National Level DBT's Electronic Library Consortium (DeLCON Consortium): A Success Story and Development

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ABSTRACT

The Proliferation of electronic resources and ever changing information technology has become a challenging task for the library professionals. Since last few decades, there has been tremendous change in the are of library cooperation and resource sharing has become the hallmark of libraries for cooperation, coordination and collaboration. The Library and information systems and services are being transformed by the modern information and communication technologies (ICTs). On one hand, libraries have to be transformed to serve their users better and on the other, library networks have to ensure that they suuport this transformation. The ultimate aim of libraries is to support education research and the creation of knowledge society where the society in general is knowledge-driven. Coming together of libraries, to achieve a common goal that is beyond what an individual library could achieve on its own.

Keywords: *ICT, Digital library, Electronic library, Consortium, DelCon consortium, DBT, NBRC.*

1. Introduction

The DBT Institution libraries were the central support deeply committed to update the collections continuously and rendering services to their own institutions and support for education, research and developments. Earlier these Institution have their own library but due to funds crunches they were not able to fulfil the requirements of their Institutions, hence the DBT has taken an Initiative to setup a National Level Biotechnology Library Consortium, which was further setup and developed as DeLCON Consortium.

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'. Dr. S. Natesh, Senior Advisor, DBT had also participated in the meeting alongwith the Secretary DBT (Dr. M. K. Bhan). Prof. Vijayalakshmi Ravindranath, Director of NBRC volunteered to coordinate this project along with Dr. D. D. LAL, who was Officer-in-Charge Library NBRC. 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.

2. Formation of DeLCON Consortium

It was indeed a herculean task for the Officer Incharge for NBRC Library (Dr. D. D. LAL) to constitute a National Level Library Consortium in the field of Life Sciences and Biotechnology but the Challenges was accepted by the Director, NBRC and Dr. D. D. LAL (Officer Incharge for Library) in the year 2008 and successfully implemented and made if 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.

Dr. D. D. LAL 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 Dr. D. D. LAL (Officer Incharge for NBRC Library). In month of Mar-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 'Dr. S. Natesh (Sr. Advisor, DBT) to review. It was clearly mentioned the following points :

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

At this point 'Dr. T. Madhan Mohan, Adviser, DBT' was deputed by the DBT to look after the concept. The DBT had constituted a negotiation committee comprising 8 members (including Consortia experts) from various Institutions vide No.BT/BI/1/031/2004 dated 9th May, 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 NII on 19th August, 2008 chaired by Ex. Secretary, DBT (Dr. M. K. Bhan).

The Department of Biotechnology, which is under the MST (Ministry of Sc. and Technology), GOI started its e-Library Consortium in the month of January 2009 and it has been somooth functioning. This DeLCON consortium started with Ten (10) DBT Member institutions including 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 DeLCON Consortium is a large venture of the DBT to carry qualitative revolution in their Institutions. In the month of Jan. 2009, it was started with initially Ten (10) DBT Institutions. It became a national initiative for supplying get right of access to the scholarly e-resources which include complete-text and bibliographic databases in all concern are of lifestyles technology disciplines to DBT member organizational community. It enables access to high quality of electronic resources to DBT member Institutions in the country to improve and develop teaching, learning and research.

The 'Delcon Consortium' is a good sized undertaking of the 'DBT' to hold qualitative alteration in their studies institutions. To begin with the ten DBT establishments it turned into released inside the month of January, 2009 with an extensive quantity of high effect on line journals. To improve teaching learning and research in the country, it encourages access to high quality of electronic resources to DBT research institutions.

The DeLCON Consortium started with 10 DBT Institutions in the year 2009 and access of all major electronic resources was provided to these 10 prime insitutions. Later on, 17 Institutions added under this Consortium in the 2nd Phase of extension, in the Year 2010, and after that 07 Member Institutions were added as 3rd phase of

extension in the Year 2011. Now, the DeLCON Consortium comprising currently 35 member Institutions. The 'DeLCON Consortium' offers more than 1172 core journals which covered recent as well as old archival access (some are now discontinued and currently 1000+ online journals) and peer-reviewed e-journals and bibliographic e-database in various subject disciplines from 21 international publishers and aggregators. In the beginning of the year 2009, access of all major e-resources was given to 10 DBT Institutions and now the member Institutions are 35.

The primary beneficiaries of the DeLCON Consortium are Research Scholars, Students, faculties, Scientists and Project Assistants of the member Institutions. For providing these e-resources access through 'DeLCON Consortium' for the DBT organizations all expenditures beared by the DBT.

The following 35 Institutions covered under DeLCON Consortium:

Members of DeLCON Consortium

- ☆ NBRC, Manesar → National Brain Research Centre
- ☆ DBT, New Delhi → Department of Biotechnology
- ☆ NIPGR, New Delhi → National Institute of Plant Genome Research
- ☆ NII, New Delhi → National Institute of Immunology
- ☆ NCCS, Pune → National Centre for Cell Science
- ☆ ILS, Bhubaneswar → Institute of Life Sciences
- ☆ IBSD, Imphal → Institute of Bioresources and Sustainable Development
- ☆ CDFD, Hyderabad → Centre for DNA Fingerprinting and Diagnostics
- ☆ RGC, Thiruvananthapuram → Rajiv Gandhi Centre for Biotechnology
- ☆ ICgeb, New Delhi → International Centre for Genetics and Engineering Biotechnology
- ☆ Welcome Trust, Hyderabad → Welcome Trust-DBT India Alliance (further excluded in the year 2011)
- ☆ InStem, Bangalore → Institute for Stem Cell Science and Regenerative Medicine
- ☆ DU, Assam → Dibrugarh University
- ☆ AU, Silchar → Assam University
- ☆ NCERT, Arunachal Pradesh → North Eastern Regional Institute of Science and Technology
- ☆ NEIST, Assam → North East Institute of Science and Technology
- ☆ Mizo Univ, Mizoram → Mizoram University
- ☆ DMC, Manipur → D. M. College of Science
- ☆ SU, Gangtok, → Sikkim University
- ☆ CVSAAU, Guwahati → College of Veterinary Science, Assam Agricultural University .

- ☆ SAC, Meghalaya → St. Anthony's College
- ☆ BIRAC, New Delhi → Biotechnology Industry Research Assistance Program
- ☆ GU, Assam → Gauhati University
- ☆ MU, Imphal → Manipur University
- ☆ CVSAHCAU, Mizoram → College of Veterinary Science and Animal Husbandry Central Agricultural University
- ☆ RGU, Arunachal Pradesh → Rajiv Gandhi University
- ☆ NU, Nagaland → Nagaland University
- ☆ NEHU, Shillong → North-Eastern Hill University
- ☆ IIT, Guwahati → Indian Institute of Technology Guwahati
- ☆ NABI, Mohali → National Agri-Food Biotechnology Institute
- ☆ NEBMG, Kolkata → National Institute of Biomedical Genomics
- ☆ RCB, Faridabad → Regional Centre for Biotechnology
- ☆ TU, Assam → Tezpur University
- ☆ THSTI, Faridabad → Transnational Health Science and Technology Institute
- ☆ SSCST, Sikkim → Sikkim State Council of Science and Technology

The DeLCON Consortium is a one in every of the largest consortium in India for the Biotechnology and Life Sciences with a imaginative and prescient and strategy to attain out to all DBT Member organizations, research establishments, departments, universities, and their affiliated schools.

3. Aims of DeLCON

The principle targets of the DeLCON Consortium is to provide get entry to qualitative e-resources such as complete-textual content e-resources and bibliographic e-databases to DBT Member institutions at a financial rates of subscription. The main targets of the DeLCON Consortium are given here:

- ☆ to provide seamless access to a high-caliber and educational e-resource to an massive range of DBT Institutions which include studies establishments, schools and universities at extensively lower price of subscription and at most beneficial conditions;
- ☆ To endorse quick and effective access to academic-contents to the users and to make and advance utilization of DeLCON in educating and learning in research associations, colleges, and schools in India;
- ☆ To stretch out the advantage of Consortium to its partner institutions
- ☆ To enhance and optimizing the usage its organize training for the librarians, research scholars scientist and other users of the institutions within the use of Electronic Resources;

- ☆ To promote consumption of e-resources with steady reduction in print copy of subscription;
- ☆ To promote connection and ILL between institutions of DeLCON;
- ☆ to take a look at the use of the subscribed e-sources and to find new resources that required to be subscribed;
- ☆ To gather qualitative alternate in learning, teaching and research of and studies with an objective to address the continually developing difficulties of globalization of superior education
- ☆ To increment the research productivity of the organizations inside the phrases of amount and excellent of publications.

4. Needs and Purposes of DeLCON Consortium

Thorny problems like shrinking budgets, growing patron demands, rising costs of books and periodicals led to the crystallization of such a concept for the Library and Information Systems. The primary purpose 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 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. Howsoever, they get the information after a big gap of time in the hard copy form.

The DeLCON consortium was needed for DBT libraries because of the following:

- ☆ Explosion of Information
- ☆ Variety of user requirements
- ☆ Crisis of the budget
- ☆ No possibility of self-sufficiency

5. Factors Considered before formation of DeLCON

Various factors to be taken in account for an effective functioning of a successful DeLCON consortium like resources identification on the basis of usage and usability, long term planning of the technology infrastructure, access to back runs of periodicals will have to clearly spelt, copyright and licensing, archival issue, price issue should be economically favorable.

Last but not least, designing and launching the DeLCON consortium was made in order achieve its long term Sustenance and robust models towards achieving the above goals.

These are the formulations covered under the DeLCON Consortium :

1. The caption and call for 'Sharing Resources, Sharing Risk, Sharing Success'
2. Identification and evaluation of Infrastructure requirements
3. Identifying and evaluation of electronic resources and subscription
4. Identification and evaluation information resources of print format of subscription
5. Establishment of Integrated model to enable single web based Interface/ Portal.
6. Consolidation of the electronic resources for online access
7. Cost effectiveness - (Independent/Consortium, Distributed vs Centralized).
8. Copyright issues and right management
9. Services and Benefits to be offered
10. Licensing strategies and terms of access
11. Participation and membership
12. License negotiations and subscription
13. Access control and delivery
14. Training and Workshop
15. Quality improvements

6. DeLCON Consortium - Main Advantages

Benefits of the DeLCON consortium are as given below:

- ☆ Offers access to a wider range of e-resources at significant lesser cost
- ☆ Funds utilization at maximum
- ☆ Assistance for making an e-libraries
- ☆ Supportive to deliver SDI and CAS of library services
- ☆ Support for Technical and training through cost sharing
- ☆ No library space and no shelving costs required for e-resources
- ☆ Improved terms of licenses, archival access and conservation of subscribed e-resources
- ☆ Available 24 hours a day, 7 days a week *i.e.* called 24X7 access
- ☆ Economy in maintaining

DeLCON is a non-profit making and an association of library, documentation and information centres of the institutions under the 'Department of Biotechnology'.

7. Benefits and Features of DeLCON Consortium

For growing the access of e-resources between all of the DBT institutions

at a lower rate of subscription, the consortia-primarily based subscription to e-resources is a best feasible solution. The benefits of DeLCON consortium are given beneath :

- ☆ This consortium turns as a solitary window service for a large number of DBT establishments with their numerous studies and scholarly hobby;
- ☆ the DeLCON consortium, with its joint power of contributing member institutions, attracts exceptionally reduced expenses of subscription with most super phrases of settlement for a broader range of electronic resources. The fees provided to the consortium are lower by 60 to 99 per cent relying upon the group of DBT establishments;
- ☆ Customers have quick access to material previously not subscribed to, at no incremental charge for retrieving back files;
- ☆ it improves the prevailing library centers and compact the subscription price;
- ☆ The research output of DBT establishments are predicted to enhance with multiplied get admission to to full-text resources;
- ☆ The DeLCON Consortium is expected to trigger first-rate increase in sharing of e-resources among taking part members
- ☆ The DeLCON Consortium has been opened-up to encompass more DBT members through its some other level of extension and additional DBT institutions also can be part of the DeLCON Consortium and get the benefit of most effective enormously decreased fee of subscription and also the remarkable phrases and conditions;
- ☆ Members of the DeLCON Consortium have the advantage of the annual boom within the fees of subscription, whilst the same old boom in price of digital resources range from 15-20 per cent, but the DeLCON Consortium members enjoys the decreased price between 5 per cent -7 per cent;
- ☆ The DeLCON Consortium is obtained better phrases of settlement for use, vintage archival get right of entry to and renovation of subscribed e-Resources, which changed into now not practicable for individual establishments; and
- ☆ Since the subscribed e-resources is accessible online layout, the DBT institutions don't have any burden on space necessity for storing and handling print based library resources. Furthermore, all troubles related with print media for instance, their mileage, area, racking, authoritative, sorting out, and so on are not an trouble for electronic assets.

8. Coverage of Electronic Resources by this Consortium

This Consortium buys in to electronic assets covering all significant Life Science and Biotechnology subject control being educated in the DBT research Institutions, Universities and Colleges. It incorporates wide assortment of materials for example

e-resources, bibliographic databases, reviews and reports distributed by insightful social orders, college presses, institutional and business distributors. One thousand one hundred seventy two (1172) full-text online resources (at present 1000+) and one (01) bibliographic database being subscribed by the DeLCON Consortium from the 20 prestigious overseas publishers and from some of the aggregators. The access of these subscribed resources given to various member Institutions on the basis of their requirements and activities as per recommendations of the Steering Committee.

The list of full-text resources (e-Journals) and bibliographic databases is given in Table 8.1.

Table 8.1

Sl. No.	Website/URL of the Publishers and Journals	No. of Journals	Name of Publishers
1	http://www.sciencemag.org	3	American Association for Advancement of Science
2	http://www.aacr.org	8	American Association for Cancer Research
3	http://pubs.acs.org	37	American Chemical Society
4	http://www.annualreviews.org	23	Annual Reviews
5	http://www.jbc.org	2	American Society for Biochemistry and Molecular Biology
6	http://www.asm.org/	12	American Society For Microbiology
7	http://www.cshl.edu	4	CSHL Press
8	http://www.informaworld.com	7	T and F Publisher
9	http://ovidsp.ovid.com	11	OVID/Lippincott William and Wilkins
10	http://www.liebertonline.com	7	Marry ANN Liebert
11	http://www.nature.com	38	MacMillan NPG Publishar
12	http://www.oxfordjournals.org	18	Oxford University Press
13	http://www.springerlink.com	237	Springer India
14	http://mic.sgmjournals.org	3	Society for General Microbiology
15	http://bloodjournals.hematologylibrary.org	1	Society for Hematology
16	http://www3.interscience.wiley.com/cgi-bin/home	86	Wiley
17	http://www.sciencedirect.com	434	Elsevier Science
18	http://www.aspb.org/	2	American Society of Plant Biologist
19	http://www.aai.org/	1	American Association of Immunologist
20	http://www.scopus.com	1	Scopus Database from Elsevier

9. Procedures to Selection of Resources for the Electronic Resources Under DeLCON

Upon the inputs received from the Members, e-resources were identified from the various publishers and evaluated before negotiating licensing arrangements. Keeping in view the diversity of 'DBT Research Institutions programmes offered by DBT Institutions, every attempt was made to subscribe to e-resources that are multidisciplinary in nature with wide scope and coverage.

Based on the requirements and objectives of the DBT Institutions, the DeLCON Consortium subscribed e-Resources in the form of Print and Online resources and make available to these institutions. For understanding about the collections of the DBT Institutions, various meetings have been conducted with the Directors, Nodal Officers of the DBT Institutions and obtained feedback and inputs. Upon inputs received from the Members, e-resources were identified and evaluated from the various publishers before negotiation of licensing arrangements. Keeping in sight the range of 'DBT analysis establishments programmes offered by DBT establishments, each try was created to buy e-resources that are multidisciplinary in nature with wide scope and coverage.

All electronic resources were assessed for their : a) subjective and quantitative substance; b) Coverage; c) their accessibility on various platforms and their similar comparative advantage/weaknesses; and d) costs relevant for these e-resources to Individual organizations as well as to other consortia. The subscription of e-Resources were proposed upon the following standards:

- ☆ Academic Society's Resources, university presses and no profit determined tasks were favoured over commercial publishers;
- ☆ Good Established and what's more multi-disciplinary e-resources with totally scope were favored over profoundly particular wellsprings focused for specialists;
- ☆ E-Resources as of now on membership in the DBT research associations were favored over those which are not being used in any of them;
- ☆ Resources that are 'electronic just' were favored over those that are print-based;
- ☆ Resources that are noteworthy yet significantly cost-escalated were preferred over those which are less huge or less-used anyway negligible exertion;
- ☆ Resources were e-adaptation are made available free on membership to their print variant were stayed away from beyond what many would consider possible
- ☆ Selections were made on use/propriety of electronic assets to DBT Institutions

10. Subject Coverage Under 'DeLCON Consortium'

All subjects covered under Life Sciences *i.e.* Biotechnology, Bioinformatics, Biochemistry, Biology, Chemistry, Chemical Biology, Computational Biology, Cell Biology, Cell Sciences, Cellular Biology, Computational Neuroscience, Genome, Gene, Genetics, Immunology, Microbiology, Mathematics, Medicines, Molecular Biology, Molecular and System Neuroscience Neuroscience, Plant Genome, Plant Biology, Physics, Physiology, Psychology, Physiotherapy, Psychotherapy, Radiology, Sciences *etc.* are covered by the DeLCON Consortium.

11. Procedures to Subscribe E-Resources

At the point when the e-assets proposed for subscriptions are perceived, proposition welcomed from the publishers of electronic resources and their endorsed agents and merchants. The Publishers and their operators are furthermore invited for formal arrangement on their items and administrations. In the early stages of the DeLCON Consortium, the 'DeLCON Steering Committee' negotiates the lowest rates of subscription and favorable terms and agreement.

A Negotiation Committee which setup by the Department of Biotechnology (DBT) according to the buy strategies and rules, who negotiate for subscription to e-resources for this consortium.

While the DeLCON Steering Committee takes strategy choice in regards to incorporation of member institutions, electronic resources *etc.* and for negotiating costs of subscription to electronic resources with various publishers for all DBT Institutions the Negotiation Committee is responsible for it. After finalization of resources and members of DeLCON, the DeLCON places supply orders for subscription to electronic resources to the publishers according to the purchase rules. The DeLCON is additionally liable for signing to License arrangement on behalf of the DBT Institutions covered under the DeLCON. The DeLCON supports the managerial administration of Consortium from the nodal centre of 'National Brain Research Center', Manesar.

12. Access to Journals Subscribed Under DeLCON Consortium

Full text Access to Journals can be had either directly visiting the publisher site or through the Bibliographic databases. Many of the Bibliographic databases will have facility to browse the publications or search as per query. The access to all these resources being subscribed are made available to 33 DBT Institutions *i.e.* 10 DBT Centers from 1st January 2009 and extended 1st phase for 17 and 2nd phase for 07 DBT institutions simultaneously from 2010 and 2011.

13. Operations of DeLCON Consortium

The DBT Institutions have been fully funded by DBT for connectivity under DeLCON and will have network connectivity. Access is given by the publishers for subscribed contents to the Individual member organizations on their exclusive static IP address. However entire programme will be administered maintained by the Nodal Centre (NBRC)'.

14. Website of DeLCON Consortium

☆ Dr. D.D. Lal was selected and Nominated as DeLCON Coordinator and he was responsibilities for the “DeLCON Consortium” regarding management; operations and functions since inception. Dr. D. D. Lal worked to develop a DeLCON Website and finally the NBRC has launched the first self created website on own NBRC Server which was earlier hosted in the year 2009 at : <http://www.nbrc.ac.in/delcon>.

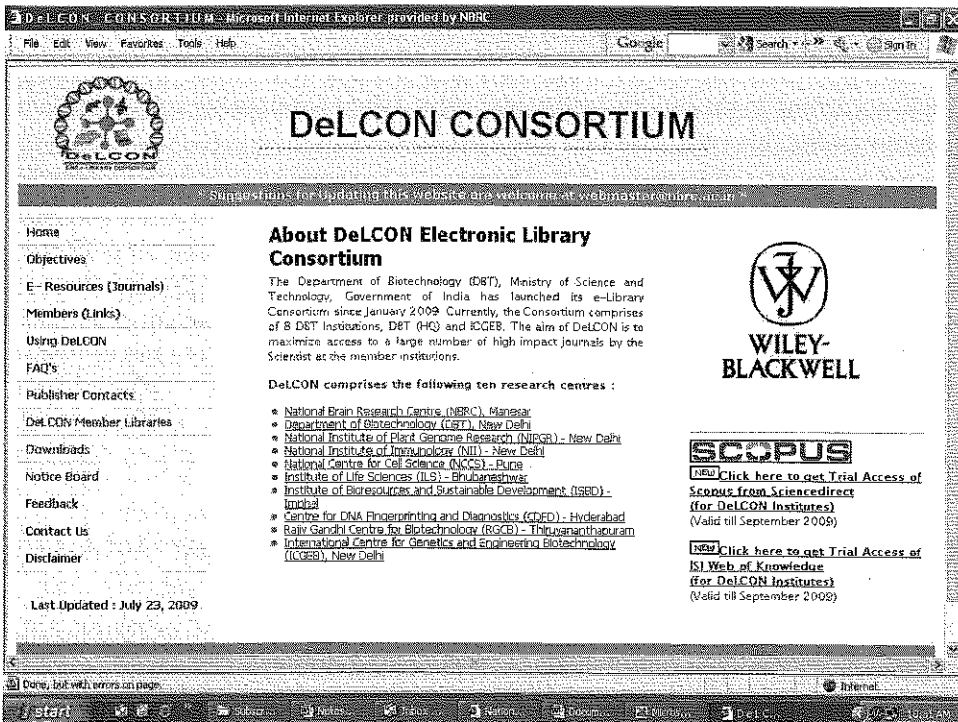


Figure 8.1: Website of DeLCON Consortium Hosted at the NBRC Server in the Year 2009.

☆ Further, the DeLCON website has been developed by the Information of Library Network (INFLIBNET) Centre, Ahmedabad and was hosted in the year 2010 at the NIC Server, i.e., <http://delcon.gov.in>

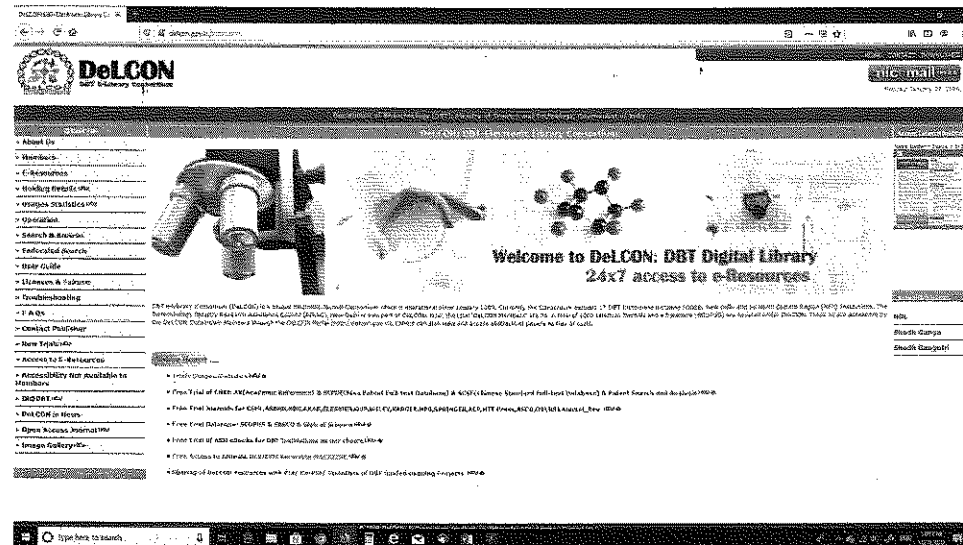


Figure 8.2: Website of DeLCON Consortium Hosted at the NIC Server in the Year 2010.

15. Formal Launch of DeLCON Website

The DeLCON website formally launched by the former Director of NII (Prof. Avadhesh Surolia) at the Conference Room of the National Institute of Immunology, New Delhi on 16th July 2010 during the 6th DeLCON Nodal Officers Meeting at NII, New Delhi and it was dedicated to the Nation.

16. Role and Responsibilities of NBRC as a Nodal Centre

- ☆ The National Brain Research Center (NBRC) performed about as a nodal organization for implementation, observing and execution of the whole DeLCON Consortium program through the constituted committees. On the behalf of the DeLCON Consortium, it coordinates all activities concerned with negotiation, renewal of subscription of electronic resources and trouble shootings. The NBRC likewise advances collaboration among member Institutions and boosts good terms of references for use and protection of subscribed e-Resources.
- ☆ The NBRC is accountable for the following:
- ☆ Managing the “DeLCON Consortium” since inception (i.e., from the Year 2009), which is National Biotechnology Consortium.
- ☆ Coordinating meetings of its various Committees (such as Steering Committee Meetings, Review Committee Meetings, Negotiation Meetings, DeLCON Nodal Officers Meetings, SFC Meetings, Audit and Budget related meetings etc.).

- ☆ Constitution of National Steering Committee and National Negotiation Committee through Department of Biotechnology (DBT);
- ☆ Negotiating rates of subscription and its terms and conditions with the publishers;
- ☆ Managing whole DeLCON funds and arranging required budgets from the DBT as well as releasing funds to publishers.
- ☆ Make sure about the access of subscribed e-resources on IP-based to beneficiary Institutions;
- ☆ Mediate with publishers to resolve such problems and attend to the hitches faced by member institutions;
- ☆ Managing administrative credentials such as user name and password for the DeLCON Consortium and its members.
- ☆ Developing promotion ingredients, tutorials, communicate exercise and technical supports to the covered Institutions;
- ☆ Flourish the Consortium between other Institutions; other Ministries/ Departments encouraging them to avail the benefits of the national initiative through ILL services and resource sharing for research works;
- ☆ Extracting, arranging, evaluating subscribed e-resources and monitoring its usage statistics regularly and analyzing usages statistics of all the DeLCON Members.
- ☆ Sign license agreement for access to several e-resources on the behalf of members;
- ☆ Maintaining and updating DeLCON website of the Consortium (<http://www.delcon.gov.in>) regularly;
- ☆ Managing the manpower for the DeLCON Consortium;
- ☆ Evaluating and analyzing the License Agreements of publishers and discussing on the major issues related to terms and conditions
- ☆ Evaluating and analyzing the proposals of the publishers for the subscriptions/renewals of the DeLCON resources.
- ☆ Organizing awareness programme time-to-time to advertise e-resources;
- ☆ Cultivating collaboration and communication among the member Institutions;
- ☆ Measure impression of access to electronic resources on research productivity in beneficiary member institutions; and present periodic report to the Department of Biotechnology (DBT) on extent of usage of online resources, funds of the consortium and its impression on research output.

17. DBT Roles towards DeLCON Consortium

The DeLCON Consortium is fully funded by the Department of Biotechnology

(DBT). The DBT is responsible for constituting the National Advisory Committee, National Steering Committee and Negotiation Committee of the Consortium. The DBT is additionally responsible for formation of techniques, recognizing the development, synchronizing with other Consortium in the nation and to guarantee consistent decrease in membership of print assets in the recipient part foundations. The DBT additionally screens use of e-assets and its impact on research creation in recipient foundations.

18. Training, Workshop and Conferences Organized for DeLCON at DBT and NBRC

The NBRC organized various "User Awareness Programme" at NBRC in association with various International Publishers during 2009-2016. The Coordinator organized "Users Awareness Programme" at DBT Head Quarter during the year 2009.

19. DeLCON National Seminar (DNS) - 2013

The NBRC also organized a National Seminar (DeLCON National Seminar-2013) in the year 2013 at Delnet, New Delhi. The DeLCON National Seminar (DNS-2013) was held on 30th-31st January 2013 at Developing Library Network (DELNET), New Delhi. This program was organized by Dr. D. D. Lal, who was the organizing secretary of this DNS-2013 program. The DNS-2013 program theme was "Information Literacy in Promoting E-Resources, Preservation and Intellectual Property Rights". The inaugural session was started with lighting the lamp by dignitaries.

20. DeLCON National Workshop (DNW) - 2017

DeLCON National Workshop (DNW-2017) was held on 23rd June 2017 (Friday) at NBRC auditorium, this program was organized by Dr. D. D. Lal (DeLCON Coordinator), who was the organizing secretary of this DNW-2017 program. The DNW-2017 program theme was "Strengthening Open Access Initiatives in India". The inaugural session was started with lighting the lamp by dignitaries.

21. DeLCON National Workshop (DNS) – 2018

DeLCON National Seminar (DNS-2018) was held on 27th March 2018 (Tuesday) at NBRC auditorium, this program was organized by Dr. D. D. Lal, who was the organizing secretary of this DNS-2018 program. The DNS-2018 program theme was "Role of Libraries and Librarians in Knowledge Society". The inaugural session was started with lighting the lamp by dignitaries.

22. NBRC National Workshop (DNS) – 2019

NBRC National Seminar (NNS-2019) was held on 2nd August 2019 (Friday) at NBRC auditorium, This program was organized by Dr. D. D. Lal, who was the organizing secretary of this NNS-2019 program. The NNS-2019 program theme

was "Enhancing the role of the library with new tools for teaching and learning". The inaugural session was started with lighting the lamp by dignitaries.

23. Encouragement Activities of DeLCON

The Coordinator also visited various member organization and given presentation about the DeLCON to encourage the users to utilize the DeLCON Resources.

It is indeed a matter of pride and privilege that the task of operating and executing the DBT's Electronic Library Consortium (DeLCON Consortium) is assigned to the NBRC Centre, where Dr. D. D. LAL has taken the full responsibility to manage it since inception and now the DeLCON Consortium successfully completed 11 years.

24. Conclusions

Due to the budget crises faced by all the DBT Institutions, the DBT constituted a DeLCON Consortium and this DeLCON Consortium has come as a consequence helpful solution for the DBT Institutions.

- ☆ The DeLCON Consortium is actually very-very useful and appreciated by the DBT Institutions as well as their faculties, scientists, researches, students and other user community of the member Institutions. All the patrons of DBT Institutions are extremely benefitted.
- ☆ After formation of the DeLCON Consortium the NBRC and other members were discontinued maximum online journals and print journals as the member were getting 1172 resources through DeLCON Consortium. Now, currently some major and prime journals are being subscribed with own Institutional Budget which were not covered under the DeLCON Consortium. Due to DeLCON Consortium the members have saved their own Institutional budgets. A wider range of major journals have been covered under DeLCON Consortium, which fulfill the requirements to the member institutions and their Scientists and researches for their research areas. The DeLCON resources helps to improve the growth of the member Institutions in the terms of quality of research works as well as publications. It would not be possible for any single institution to negotiate better terms for subscription, archival access and preservation of licensed e-Resources, which the DeLCON Consortium currently providing with lower cost, suitable terms and a wider range of journals to the DBT Institutions.

Since the year 2009, the DeLCON consortium growth was extremely extended very high. The DeLCON consortium is now became most popular Consortium in the area of biotechnology and life sciences in the country.

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