



Digital Libraries in India with special reference to experiences at IGNCA, New Delhi, India

Dr. Ramesh C Gaur

PGDCA, MLISc, Ph.D. Fulbright Scholar (Virginia Tech, USA)
Librarian & Head-Kalanidhi Division

Indira Gandhi National Centre for the Arts(IGNCA)

(An Autonomous body under Ministry of Culture. Govt. of India)

5 Dr. Rajendra Prasad Road, New Delhi-1

Phone: 91-11-23385442, 23385884

Fax: 91-11-22385442 Mobile: 91-9810487158

URL: www.ignca.nic.in

Email: gaur@ignca.org; gaur@vt.edu; rcgaur@bol.net.in

2/15/2006

Max Mueller Bhawan, New Delhi

Indira Gandhi National Centre for the Arts

Will talk about.....

- ◆ **India**
- ◆ **This visit to Germany**
- ◆ **About Indira Gandhi National Centre for the arts (IGNCA)**
- ◆ **Digital Library Initiatives at IGNCA**
- ◆ **Digital Libraries in India**
 - **Models of publishing: Print V/s Electronic**
 - **Challenges & Opportunities**
 - **Funding for Digital Libraries in India**
 - **Digital Libraries and Open Access Publishing (OAP)**
 - **Potential for Digital Library Initiatives in India**
 - **Current Digital Library initiatives in India: Examples**
 - **Digital Library Model for India**
- ◆ **Conclusions**
- ◆ **Forging Collaborative Partnerships**
- ◆ **Acknowledgements**

India: A brief profile



- **7th largest country with total area of 32,87,2631 sq kms**
- **India-1 billion Population, 28 states, 7 Union territories, 22 official Languages, 300 dialects, and about 1500 spoken languages**
- ***Indian Society- more heterogeneous than any other society of the world with 7 major religious groups with many minor ones, six main ethnic groups, 434, tribal or indigenous communities, 3000 castes***
- ***Rising economy with 7% GDP and 10% projected for next year***
- ***Very rich in terms of both tangible and intangible cultural heritage***
- **The third largest scientific and technical manpower in the World, accounts for 3% of the world's publication output.**
- ***<http://www.india.gov.in/>***

India: One of the oldest civilization

- India is one of the oldest civilizations
- History of more than 3000 years
- Has great cultural heritage, known for classical Dance, music, arts and handicrafts, ancient monuments, Ayurveda – Indian system of medicine and Yoga



2/15/2006

Max Mueller Bhawan, New Delhi
Indira Gandhi National Centre for the Arts



Visit to Germany

(Feb 6, 2006 to Feb 25, 2006)

With the support of Goethe Institute-Max Mueller Bhawan, New Delhi a Team consisting of following Library & Information Professionals visiting various institutions in Germany

- 1. Dr. Ramesh C. Gaur, IGNCA, New Delhi (Librarian)**
- 2. Dr. Devika Madalli, DRTC, Bangalore (Teacher of Library Science)**
- 3. Dr. G K. Manjunath, G.K, IGIDR, Bangalore (Librarian)**
- 4. Dr. Aditya Tripathi, Banaras Hindu University, Varanasi (Teacher of Library Science)**

2/15/2006

Max Mueller Bhawan, New Delhi
Indira Gandhi National Centre for the Arts



Visit to Germany

Purpose:

1. To study digital library practices in various German Institutions
2. Sharing of experiences
3. To develop long term Indo-German DL collaboration and Inter Library cooperation in other common areas of interest
4. As a result of this visit, development of a e-learning module on “how to develop a digital library?” during a workshop in New Delhi in April or May 2006.



IGNCA : AN INTRODUCTION

The Indira Gandhi National Centre for the Arts is visualized as a centre encompassing the study and experience of all the arts – each form with its own integrity, yet within a dimension of mutual interdependence, interrelated with nature, social structure and cosmology. The arts are here understood to comprise the fields of creative and critical literature, written and oral; the visual arts, ranging from architecture, sculpture, painting and graphics to general material culture, photography and film; the performing arts of music, dance and theatre in their broadest connotation; and else in fairs, festivals and lifestyle that has an artistic dimension.

2/15/2006

Max Mueller Bhawan, New Delhi
Indira Gandhi National Centre for the Arts

Various divisions in IGNCA

◆ Kala Nidhi



◆ Kala Kosha



◆ Kala Darshan



◆ Janpada Sampada



◆ Sutra Dhara



◆ Cultural Informatics Lab



2/15/2006

Max Mueller Bhawan, New Delhi
Indira Gandhi National Centre for the Arts

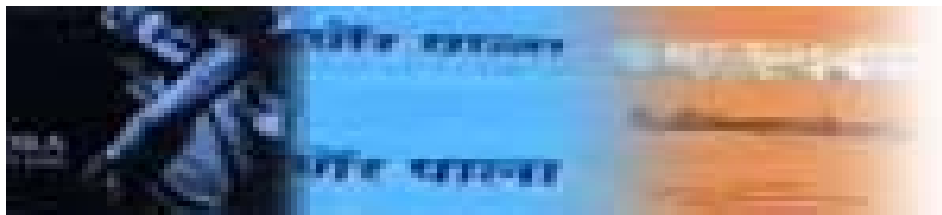


- ◆ The Kalanidhi is a National Information System and a Data Bank of the arts, humanities, cultural heritage with a fully supported reference library of multimedia collections. This information System and Data Bank will serve as a major resource centre for research in humanities, in the arts, in the disciplines of Archaeology, Anthropology, History, Philosophy, Literature, Language, Arts, Crafts etc.
- ◆ Total collection about 800,000 in form of Books, Journals, Slides, Microfilms, Microfiches, Photos, Glass plates, Negatives, artifacts, art objects, audio, video, Masks, music instruments, paintings, rare books, manuscripts etc.



2/15/2006

Max Mueller Bhawan, New Delhi
Indira Gandhi National Centre for the Arts



कलाकोश

- ◆ While the Kalanidhi collects primary and secondary material, sifts information and evolve databases, the **Kalakosha** investigates the intellectual traditions in their dimensions of multi-layers and multi-disciplines. As a research and publication division it endeavours to place the arts within the integral framework of a cultural system, combining the textual with the oral, the visual with the aural, and theory with practice





Kalādarśana

- ◆ The Kala Darshan division of the IGNCA provides the venue and forum for facilitating a creative dialogue amongst cultures, disciplines, levels of society and diverse arts through its programmes it has established a unique style of projection and presentation of the arts.





Janapada Sampadā

- ◆ Janpada Sampada complements the programmes of Kala Kosha, and aims at understanding the Arts in their eco-cultural and socio-economic contexts. Its emphasis is on the oral tradition that orients the literature tradition in reality. Here theory and practice, textural and oral, verbal, visual and kinetic are seen as a semiotic whole, not as items to be aggregated.

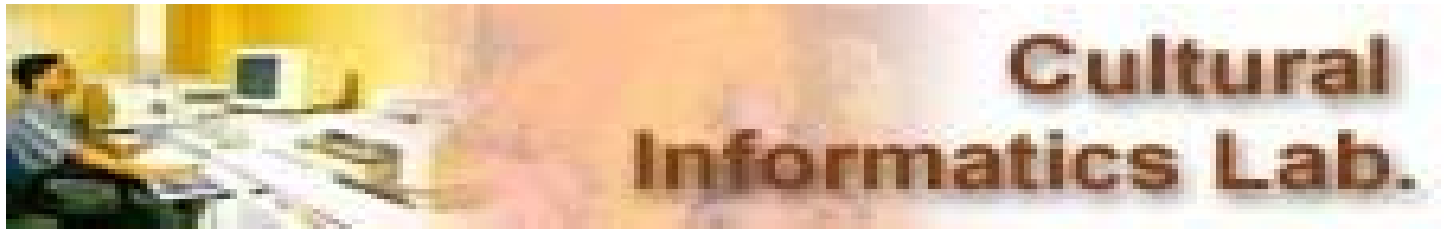




सूत्रधारा

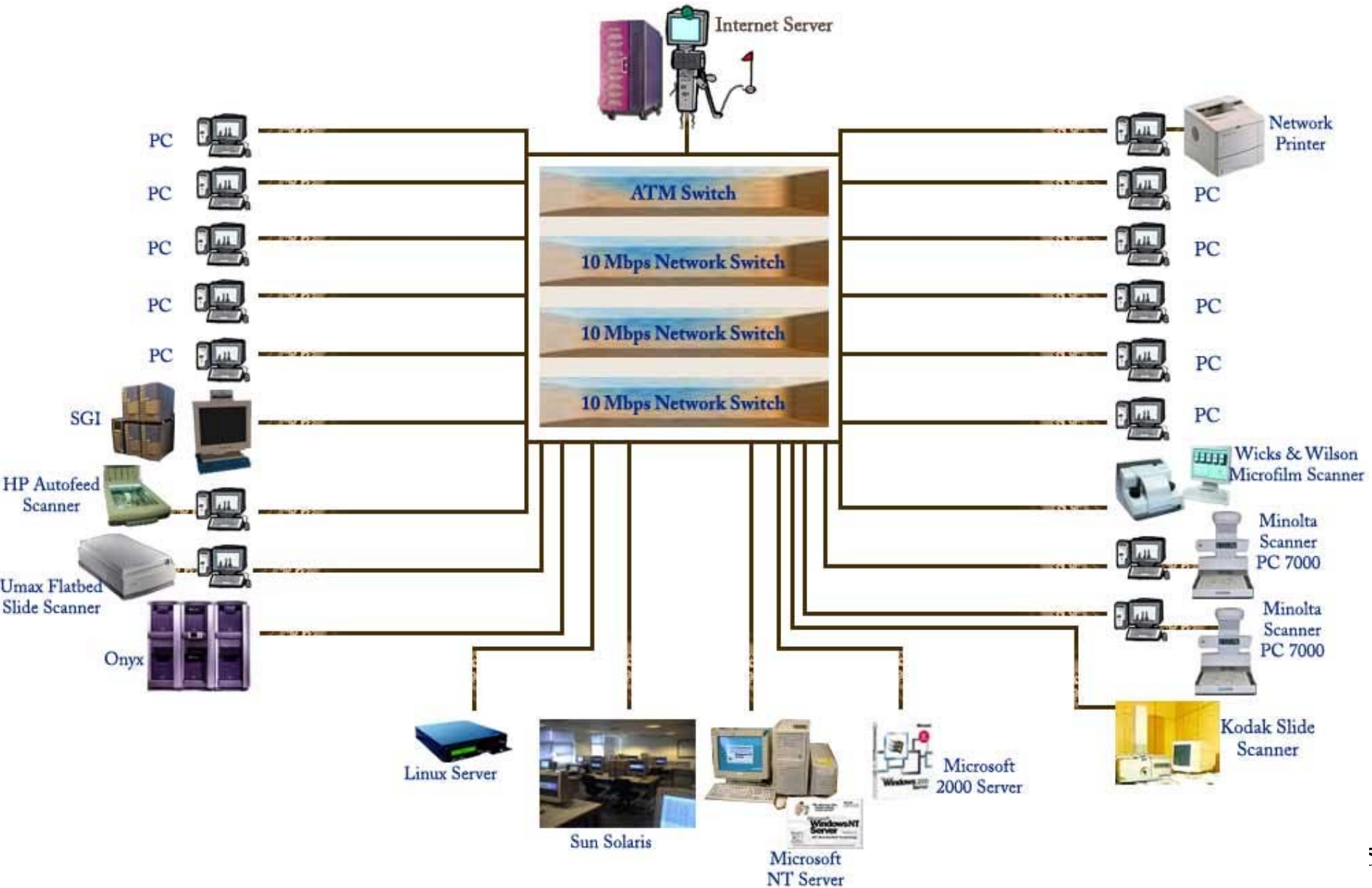
- ◆ The Sutra Dhara serve as the administrative, Managerial and organizational support and makes available services through appropriate inter-linkage amongst the various other component Divisions of the IGNCA. This Division serves as a nodal administrative Division and a central co-ordinator of programmes.





- ◆ The Cultural Informatics Laboratory (CIL) is engaged in Interactive-multimedia-documentation and in-depth analysis of cultural information. This demonstrate how cultural heritage can be recreated virtually, in holistic and integrated perception of culture.

Infrastructure of Cultural Informatics Lab



Branches of Kala Nidhi

- ◆ Reference Library
- ◆ Cultural Archive
- ◆ Reprography Unit
- ◆ Slide Unit
- ◆ Photography Unit
- ◆ Conservation Unit
- ◆ Media Production Unit



Reference Library

- ◆ The reference library of IGNCA has a large collection in the broad areas of humanities and the arts. It constitutes books, reprographics of several folios of unpublished Sanskrit, Pali, Persian and Arabic manuscripts in microfilm and microfiche, photographs and slides. The collection includes books on archaeology, philosophy, religion and ritual studies, history and anthropology, art and literatures as well as folk, pastoral and community studies. The library is enriched by many rare collections of illustrious scholars who have made path-breaking contributions in the fields of arts.
- ◆ Collection of about 175, 000 printed books, journals and other publications



Cultural Archives

- ◆ Material related to different genres in the original and in the other forms of copies is collected, classified and catalogued in the **Cultural Archives**. The archives are enriched by personal collection, ethnographic collections documentation and cultural exchange. Many scholars, artists and art enthusiasts, over the last decades, have carefully and dedicatedly collected materials of their interest ranging from literature and personal histories, recitation, painting, music to folklore and tribal arts. Some of these rare collections of ethnography and audio/visual documentation of old masters and rare art forms have been acquired by the archives.
- ◆ About 200,000 collection of Photos, Glass plates, Negatives, artifacts, art objects, Audio, Video etc

Reprography Unit

- ◆ A unique feature of the Reprography unit of the Kala Nidhi is the reprographic compilation of unpublished manuscripts in Indian and foreign collections from private and public libraries. A pioneering attempt has been made to bring under one roof primary sources of the Indian tradition lying scattered, fragmented, inaccessible or worse, in danger of extinction. At present the library contains more than ten millions folios of unpublished Sanskrit, Pali, Persian and Arabic manuscripts.
- ◆ Total 20,000 microfilm rolls (approx.) containing 2.5 lacs mss. have been generated so far.
- ◆ Digitization going on



Slide Unit

- ◆ A concerted effort is being made to establish a large photograph and slide library. Here also the focus is on developing a resource centre where Documentation on Indian and Asian art is easily accessible.
- ◆ Collection of about 100,000 visuals
- ◆ All digitized



Photography Unit

- ◆ Undertake the Still Photography work of all the divisions of the IGNCA
- ◆ Photo documentation work



Conservation Unit

- ◆ The Unit caters to the conservation and preservation needs of works of arts housed in IGNCA
- ◆ Conducts awareness campaigns and training programmes.
- ◆ Also acts as a manuscript conservation centre of Delhi region for National Manuscript Mission.



Media Production Unit

- ◆ Film Production
- ◆ Kalatarang Programme
- ◆ Documentation of various Arts e.g. performing arts, experiences and views of intellectuals, Folk Arts and dances etc.
- ◆ Media coverage and documentation of all the in-house programmes of IGNCA.



ABIA INDEX Project at IGNCA

ABIA stands for Annual Bibliography of Indian Archaeology that was published by the Kern Institute in Leiden during 1926-73. In 1996, the International Institute for Asian Studies (IIAS), Leiden put forward a proposal to resume the bibliography. The new bibliography is called ABIA South and Southeast Asian Art and Archaeology Index, briefly ABIA Index.

The IIAS, Leiden initiated this International project to compile and maintain a bibliographic electronic online database which supplies annotated records, covering the subjects- pre and pro history, historical archaeology, ancient and modern art history, material culture, epigraphy and paleography, numismatics and sigillography. An Annotated Bibliography extracted from this database is published annually in a printed version in addition to CD-Rom Version of ABIA Index.

2/15/2006

Max Mueller Bhawan, New Delhi
Indira Gandhi National Centre for the Arts

24



ABIA Index - Journey

- 23 ABIA Index volumes were published by Kern Institute Leiden, the Netherlands during 1926- 1973
- Work resumed by International Institute for Asian Studies (IIAS), Leiden, the Netherlands in 1996 by naming it ABIA South and Southeast Asian Art and Archaeology Index – (ABIA Index) and First Volume was published in 1999 and Second Volume in 2002 (two parts)
- PGIAR , Srilanka is the coordinating office for 2002-2006 and Third Volume is expected in 2006
- IGNCA, India will be coordinating office from 2007-2012
- Malaysia, Nepal, Pakistan, Bhutan, Cambodia, Indonesia, and Bangladesh are other participating countries

Digital Library initiatives at

Indira Gandhi National Centre for Arts (IGNCA)

- ◆ Kalasampada: Digital Library of Indian Cultural Heritage
 - The Pioneering Digital Treasure of Arts (<http://www.ignca.nic.in>)
 - Digital Images
 - Manuscripts in India
 - Multimedia Documentation
 - Video & Audio Recordings
 - Papers and Essays
 - Animations and Walk throughs
 - Research Reports
 - Databases; Conference Proceedings
 - Developed own digital library software
 - Also planning to install Dspace

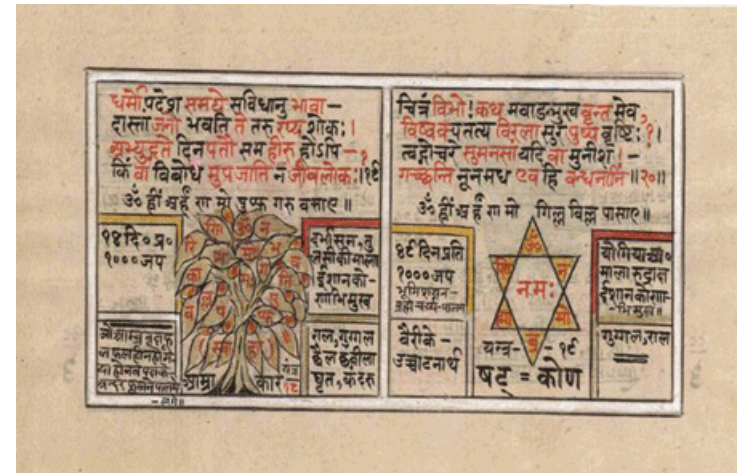


National Mission for Manuscripts

(<http://namami.nic.in/>)

- ◆ To save the most valuable (but less visible) cultural inheritances

- Indian Manuscripts





National Mission for Manuscripts

A Mission to reclaim the invaluable heritage of India preserved in manuscripts



[Related Sites](#) | [Contact](#) | [Guestbook](#) | [Home](#)

[Discussion](#)

[Events](#) **NEW**

[Photogallery](#)

[Contributor](#) **NEW**

[Faq](#)

[Notices](#)

[Members](#) **NEW**

[Background](#)

[Objectives](#)

[Strategies](#)

[National Nodal Agency](#)

[Manuscript Resource Centres](#)

[Manuscript Conservation Centres](#)

[National Electronic Register](#)

[Catalogus Catalorum](#)

[Mission Structure](#)

[Mission Management](#)

[Performance Summary](#)

[Activities \(Current & Planned\)](#)

[Time Frame](#)

[Annual Report](#)

[Digitization](#)

Newsletter

Your Name

Your mail ID

[Subscribe](#)

[Unsubscribe](#)

Background

Background: Why a Mission for Manuscripts?

India is the repository of an astounding wealth of ancient knowledge belonging to different periods of history, going back to thousands of years. Most of this knowledge belonging to different areas of intellectual activity such as religion, philosophy, systems of science, arts and literature is preserved in the form of manuscripts. Composed in different Indian languages and scripts, they are preserved in materials such as birch bark, palm leaf, cloth, wood, stone and paper.

India has the largest collection of manuscripts in the world. They are spread all over the country and also abroad in different libraries, academic institutions, museums, temples and monasteries and in private collections. The rich manuscript wealth of India today faces a threat of survival. However, India has possibly lost a vast amount of this wealth. Sufficient information on them is not available today. Among the existing collection, most of them are in a state of decay and damage. Among the extant collection, only a very small portion has been surveyed and documented properly. Experts fear that almost all the palm leaf manuscripts will perish in the near future due to decay, and wear and tear. The invaluable heritage of India in the form of manuscripts has to be documented, preserved and made accessible to us and to succeeding generations.

[D:\NMM \(F\)\nmm.exe](#)



National Mission for Manuscripts

- ◆ India has the largest collection of manuscripts in the world (5 million Approximately).
- ◆ India is the repository of an astounding wealth of ancient knowledge belonging to different periods of history, going back to thousands of years. Most of this knowledge belonging to different areas of intellectual activity such as religion, philosophy, science, arts and literature is preserved in the form of manuscripts. Composed in different Indian languages and scripts, they are preserved in materials such as birch bark, palm leaf, cloth, wood, stone and paper.
- ◆ National Manuscript Mission was launched five-year programme in Feb., 2003 by the Ministry of Human Resource Development, Govt. of India to get all the manuscripts and conserve them.

India is the repository of an astounding wealth of ancient knowledge belonging to different periods of history, going back to thousands of years. Most of this knowledge belonging to different areas of intellectual activity such as religion, philosophy, systems of science, arts and literature is preserved in the form of manuscripts. Composed in different Indian languages and scripts, they are preserved in materials such as birch bark, palm leaf, cloth, wood, stone and paper.



National Mission for Manuscripts

Save Our Manuscript Wealth for India's Future



Manuscripts digitized from:

- ◆ [Cloth](#)
- ◆ [Paper](#)
- ◆ [Bamboo Leaves](#)
- ◆ [Photo gallery](#)

Palm Leaf



[Home](#)

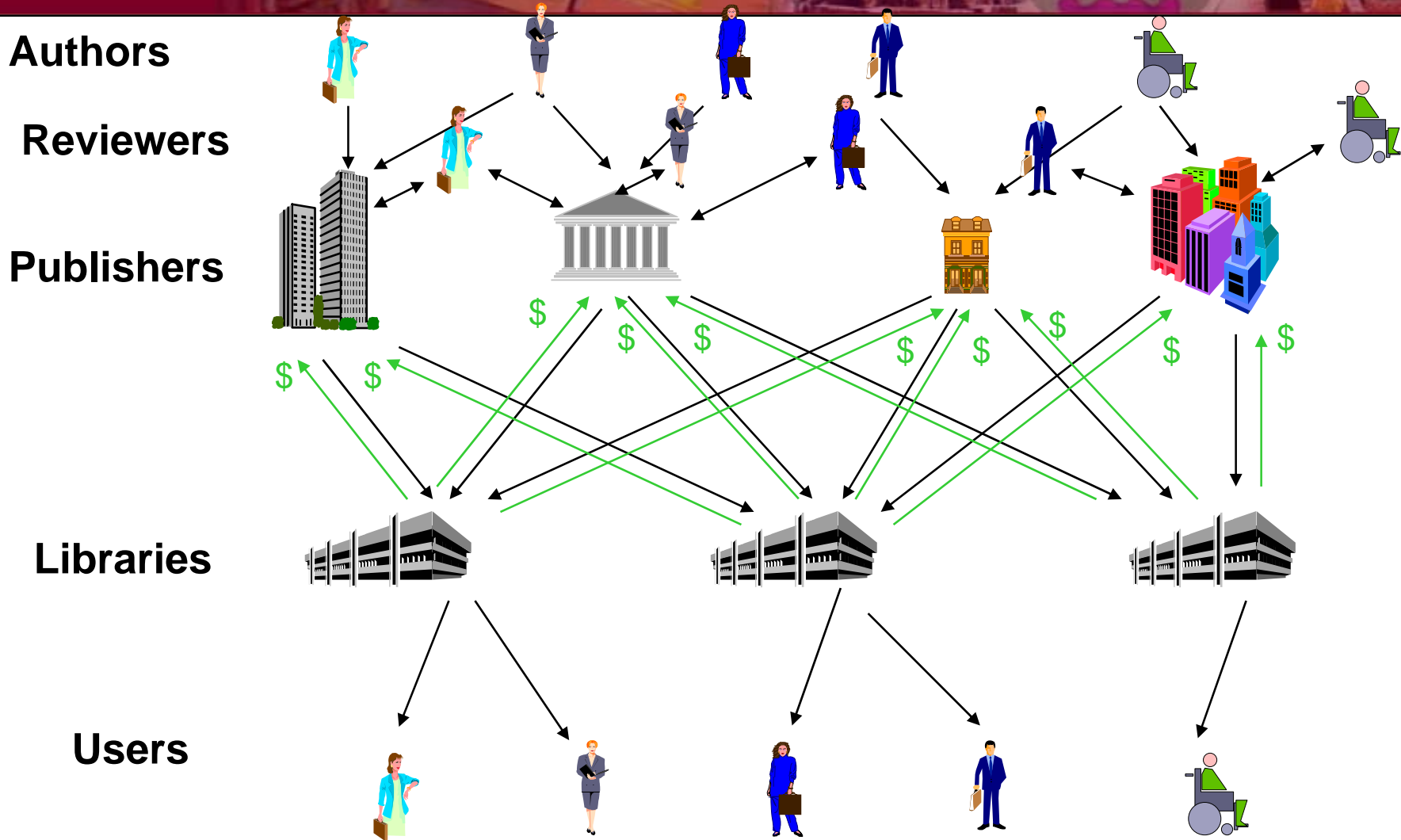
Digital Libraries in India: An overview



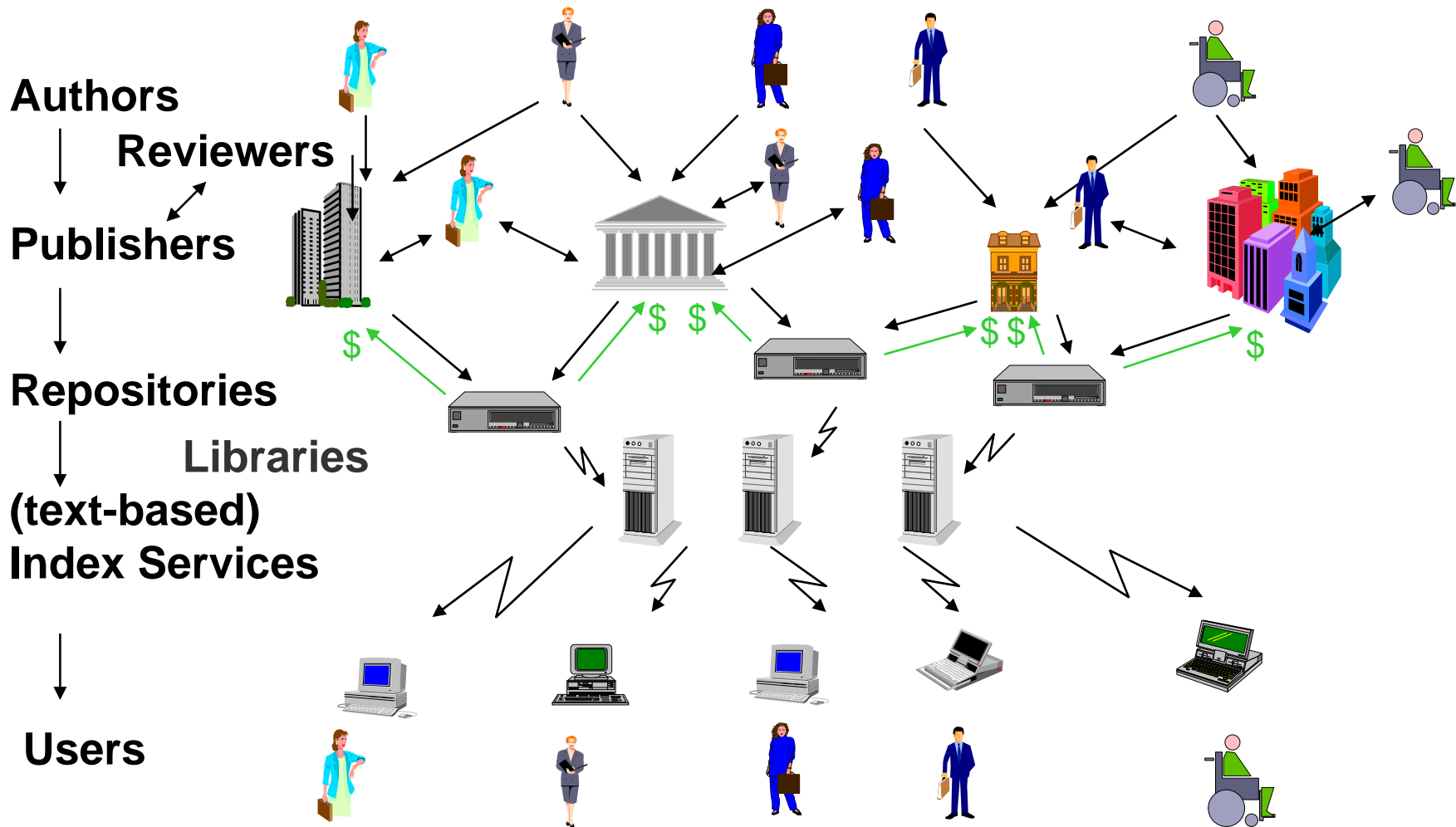
Digital libraries are organizations that provide the resources, including the specialized staff, to select, structure, offer intellectual access to, interpret, distribute, preserve the integrity of, and ensure the persistence over time of collections of digital works so that they are readily and economically available for use by a defined community or set of communities.”

- Donald Waters

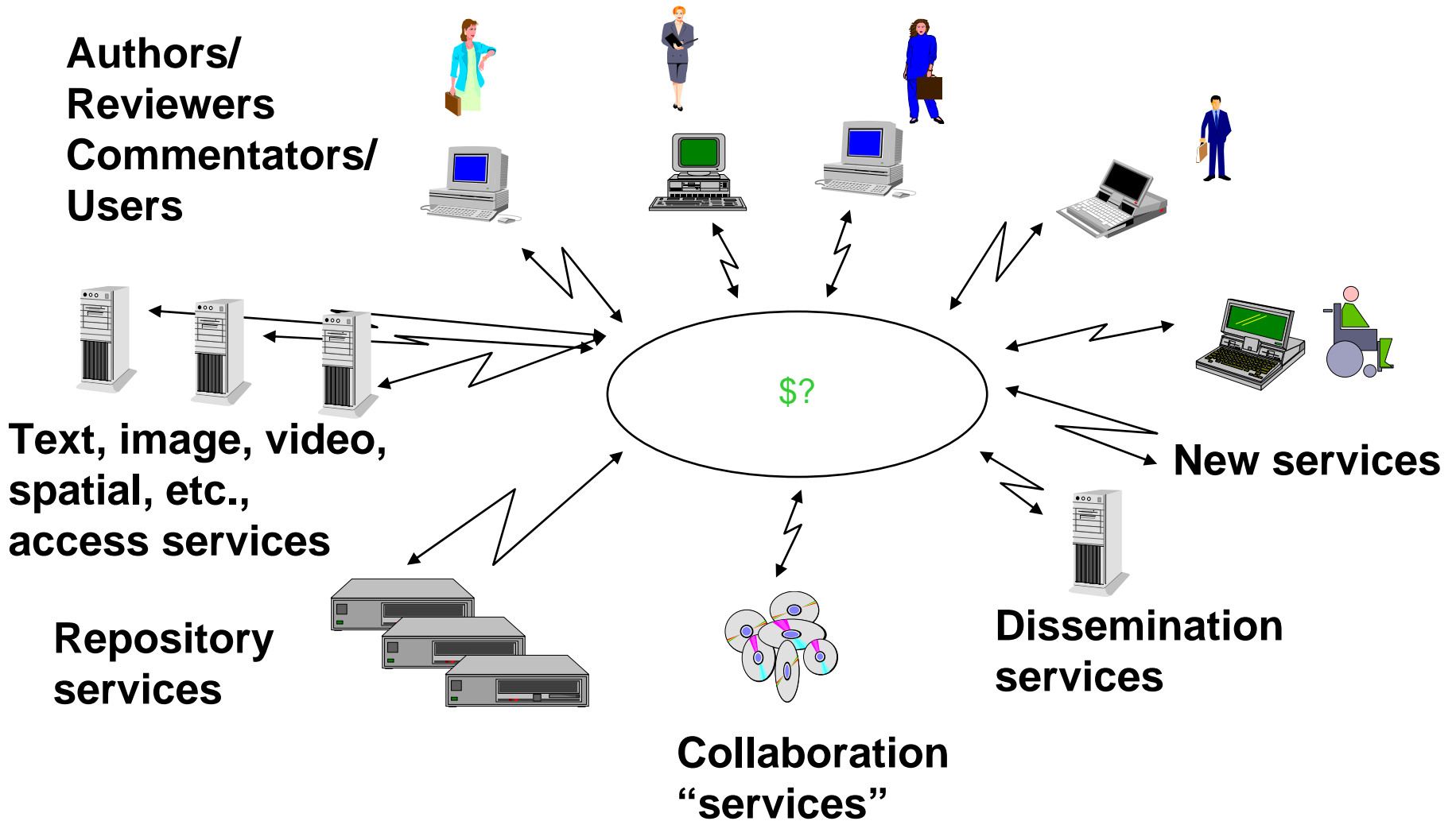
Current Model of scholarly publications



Scholarly Publications in Electronic Environment



Scholarly Publications in Electronic Environment in a Fully Distributed Model



Challenges

- Building digital collections of national importance from existing texts, documents, images . . .
- Creating new digital documents & linking them
- Selecting open source digital resources & creating & maintaining linkages (Subject portals)
- Developing / adapting management tools for digital collections
- Providing access to digital collections
- Integrating digital & other library collections
 - incl. integration of OPACs & library management tools
- Establishing services for digital libraries
 - online access & offline support
 - education & training of users and librarians
- Addressing social, legal, policy issues
- Outsourcing digitization and services

DL and Open Access / Public Domain Publishing (OAP)

- Provision of free online access to quality 'public domain' and 'Open access' scholarly material
- Enabling factors:
 - Global movement and initiatives for open access:
 - Open Access Initiative (OAI)
 - Budapest Open Access Initiative BOAI)
 - Scholarly Publishing & Resources Coalition (SPARC)
 - Open Access News (Formerly FOS)
 - OAI-complaint digital repository software (Dspace, E-print Archives, CDS Ware, Fedora, etc.)
 - Protocols for metadata and interoperability (DC & OAI-PMH)

- **'open access' means free availability of scholarly material on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited."**

Importance of Public Domain / Open Access Digital Library to India



- Protect Intellectual Property
- Remove price barriers (subscriptions, licensing fees, pay-per-view fees)
- Remove permission barriers (copyright and licensing restrictions)
- Improved visibility
- Smooth flow of information
- Improved collaboration: global platform for local research
- Improved economy
- Conserve fragile / precious originals and provide access to digital surrogates
- Integration of different media

Potential of Public Domain / Open Access Digital Library [1]

- Large number non-commercial R&D institutions in India
 - 2,900 (R&D Directory, NSTMIS, DST, 2001)
 - Academic institutions:
 - Universities (graduate, research): 310
 - Teachers in University: 72,543 (2002-03)
 - Colleges: 15,437 (as on 1/1/2002)
 - Total Number of Teachers: ~ 4,00,000 +
 - Total Enrolment - 2001-2002 (for regular courses)
 - Researchers: 60,516
 - Post-Graduates: 8,16,335
 - Graduates: 78,62,588
 - Diploma / Certificate: 81,656

Potential of Public Domain / Open Access Digital Library [2]

- Total Indian Journals : 12,000
- Technical Reports : 8,236 / year
- Theses and Dissertations : 11,451 / year
- Research Papers : 19,572 / year
- Patents: Applications File Patents Granted Patents In-force
 8,387 1,318 8,025
- Conferences : 800 –1000 / year
- Standards : 17,600
- Books : 904 / year
- Total No. of Books
(Published in India Till 2001) : 49,553

Potential of Public Domain / Open Access Digital Library [3]

- **R&D labs under govt. science agencies**
 - ➔ **Industrial research (CSIR)**
 - ➔ **Defense research (DRDO)**
 - ➔ **Agricultural research (ICAR)**
 - ➔ **Medical research (ICMR)**
 - ➔ **Biotechnology (DBT)**
 - ➔ **Environment (Deptt. of Environment & Forestry)**
 - ➔ **S&T (DST)**
 - ➔ **IT (MIT)**
 - ➔ **Space (Deptt. of Space)**
 - ➔ **Energy (Deptt. Of Non-conventional Energy Resources)**
 - ➔ **Ocean Development (Dept. of Ocean Development)**
 - ➔ **Various departments in Universities in India**
- ➔ **Other organizations both funded by government and non-government agencies**

Potential of Public Domain / Open Access Digital Library [4]

- About 50 billion Rupees is being spent annually on research and development in our country.
- The third largest scientific and technical manpower in the World, accounts for 3% of the world's publication output.
- It is estimated that there are 3,000-4,000 active scientists in India working in about 200 laboratories
- Number of S&T personnel has been increasing @6% / year*

*Pursuit and Promotion of Science: The Indian Experience. Indian National Science Academy, New Delhi (p74). 2001.



Other institutions

Archeological Survey of India (1861) – Ministry of Culture

Activities:

- * Maintenance, Conservation & Preservation of centrally protected monuments and sites and related research**
- * Protecting 3606 monuments of National importance**
- * Two year postgraduate diploma course**

Other institutions



- **Anthropological Survey of India**

- **The People of India, Tribal India: Dynamics and Social Change, Agrarian System and Agrarian Laws in Tribal India, Study of Folk Tradition,**

- **National Museum, India**
- **CSO**
- **Planning Commission**
- **Department of Biotechnology**

Digital Library Support in India



- Ministry of Human Resource Development (MHRD)
- Department of Scientific & Industrial Research (DSIR-TRP)
- All India Council for Technical Education (AICTE)
- Ministry of Communication & Information Technology (MIT)
- University Grants Commission (UGC)
- Department of Culture, Government of India
- Respective organizations under which concerned library exist

Current Digital Library Initiatives in India



Some Examples

Current Open Access / Public Domain DL Initiatives



- **Scholarly Science Journals**
- **Theses & Dissertations**
- **Institutional E-Print Archives**
- **Books (out of copyright)**
- **Data**
- **Manuscripts**
- **Newspapers**
- **Online Courseware**
- **Open Access at Metadata Level**
- **Portal and Gateway Services**



Scholarly Science e-Journals from India

Available free

Scholarly Science Journals from IAS

- Indian Academy of Sciences (IAS)
 - Established: 1934
 - Organizes meetings, discussions, seminars, symposia and publishes 11 journals.
 - All journals web accessible
 - Digitization of issues right from the first volume is under way
 - <http://www.ias.ac.in/>

Scholarly Science Journals from IAS

[2]

- IAS Journals available online:
 - Proceedings of the Indian Academy of Sciences - Chemical Sciences (www.ias.ac.in/chemsci)
 - Proceedings of the Indian Academy of Sciences - Mathematical Sciences (www.ias.ac.in/mathsci)
 - Proceedings of the Indian Academy of Sciences - Earth and Planetary Sciences (www.ias.ac.in/epsci)
 - Sadhana (Academy Proceedings in Engineering Sciences) (www.ias.ac.in/sadhana)
 - Pramana - Journal of Physics (www.ias.ac.in/pramana)
 - Journal of Biosciences (www.ias.ac.in/jbiosci)
 - Bulletin of Materials Science (www.ias.ac.in/matersci)
 - Journal of Astrophysics and Astronomy (www.ias.ac.in/jaa)
 - Journal of Genetics (www.ias.ac.in/jgenet)
 - Resonance - Journal of Science Education (www.ias.ac.in/resonance)
 - Current Science (www.ias.ac.in/currsci)



Journals

	Name of journal	No. of issues a year	Volume number in 2004	E-mail address
1	Journal of Chemical Sciences	6	116	chemsci@ias.ernet.in
2	Proceedings - Mathematical Sciences	4	114	mathsci@ias.ernet.in
3	Proceedings - Earth and Planetary Sciences	4	113	epsoci@ias.ernet.in
4	Sadhana (Academy proceedings in engineering sciences)	6	29	sadhana@ias.ernet.in
5	Pramana - Journal of Physics	12	62, 63	pramana@ias.ernet.in
6	Journal of Biosciences	4	29	jbiosci@ias.ernet.in
7	Bulletin of Materials Science	6	27	matersci@ias.ernet.in
8	Journal of Astrophysics and Astronomy	4	25	jaa@ias.ernet.in
9	Journal of Genetics	3	83	jgenet@ias.ernet.in
10	Resonance - Journal of Science Education	12	9	resonanc@ias.ernet.in
11	Current Science (published by the Current Science Association in collaboration with the Academy)	24	86, 87	currsci@ias.ernet.in

[Top](#)

<http://www.ias.ac.in/>

Scholarly Science Journals from INSA

- Indian National Science Academy (INSA)
 - Established: 1935
 - Publish journals, organize scientific discussions and bring out proceedings and monographs
 - DSIR supported project for digitizing and web hosting of INSA journals:
 - Indian Journal of Pure & Applied Mathematics
 - Proceedings of INSA A Physical Sciences
 - Proceedings of INSA B Biological Sciences
 - Indian Journal of History of Science
 - <http://www.insa.ac.in/>



SA with relevant details.

Search:

Search Help

Our Publications

- *Indian Journal of Pure & Applied Mathematics*
- *Proceedings of INSA - Part A (Physical Sciences)*
- *Proceedings of INSA - Part B (Biological Sciences)*
- *Indian Journal of History of Science*

<http://www.insa.ac.in/>

The publication activities of INSA have the roots to the depth of Academy's foundation in 1935 as being one of the key activities of the Academy. The activities encompass publication of three leading journals namely the Proceedings of the Indian National Science Academy Part A devoted to Physical Sciences and Part B devoted to Biological Sciences, the Indian Journal of Pure and Applied Mathematics (IJPAM) and the Indian Journal of History of Science (IJHS). In addition, the Academy publishes its Year Book, Annual Report, INSA News, Compendium of Fellows and Biographical Memoirs of deceased Fellows from time to time, Special Publications and INSA Seminars/Symposia proceedings in a regular way. The Academy has constituted a Publication Advisory Board (PAB) for rendering valuable guidance for strengthening the publication activities.

Publication Advisory Board (2004)

M S Valiathan (Manipal) President, INSA-Chairperson, S Prasad (New Delhi), I P Abrol (Delhi), R Gadagkar(Bangalore), S K Sopory (Delhi), R Rajaraman (Delhi), V Ramamurti (Chennai), V Kannan (Hyderabad), N Sathyamurthy (Kanpur), R Narasimha (Bangalore), K Muralidhar (Delhi)

Indian Journal of Pure & Applied Mathematics

ISSN 0019- 5588



The Academy published Mathematics and related research articles initially in the Proceedings of INSA, but considering the large increase in the influx of mathematical articles, the need for bringing out a separate journal in this field was felt, as a result of which the Indian Journal of Pure & Applied Mathematics (IJPAM) came into being in January 1970. The journal was quarterly in the beginning but had to be later changed over to a bimonthly one. As the publishing of the journal could not be kept abreast with the tremendous growth in the number of articles, its periodicity had to be revised further by changing it to a monthly publication from 1973. IJPAM publishes papers of original research in the areas of Pure and Applied Mathematics, Statistics and related mathematical sciences such as Operation Research, Game Theory, Mathematical Economics, Computer Science, Stochastic Modelling, Numerical Analysis, Pattern Recognition, Mathematical Systems. The Editor might also invite papers on special topics, which are of current interest. However, all papers are refereed whether invited or contributed. The authors are encouraged to contribute and prepare their manuscript as per INSA guidelines. The size of the journal has been changed to Demi Quarto A4 International since January 1998.

The journal is indexed in the Science Citation Index: Current Contents; Mathematical Reviews; INSPEC Science Abstracts (Part A); Zentralblatt fur Mathematic and all the major abstracting services of the world.

Editor (2004)

User Login

Login

.....

Forgot Password?

Register



To read our journals you need to have Adobe Reader installed.



- MedIND: Biomedical Journals from India (<http://medind.nic.in/>): Full-text of 28 Journals Indexed in IndMED.
- Project supported by the Indian MEDLARS Centre, National Informatics Centre (NIC)



medIND Project
Available Journals
Contacts

Indian Medlars Centre

medIND

Biomedical Journals from India

One point resource of peer reviewed Indian biomedical literature covering full text of IndMED journals. It has been designed to provide quick and easy access through searching or browsing.

Search IndMED

Fulltext Only.

20 Items.

Journals available on medIND :

- Endodontology
- Health Administrator
- Indian Journal of Aerospace Medicine
- Indian Journal of Allergy Asthma and Immunology
- Indian Journal of Anaesthesia
- Indian Journal of Chest Diseases and Allied Sciences
- Indian Journal of Clinical Biochemistry
- Indian Journal of Community Medicine
- Indian Journal of Medical & Paediatric Oncology
- Indian Journal of Medical Microbiology
- Indian Journal of Medical Research
- Indian Journal of Occupational and Environmental medicine
- Indian Journal of Occupational Therapy
- Indian Journal of Otolaryngology and Head and Neck Surgery
- Indian Journal of Pharmacology
- Indian Journal of Preventive and Social Medicine
- Indian Journal of Thoracic and Cardiovascular Surgery
- Indian Journal of Tuberculosis
- Indian Pediatrics
- J.K. Practitioner
- Journal, Indian Academy of Clinical Medicine
- Journal of Indian Rheumatology Association
- Journal of The Anatomical Society of India
- Journal of Indian Association of Pediatrics Surgeons
- Journal of Indian Society of Pedodontics and Preventive Dentistry
- Medical Journal Armed Forces India
- NTI Bulletin
- Trends in Biomaterials and Artificial Organs

<http://medind.nic.in/>

DISCLAIMER: Best efforts have been made to present the contents of Journals as they appear in original. However, the published hard copy version should be considered as the final version.

TERMS OF USE and PRIVACY POLICY: The site is meant for individual use only for research purposes by Biomedical Researchers and Health Care Providers. The content of the site is not meant to be used by patients for self-treatment. Copying or distribution of the contents/data is

Some more e-journals from India

- Neurology India
- OJHAS
- NISCAIR <http://www.niscair.res.in>
- Indian Economic Journal
<http://www.indianeconomics.org/>
- Kalakalp from Indira Gandhi National for Arts
<http://www.ignca.gov.in>

Address http://oii.igidr.ac.in

Adobe Y! Search Sign in My Web Y! Mail Mobile

Open Index Initiative at IGIDR, Mumbai

Open Index Initiative

A Cooperative Effort to Index, Indian Social Science Journals

(Beta Testing)

OII : A Bibliographic database of Indian Social Science journals

Free Online Journals : Free Online Social Science Journals.

Union Catalogue : A database of journal holdings of major Indian Social Science Libraries.

Indian Social Science Research Institutes
Citywise list of Institutes conducting teaching programmes and research in Social Science and related areas.

Online Directory : Search for Indian Library

Oil Search **GO**

Advanced Search
HELP

LINKS

- ERIC
- ICSSR
- Indian Economy
- RePEc
- Resources for Economists
- SOSIG
- SSRN e-Library

LAST UPDATED
17th October, 2005

Slide 23 of 23 Blueprint

Start Open Index Initiativ... C:\WINNT\System32\c... Microsoft Excel Microsoft Word 8:11 PM

Microsoft PowerPoint - ... C:\WINNT\System32\c... PATHWORKS VT320

Open Index Initiative at IGIDR: A cooperative effort to develop online database consisting of index with abstracts journal articles, book reviews and conference papers published in Indian social science journals

Search for which contain of the words

Begin Search

Scanned Journal Articles @ IIT Delhi

About this collection

This is a collection of scanned old bound volumes of journals: Applied Optics, British Corrosion Journal, Automatica, Fuel, Journal of Soil and Water Conservation of India and Vacuum. Principal Investigator: Dr. Jagdish Arora Head, Library Services, Central Library, IIT Delhi

How to find information in the optical collection

There are 3 ways to find information in this collection:

- search for particular words
- access publications by title
- access publications by filename

You can *search for particular words* that appear in the text from the "search" page. This is the first page that comes up when you begin, and can be reached from other pages by pressing the *search* button.

You can *access publications by title* by pressing the *titles a-z* button. This brings up a list of books in alphabetic order.

You can *access publications by filename* by pressing the *filenames* button. This brings up a list of entries, sorted by original filename.



Electronic Theses & Dissertations (ETD) in India

Full Text and Meta Data Levels

Electronic Theses & Dissertation (ETD) at IIT Delhi

- ETD @ IIT Delhi
 - Initiated as projects with grants received from the Ministry of Human Resource Development & Deptt. of Biotechnology
 - 500+ Ph.D. theses scanned
 - Electronic submission of theses approved by the Institute senate
 - D-Space Configured for submission and access
 - More than 25,000 pages of old volumes of journals were scanned;
available on Institute Intranet



Indian Institute of Technology Delhi

Search DSpace: [input] Go Advanced Search

Digital Library of IIT, Delhi >

Theses and Dessertations

Welcome to our digital repository of IIT, Delhi! More exciting news to appear here.

Search

Enter some text in the box below to search DSpace.

[input] Go

Communities in DSpace

Select a community to browse its collections.

- Department of Applied Mechanics
Department of BMEB
Department of Physics
Ph.Ds

Testing is going on

It can be extensively configured by installing modified JSPs, and altering the site configuration.

- Home
Communities & Collections
Titles
Authors
By Date
Sign on to:
Receive email updates
My DSpace authorized users
Edit Profile
Help

Electronic Theses & Dissertation (ETD) at IIT Bombay



- ETD @ IIT Bombay
 - Submission commenced in 1999 for M.Tech. Dissertations and Ph.D. theses
 - More than 3,500 deposits as on date
 - Bibliographic data along with abstracts available to all
 - Full-text of theses and dissertations available on Intranet

select a collection

Doctoral Theses

Masters Dissertations

Horizontal separator line

<http://www.library.iitb.ac.in/>

Doctoral Theses

We have good number of theses on our database providing access to bibliographic information and an abstract since 1965 till to-date. Click on [Doctoral Theses](#) to search and browse bibliographic details and the abstract.

Masters Dissertations

The database of Masters dissertations contains bibliographic information and an abstract since 1999 till to-date. Click on [Masters Dissertations](#) to search and browse bibliographic details and the abstract

Total 1700+ full text Doctoral theses and Masters dissertations are available on the ETD database. <http://etd.library.iitb.ac.in> (Intranet)

Please send your comments or suggestions to [Mr. Mahendra N. Jadhav](#) Asst. Librarian, Central Library, IIT Bombay.

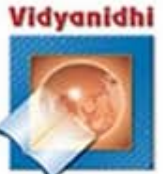
[Powered by Greenstone Digital Library Software](#)



Horizontal separator line

Electronic Theses & Dissertation (ETD) - Vidyavidhi Project

- Vidyavidhi
 - A digital library initiative for digitizing and hosting theses and dissertations
 - Dept. of L&IS, University of Mysore
 - Supported by DSIR, GOI
 - Part of global ETD initiative
 - Develop workflows, DTD, multilingual support...
 - <http://www.vidyavidhi.org.in/>



Indian Digital Library of Electronic Theses

A University of Mysore-NISSAT Initiative

Vidyanidhi (meaning 'Treasure of Knowledge' in Sanskrit) is a Digital Library Initiative currently underway at the Department of Library and Information Science, University of Mysore, India. This initiative is sponsored by NISSAT, DSIR Government of India

A doctoral thesis is a rich source of information on a given topic, in terms of background information, detailed methodology, data sets, discussions, inferences drawn, and having a very exhaustive bibliography. It is the outcome of a focussed, intensive study on a topic, which, in most cases, may not be available in any other form.

Electronic Thesis and Dissertations of ETDs as they are popularly known as, are an efficient medium to preserve, store and make available doctoral theses and dissertations.

ETDs gracefully overcome many of the problems that are encountered in archiving, accessing and searching of theses and dissertations.



[About Us](#) [Who We Are](#) [ETD Worldwide](#) [Sponsors](#) [Contact Us](#)

Vidyanidhi: www.vidhyanidhi.org.in



Search ETD:

 Go

Advanced Search

Home

Browse

- Communities & Collections
- Titles
- Authors
- Guides
- By Date
- By Subject

Sign on to

- Submit Thesis login/register
- Edit Profile

Kiosk

- Help
- Project Site
- Study@IISc

ETD at Indian Institute of Science >

Welcome to etd@IISc!

This is the digital repository of Theses and Dissertations of Indian Institute of Science, Bangalore, India. You can search, browse and access theses and dissertations from this collection. This repository has been developed to capture, disseminate and preserve research theses of Indian Institute of Science. It complements ePrints@IISc, the research publications repository of IISc.

Number of theses in etd@IISc: **142**

Search

Enter some keywords or text in the box below to search the whole Repository(See Help for more details)

 Go

Browse communities and collections in etd@IISc

- Division of Biological Sciences [29]
- Division of Chemical Sciences [14]
- Division of Electrical Sciences [55]
- Division of Information Sciences [3]
- Division of Mechanical Sciences [37]
- Division of Physical and Mathematical Sciences [4]

January 29, 2006

ETD Help

- How to Submit a thesis
- Thesis Templates

National & International ETD Services

- NDLTD
- Search Thesis World wide
- Vidyanidhi

Electronic Theses & Dissertation (ETD) at PRL, Ahmedabad

- Physical Research Laboratory,
Ahmedabad
 - E-version of thesis available for last
four years
 - Plans to cover last 7 years



Institutional E-Print Archives

Open Access Initiatives

Institutional E-Print Archives at IISc, Bangalore

- eprints@iisc
 - E-Print archive of Indian Institute of Science, Bangalore
 - Online digital repository of IISc research papers
 - Research papers (preprints, post-prints), book chapters, tech reports, unpublished findings, conf papers, magazine articles
 - Set up using eprints.org open source software
 - Part of worldwide institutional e-print archives
 - <http://eprints.iisc.ernet.in/>



Welcome to eprints@iisc

Search the Titles, Abstracts or Keywords

Submit

NCSI has set up an eprints archiving facility for the [IISc](#) research community, using the GNU [EPrints](#) software developed at the University of Southampton. This service enables the Institute community to archive their preprints, postprints and other scholarly publications. In keeping with the objectives of the [EPrints movement](#) and the [Free Online Scholarship \(FOS\) movement](#), we expect this service to facilitate the Institute researchers in self-archiving and long-term preservation of their scholarly publications, provide easy access to these publications world wide and improve impact of their research.

While eprints@iisc can be accessed by anybody, submission of documents to this archive is limited to the IISc research community.

Your comments and suggestions for improving this service are most welcome. Please send your feedback to the [Archive Administrator](#).

[Archive FAQ](#)

[Submission Policy](#)

[Publishers Policy](#)

eprints@iisc

[Browse](#)

Browse the archive by [Dept/Centre](#) or [Year](#).

[Latest Additions](#)

View items added to the archive in the past week.

[Simple \(metadata\) Search](#)

Search the archive using the most common fields.

[Advanced \(metadata\) Search](#)

Search the archive using a more range of fields.

[Fulltext Search Using GSDL](#)

Search the archive using GSDL

[Deposit](#)

Registered users may submit documents to the archive.

[Register](#)

Register for an account (or reset a forgotten password). You should register first before submitting documents to the archive.

[Cross Archive Searching](#)

Institutional E-prints Archives under INDEST Consortia

- INDEST Consortium promotes establishment of e-print archives at its member institutions under “INDEST Extended”. Training imparted to participants from 22 institutions at NCSI, IISc, Bangalore. Institutional E-prints Archives has already been established at:
 - IIT Delhi (www.eprint.iitd.ac.in/)
 - IIT Bombay (www.library.iitb.ac.in/~mnj/etd/)
 - IIT Kharagpur (intranet)
 - IIIT Allahabad (eprints.iiita.ac.in/)
 - IIM Kozikode (<http://eprints.iimk.ac.in/>)



Search DSpace:
 Go
[Advanced Search](#)

[Home](#)

Browse

- [Communities & Collections](#)
- [Titles](#)
- [Authors](#)
- [By Date](#)

Sign on to:

- [Receive email updates](#)
- [My DSpace](#)
authorized users
- [Edit Profile](#)
- [Help](#)
- [About DSpace](#)

EPrints@IIT Delhi >

Eprints@IIT Delhi

Welcome to our digital repository of Indian Institute of Technology Delhi research and **Electronic Submission of Theses and Dissertations [ETD]!**

See other Digital Collections at Eprints@Central Library, IIT Delhi. [Click here](#) to go.

Search

Enter some text in the box below to search DSpace.

Communities in DSpace

Select a community to browse its collections.

- [Convocations](#) [1]
- [Electronic Theses and Dissertations](#) [0]
- [Faculty Research Publicatons](#) [1008]
- [Students Publications at IIT Delhi](#) [0]

ETD @Central Library, IIT Delhi!

[How to Register](#)

Mediated Deposit

Are you or your department too busy to archive all of your material in the *IIT Delhi Research Archive*? We can help by offering a mediated deposit service to ease the load on you. Contact at librarian@library.iitd.ac.in for assistance.

For more info/help contact

[Dr Jagdish Arora](#)
 Librarian, IIT Delhi.
 OR
[Mr Ashok Kumar Rai](#)



Welcome to IIMK's Scholarship Repository ePrints@IIMK

Welcome to IIMK's institutional repository, a scholarly archiving facility for the IIMK community, using the GNU EPrints software, developed at the University of Southampton. This service enables the Institute community to archive their preprints, post prints and other scholarly publications. In keeping with the objectives of the [Open Access movement](#), we expect this service to facilitate the Institute researchers in [self-archiving](#) and long-term preservation of their scholarly publications, provide easy access to these publications world wide and improve impact of their research. While eprints@iimk can be accessed by anybody, submission of documents to this archive is limited to the IIMK research community. Your comments and suggestions for improving this service are most welcome. Please send your feedback to the [Archive Administrator](#).

Search Metadata & Full Text

Browse
Year, Author, Subject, Title

Simple Search

Advanced Search



Register

Latest Additions

Registered User Area

FAQ on ePrints

Cross Archive Search

Worldwide



OpenMED@NIC is an **open access** archive for Medical and Allied Sciences. Here authors / owners can self-archive their scientific and technical documents. For this they need to **register** once in order to obtain a user id in OpenMED system. However no registration is required for searching the archive or viewing the documents.

OpenMED is a discipline based International Archive. It accepts both published and unpublished documents having relevance to research in Medical and Allied Sciences including Bio-Medical, Medical Informatics, Dental, Nursing and Pharmaceutical Sciences. These could be preprints (pre-refereed journal paper), postprints (refereed journal paper), conference papers, conference posters, presentations, technical reports/departmental working papers and theses. In case of non-English documents, descriptive data [Author, Title, Source etc.], abstract and keywords must be in English. Submitted documents will be placed into the submission buffer and would become part of OpenMED archive on their acceptance.

The aim of OpenMED is to provide free service to academics, researchers, and students working in the area of Medical and Allied Sciences. We expect it to promote self-archiving and

Search

OpenMED

- ▶ [Latest Additions](#) **RSS**
- ▶ [Simple Search](#)
- ▶ [Advanced Search](#)
- ▶ [Browse by Year](#)
- ▶ [Browse by Subjects](#)
- ▶ [Self Help Tutorial](#)

Users

- ▶ [Sign In](#)
- ▶ [Register](#)

Our Related Sites

- ▶ [IndMED](#)



Digitization of Books

Million Book Project

Million Book Project



- **Universal Digital Library Project (<http://www.dli.gov.in/>)**
- **Portal on Digital Library of India launched in Sept., 2003 by the President of India, Dr. APJ Abdul Kalam. The portal has more than 27,000 books in digitized form.**
- **Goal: Free-to-read, searchable collection of one million books (out-of-copyright)**
- **Test bed for research - language processing, indexing, search and retrieval**
- **Support from Carnegie Mellon University (CMU) coordinated in India by Indian Institute of Science, Bangalore**

Scanning Centre Wise Report as on 06-06-2006

Scanning Centre	No of Books	No of Pages	
			In Millions (approx)
CCL, Hyderabad	12947	2761403	2.7
RMSC, Hyderabad	11759	5120717	5.1
TTD, Tirupati	11680	2986763	3
SCL, Hyderabad	6475	2280460	2.3
AKCE, Tamilnadu	6392	970017	0.95
Salarjung Museum, Hyderabad	6128	2339384	2.34
IIIT, Allahabad	5536	1089407	1.1
Osmania University, Hyderabad	5331	1867927	1.9
Rashtrapati Bhavan , Delhi	4832	2023364	2.0
IISc, Bangalore	3323	1242060	1.2
SASTRA, Tamilnadu	1849	568017	0.57
Pune University	1021	279418	0.28
IIAP, Bangalore	961	343447	0.33
Sringeri , Karnataka	630	196302	0.2
ASR, Melkote, Karnataka	529	175393	0.2
SVORI , Tirupati	495	191224	0.2
Others	351	15724	0.016
Total	80,239	24451027	24.451



Digital Library of India

Hosted by: Indian Institute of Science, Bangalore in co-operation with
 CMU, IIT, NSF, EBNET and MCIT for the Govt. of India and 21 participating centres



- Home
- Vision
- Mission
- Goals
- Benefits
- Content Selection
- Current Status
- People
- Partners
- Funding
- Copyright Policy
- FAQ
- RFP
- Members

Books Journals Newspapers
 Palm-Leaves (Manuscripts)

Title

Author

Subject Any Subject

Year -

Language Any Language

Scanning Centre Any Centre

[Our Partner Site for more books](#)
[Presentations and Report](#)
[Statistics Report](#)
[Status Report](#)
[Feedback](#)

Hits since December 27, 2005

DLI Collections

For the first time in history, the Digital Library of India is digitizing all the significant [\(...more\)](#)

Books	Journals	Newspapers	Manuscripts
<ul style="list-style-type: none"> ♦ Rashtrapati Bhavan ♦ Sanskrit ♦ TTD, Tirupathi ♦ Tibetan ♦ Gurmukhi ♦ more... 	<ul style="list-style-type: none"> ♦ Astrophysics ♦ Astronomy ♦ Biosciences ♦ Current science ♦ Resonance Proc. ♦ Indian Academy ♦ more... 	<ul style="list-style-type: none"> ♦ Times of India ♦ Indian Express ♦ The Hindu ♦ Deccan Herald ♦ Eenadu ♦ Vaartha ♦ more... 	<ul style="list-style-type: none"> ♦ Saraswathi Mahal ♦ Tirumala Tirupathi Devasthanams (Telugu, Sanskrit) ♦ more...

Universal Digital Library Project

Title Beginning with...

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Author's Last Name

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Year

1850-1900 1901-1910 1911-1920 1921-1930 1931-1940 1941-1950 1951-

Librarian's Digital Library



- Established at DRTC, Bangalore by Dr. A.R.D. Prasad
- Open to the entire community of Librarians
- Powered by DSPACE
- The depository contains:
 - Publications / Articles
 - Theses / Dissertations
 - PowerPoint Presentations
 - Demo of Multi-lingual Documents
 - Photographs of LIS activities
 - Photographs of DR. S.R. Ranganathan

Librarians' Digital Library (LDL)

(<https://drtc.isibang.ac.in>)



LDL Librarians' Digital Library

Search DSpace

[Advanced Search](#)

- [Home](#)
- [Collections](#)
- [Titles](#)
- [Authors](#)
- [By Date](#)
- [Email alerts](#)
- [Login](#)
authorized users
- [Edit Profile](#)
- [Help](#)

LDL >

Upgraded

Recently we have upgraded LDL to Dspace version 1.3.2. Please let us know if you have any problems while searching or submitting or subscribing for email alerts or logging in or even registering

Communities in LDL

Choose a community to browse its collections.

[Library and Information Science](#) [194]

Our Information

- [LDL Statistics](#)
- [Tools of DRTC](#)
- [About DRTC](#)
- [LDL Team](#)
- [DSpace in India](#)



Documentation Research and Training Centre

SDL Search Digital Libraries

[Home](#)

Welcome to the DRTC Search for Digital Libraries (SDL)!

Harvester Stats

The SDL currently has **5002** papers from **11** archives indexed.

Add Your Archive

[Click here](#) to add your system to our index.



Open
ACCESS
Research

PUBLIC
KNOW
LEDGE

SDL harvests Digital Libraries and Open Access Journals in the field of **Library and Information Science**. To add your archive to SDL, please use the 'Add your Archive' link on the left side of the Home page.

Note to archive submitters: Kindly note that SDL is a search engine meant for open archives of Library and Information Science. Hence submit your archive only if it is related to the domain of Library and Information Science.

[Advanced Search](#)[Browse Archives](#)Search papers for: in [Home](#) | [Search](#) | [Archives](#) | [Submit Archive](#) | [Links](#) | [About](#)

[Documentation Research and Training Centre \(DRTC\)](#)

Indian Statistical Institute
8th Mile Mysore Road, RV College PO,
Bangalore- 560 059, India


Phone: +91 (80) 2848 3002-6 Fax : +91 (80) 2848 4265 Email : ard@drtc.isibang.ac.in

SDL Search Digital Libraries

Home > Browse Archives

Select an archive to browse...

- ▶ [All Archives](#) (5002 records)
- ▶ [Australian Library and Information Science Association \(ALIA\)](#) (18 records)
- ▶ [CaltechLIB: Caltech Library System Papers and Publications, USA](#) (30 records)
- ▶ [CCSD: Sciences de l'Information et de la Communication, France](#) (582 records)
- ▶ [CNR Bologna Research Library, Italy](#) (8 records)
- ▶ [D-Lib Magazine](#) (319 records)
- ▶ [DLIST, University of Arizona, USA](#) (423 records)
- ▶ [E-LIS: E-Prints in Library and Information Science](#) (2409 records)
- ▶ [LDL: Librarians' Digital Library, DRTC, India](#) (182 records)
- ▶ [OCLC](#) (349 records)
- ▶ [University of North Carolina, USA](#) (178 records)
- ▶ [WWW Conference Archive EPrint servers](#) (504 records)

Quick Search 

in

[Advanced Search](#)



Other Digital Initiatives in India

Other Major Digital Library Initiatives .. [1]

- **Traditional Knowledge Digital Library (TKDL)**
 - <http://203.200.90.71/IndiaTkdl/index.asp>
 - **Focus on preservation of community knowledge resources for posterity**
 - **To give legitimacy to the existing traditional knowledge and enable protection of such information from getting patented from India's traditional knowledge systems**
 - **Joint Venture of National Institute of Science Communication and Information Resources (NISCAIR) and Department of Indian Systems of Medicine and Homeopathy (ISM&H)**
 - **Documentation of this existing knowledge to be made available in public domain, on various traditional systems of medicine**

Other Major Digital Library Initiatives.[2]

- **National Health Information Collaboration (NHIC)**
 - WHO/ ICMR project - Health InterNetwork India
 - Portal for Indian health data and information
 - Free open source software under development
- **URDIP: CSIR Unit for Research & Development for Information Products**
 - Open access to Indian patents and medicinal plants
- **Central Secretariat Library**
 - Major Project - Gazette of India (post independence only; pre-independence in microfilm format with British Library, London)
 - Annual Reports

Other Major Digital Library Initiatives . . [3]

- **Khuda Baksh Oriental Library**
 - **Activities being initiated to archive valuable centuries old special collection**
 - **Manuscripts – Around 4 Lakh pages**
- **National Library, Kolkata**
 - **Activities initiated to archive valuable special collection and brittle books**
 - **Scanning and archiving of rare English books and documents published before 1900 and Indian publications of pre 1920 are considered for digitization.**
 - **Pilot Project – 6600 selected books in Indian and English languages have already been scanned and stored on CDs (total of over 25,00,000 pages) www.nlindia.org**

Other Major Digital Library Initiatives ...[4]



- Digitization of Records of Fellow of INSA (INSA)
 - Special Collection archived by the INSA library
 - Archived in print format since last over six decades
 - Digitization - initiated in 1998-99
 - Full-text Data stored in TIFF (compressed) with database containing adequate search parameters

Other Major Digital Library Initiatives ...[5]



- Nalanda Digital Library at NIT Calicut
 - E-books
 - E-Journals (Open Access)
 - Requests for Comments (RFC)
 - E-theses
- Digitization of Debates of Parliaments of India
 - All debates, questions, committee reports, biodata of present and past MPs including photographs and addresses, etc. have been digitized and available on the Web
<http://parliamentofIndian.nic.in/>

Other Major Digital Library Initiatives . . .[6]

Sri Venkateswara Temple Digital Library

- **The richest temple in the world**
- **More than 20 million pilgrims visiting the temple every year**
- **Annual budget is around INR 7000 millions** Around 13,000 employees are working in this Organization
- **40,000 old books aged up to 200 years in different Indian Languages and manuscripts of Indian culture, heritage and history.**
- **20,000 bundles of Palm leave manuscripts. Each bundle contains around 500 palm leaves, aging around 400 to 500 years.**
- **Poorna Prajan Vidya Peetha, Bangalore, a centre, contains about 15,000 books relating to the Hindu Religion and Philosophy**

Statistics

Language	No. of Books Scanned	No. of Pages scanned
SANSKRIT	1,918	7,06,139
TELUGU	1,588	4,14,939
HINDI	336	24,320
TAMIL	586	1,02,196
KANNADA	1,242	3,68,335
URDU	3	826
MULTI	919	3,55,101
ENGLISH	3,515	1,59,474
Total	10,216	39,31,330



Kautilya - Digital repository for IGIDR's publications mainly conference proceedings, thesis (abstracts) and dissertations and working papers etc.

2/15/2006

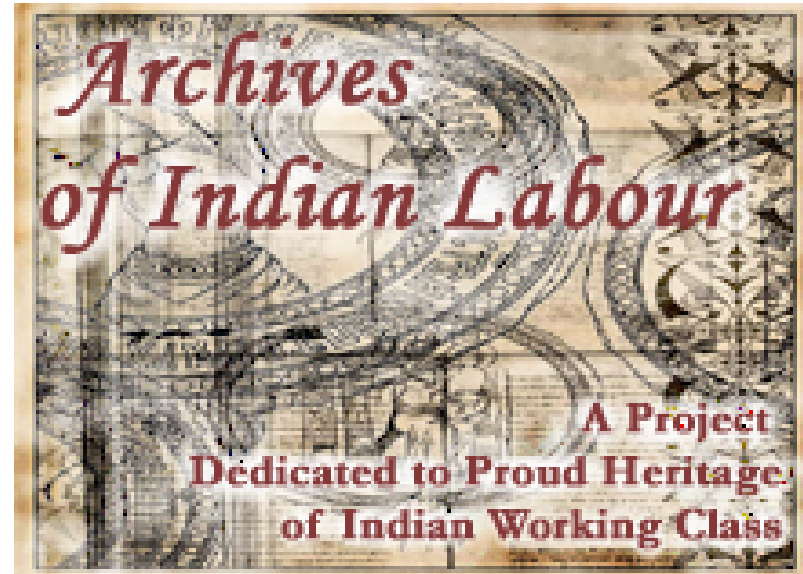
Max Mueller Bhawan, New Delhi
Indira Gandhi National Centre for the Arts

Other Major Digital Library Initiatives ...[7]

Archives of Indian Labour V.V. Giri National Labour Institute

Heritage of Indian Working Class

- ➔ Commissions on Labour
 - ➔ Oral History Collections
 - ➔ Trade Union Collections
 - ➔ Regional Collections
 - ➔ Strike Collections
- ➔ Powered by Green Stone Digital



Library <http://www.indialabourarchives.org/>

Government Publications/Information

- Now a days most of the public documents are available on respective Ministry / Department website in pdf format.
- Digitization of various old records at both state level as well as at centre level either going on or being planned.
- Other Developments
 - Information Technology Act
 - Right to Information Act

Business & Other Information

- Most of the good business organizations are having their websites
- Most of the Banks are online
- Airlines and Railway- online
- E-commerce
- Plastic Money
- Tours & Travels
- Internet@home
- Telephone available even in rural areas
- Education related information available online

Some Gateway services for open access resources in India



- SciGate: Science Information Portal (IISc)
- AeroInfo: Aerospace Virtual Library (NAL)
- Biotech Portal @ IIT Delhi
- Library Portal @ IIT Kharagpur

Newspapers

- **Times of India –English daily(epaper):**
<http://epaperdaily.timesofindia.com/>
 - **Complete News paper with all city additions**
 - **Current + 6 days**
 - **Plans to charge Rs. 50 per month and Rs 5000 per month for archives in Pdf**
- **Other newspapers with e-archives include: Hindustan Times, Hindu, Indian Express, Anand Bazar Patrika, Enadu, etc.**

Data

- National Chemical Laboratory (NCL)
 - National Collection of Industrial Microorganisms (NCIM)
 - Culture collection of around 3700 strains of algae, bacteria, fungi and yeast
 - Free access to all related data
 - <http://www.ncl-india.org/ncim/>
- National Centre for Biodiversity Informatics
 - Indian biodiversity informatics
 - <http://www.ncbi.org.in>



Digital Learning Environment

Online Courseware

- National Programme on Technology Enhanced Learning (NPTEL) (<http://www.nptel.iitm.ernet.in/>) MHRD-sponsored programme Executed by all IITs & IISc
- Aimed at developing curriculum-based video and web courses (at least 200)
- Several web-based courses already available from web-sites of participating institutions
- Online Courseware Directory in IT at IIT Delhi (Ministry of Information Technology-sponsored Project)



National Programme on Technology Enhanced Learning

Funded by the Ministry of Human Resource Development (MHRD), Government of India

[Home](#)
[Objective](#)
[Activities](#)
[Courses](#)
[Downloads](#)
[Events](#)
[Members](#)
[Contact us](#)

This site is best viewed in 1024x768 resolution

Joint Venture by Seven Indian Institutes of Technology(IITs) and Indian Institute of Science (IISc)

Introduction

The main objective of NPTEL program is to enhance the quality of engineering education in the country by developing curriculum based video and web courses. This is being carried out by IITs (Seven), IISc Bangalore and other premier institutions through a collaborative effort.

At IIT Madras, the project is evolving and it is our intent to provide learning materials, digitally taped classroom lectures, supplementary materials and links to state-of-the art research materials in every subject possible. Currently samples from approximately 70 courses offered by faculty in various departments and to students at all levels (B.Tech, M.Tech, M.S., M.Sc., Ph.D.) are given here. Approximately 140 courses are in various stages of preparation and distribution using the Internet.

All the faculty members are personally involved in the making of their respective courses in the electronic form. Our purpose is to supplement classroom lectures. The latter are compulsory for students and IIT Madras stipulates that students attend 75 percent of lectures to qualify for their examinations.

[Download the Project Implementation Plan\(PDF format\)](#)


[IISc Bangalore](#)

[IIT Kharagpur](#)

[IIT Bombay](#)

[IIT Delhi](#)

[IIT Guwahati](#)

[IIT Kanpur](#)

[IIT Madras](#)

[IIT Roorkee](#)

- Science Channel
 - EDUSAT – facilitating Science Communication
 - Demystifying & popularizing science
 - Outreach the benefits from scientific knowledge and application to the people of India

Bits-Pilani Virtual University

(<http://vu.bits-pilani.ac.in/>)



VU

weyou - the guru shishya relationship



BITS - Virtual University



Redefining education
Learn at your own pace
Internet based interactive learning

Education Grid

(<http://www.edugrid.ac.in/webfolder/g/default.htm>)

The screenshot shows a web browser window displaying the Kerala Education Grid website. The browser's address bar shows the URL <http://www.edugrid.ac.in/webfolder/g/default.htm>. The website features a header with the KEQ logo and navigation links: Help | Site Map | Feedback | Links | Contact. The main banner includes the text "Kerala Education Grid" and "Quality education to all independent of geography" with an image of a tree. Below the banner is a secondary navigation menu: About KEG | News & Events | Downloads | Resource Centres | Help. The main content area is titled "Enable, Educate and Empower Every Citizen Through Knowledge" and contains a grid of service buttons: Students, Courses, Workshops, Self Assessment, Mailing Lists, Discussion Forum, and Publications, Query Management System. A "Computational Chemistry Portal" is also visible. On the right, there is a search bar, a "NEWS" section with three items, and an "Education Grid Services" login form with fields for User Name, Password, and a dropdown menu. A "Login" button is at the bottom of the login form. A grey banner at the bottom of the page contains the text: "To provide quality education to all students independent of geography".

To provide quality education to all students independent of geography



Digital Initiatives

Through Library Consortia

The INDEST Consortium

- The INDEST Consortium is the most ambitious initiative taken so far in the country.
- Head quarter at IIT Delhi. The Ministry of Human Resource Development (MHRD) provides funds to access to various electronic resources subscribed by the Consortium for 38 core member institutions.
- The other individual members pay the membership.
- All electronic resources being subscribed are available from the publisher's Website.
- The benefit of consortia-based subscription to electronic resources is not confined to 38 major technological institutions in the country but is also extended to all AICTE-accredited and UGC-affiliated institutions.
- Highly discounted rates of subscription and better terms of agreement with the publishers
- Electronic resources are not confined to 38 major technological institutions in the country but is also extended to all AICTE-accredited and UGC-affiliated institutions



Content Selection

Electronic resources

ABI / Inform Complete
ACM Digital Library
ASCE Journals
ASME Journals (+ A M R)
ASTM Standartds and Journals
Capitaline
CRIS INFAC Ind. Information
EBSCO Databases
Elsevier's Science Direct
Emerald Full-text
Euromonitor (GMID)
IEEE / IEE Electronic Library Online (IEL)
Indian Standards
INSIGHT
Nature
ProQuest Science (formerly ASTP)
Springer Link

Bibliographic Databases

COMPENDEX on EI Village
INSPEC on EI Village
J-Gate Custom Content for Consortia (JCCC)
MathSciNet
SciFinder Scholar
Web of Science



Indian National Digital Library in Engineering Sciences & Technology

Networking People and Resources



- > [about](#)
- > [members](#)
- > [e-resources](#)
- > [user guide/help](#)
- > [troubleshooting](#)
- > [how to join?](#)
- > [operation](#)
- > [search](#)
- > [jccc@indest](#)
- > [e-RAMS](#)
- > [faqs](#)
- > [downloads](#)
- > [contact us](#)



Sun, Jan 29, 2006



Welcome to
INDEST Consortium
Website

enable access
e-resources
at highly discounted rate

desktop access
24 hours a day, 7 days a week

better management of resources

Come, be a member.... [join](#)

An Initiative by

Ministry of Human Resource Development
M H R D, Govt. of India

[Members Login for Usage Statistics](#)

What is new?

- .. [A Brief Report on INDEST Workshop & the Third Annual Meet \(pdf\)](#)
- .. [Events Calendar](#)
- .. [INDEST members \(State-Wise\)](#)
- .. [? Questionnaire Online \(Only for INDEST Members \)](#)
- .. [User Convention & Training Workshop](#)

>> [news archives](#)



UGC-Infonet














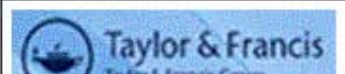













- **4000 full text** scholarly electronic journals from **25 publishers** across the globe can be accessed
- **100 Universities** out of 171 Indian Universities, has come under the purview
- Encompassing all areas of learning ...
 - Arts, Humanities, Social Sciences, Physical and Chemical Sciences, Life Sciences, Computer Sciences, Mathematics and Statistics etc. and also
 - other subject areas are to be added in near future

UGC INFONET E-JOURNALS CONSORTIUM

A Gateway to Scholarly Information

- [Home](#)
- [About E-Consortia](#)
- [Resources](#)
- [Subjects](#)
- [Journals](#)
- [Open Access Journals](#)
- [List of Universities](#)
- [Usage Statistics](#)
- [Bandwidth Utilized](#)
- [Feedback](#)
- [Tutorials](#)
- [FAQ's](#)
- [E-consortia Team](#)
- [Seminars/Conferences](#)
- [Photo gallery](#)
- [Contact](#)



Library Networking & Resource Sharing

INFLIBNET

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

- Information and Library Network (Inflibnet)
 - A gateway to India's Academic & Research Community
 - 171 participating university libraries
 - creating **infrastructure** for sharing of library and information resources and services among Academic and Research Institutions
 - Resource sharing network of Indian universities – UGC programme
 - Databases – P.D. theses, experts, R&D projects...
 - <http://www.inflibnet.ac.in/>
 -

INFLIBNET's National Online Union Catalogue of Doctoral Theses

Books
Serials
Theses

Participating Universities

Theses Database

- 1 Andhra University 216049
- 2 Assam University 2270
- 3 Avinashlingam Inst.for Home Science 46281
- 4 Banasthali Vidyapith 56586
- 5 Bangalore University 70603
- 6 Goa University 95205
- 7 Gandhigram Rural Institute 25145
- 8 Gulbarga University 50712
- 9 Dr. Babas Amb Mar.Univ-Aurangabad 34909
- 10 Maharaja Sayajirao University 50793
- 11 Mohanlal Sukhadia University 65102

We are updating this Statistics..

Basic Search	Advance Search
Search in:	Union catalogue of Theses (Basic Search)
Select the Field:	<div style="border: 1px solid black; padding: 2px;"> <p>Title</p> <p>Subject [Keyword]</p> <p>Creator [Researcher]</p> <p>Contributor [Guide]</p> <p>Date [Year of Award]</p> <p>Degree Discipline [Department]</p> </div>
Enter the TERM to Search:	<input type="text"/>
No of Records:	10 per page Database Status
<input type="button" value="Click to Search"/> <input type="button" value="Reset"/>	

This union database covers the bibliographic **Metadata** of Doctoral Theses submitted to more than 130 Universities/Institutes in India. It has over 1,53,206 unique records from all subject areas. This Data is contributed by participating Universities and we have collected more data from various reliable sources, university announcements etc.

If the record of your Ph D is not available in this database, you are requested to send us a copy of your award letter from the concerned Universities. INFLIBNET as an IUC of UGC, request all research scholars and faculty members of Indian Universities and Librarians to contribute the Doctoral Theses information to us.

Metadata Elements	Brief Help
Title	-- Enter all or initial part of title, starting with the first word: e.g. Study of corrosion - Drop initial articles (a, an, the) - <i>Truncation is automatic</i>
Subject [Keyword]	Enter standard subject heading, name, or term: PHYSICS - <i>Truncation is automatic</i>
Creator [Researcher]	Enter surname or first name, e.g. Gohel or Umesh
Contributor(s) [Guide(s)]	Enter surname or first name, e.g. Salgar or Satish
Degree Grantor [University]	Enter university name, e.g. Gujarat University - Start with the left-most word: - <i>Truncation is automatic.</i>
Degree Discipline [Department]	Enter department or faculty name, e.g. Department of Computer Science
Date [Year of Award]	Enter the year of Ph D awarded, e.g. 2001
Other Elements	Brief Help
Keyword in Title	-- Enter a keyword in title, e.g. corrosion

- National Informatics Centre (NIC)
 - INDMED – Bibliographic database of Indian biomedical literature – 75 Indian journals
 - <http://indmed.nic.in/>



Indian Medlars Centre

A Centre jointly setup by NIC and ICMR to cater to the information needs of medical community of India.

- IndMED
- Union Catalogue
- CD-ROM Databases
- Full text
- Lectures
- Training
- Diseases Update
- Search Request
- Feedback
- Contact us
- What's NEW

LINKS

- MEDLARS
- Internet Resources
- Internet Journals
- Awards to IndMED
- Translated Version

LAST UPDATED

17th November, 2004

238616



IndMED: A Bibliographic database of Indian biomedical journals

medIND: Fulltext of 28 Journals Indexed in IndMED.

Search **IndMED**

MetaMED: - A meta-search tool to search IndMED and PubMed with single click. [BETA Version]

- HELP: Use Boolean Operators in your query.
- Know about Full Text Icons displayed in references.

Union Catalogue: A database containing journal holdings of major medical libraries of India.

Other Links: Other important Services and Resources.

POLICY: This is a non-commercial web-site funded by Govt. of India. No advertisements are posted here. The personal information of the site visitors is not disclosed.

DISCLAIMER: Please note that this site also provides external links to the websites/webpages of biomedical/health related resources available over the Net. The content of these websites are owned by the respective site owners and they may be contacted for any further information or suggestion. Broken links if any may be reported to IMC.

Contact us

Bibliographic Informatics Division
 National Informatics Centre
 (Department of Information Technology)
 A-Block, CGO Complex, Lodhi Road
 New Delhi-110 003, India.
 Telephone: 91-11-24362359, Fax: 91-11-24362628
 medinfo@hub.nic.in

<http://indmed.nic.in/>

Developing Libraries Network (DELNET)

- DELNET
 - Resource sharing network of libraries in India and some abroad
 - 950 libraries
 - Several Database – Books, Periodicals, Articles, Dissertations & Theses, Experts, Others
 - <http://www.delnet.nic.in>



Multilingual Computing (MLC) Initiatives in India

Multilingual Computing



- 22 official languages, 428 known languages (415 living & 13 extinct)
- Key players in India
 - Centre for Development of Advanced Computing (CDAC)
 - Technology Development for Indian Languages (TDIL)
 - IIT (Kanpur & Mumbai)

Technology Development for Indian Languages

(TDIL) (<http://tdil.mit.gov.in/>)

- **Major thrust areas**
 - **Translation Support System**
 - **Human Machine Interface System**
 - **Knowledge Tools**
 - **Knowledge Resources**
 - **Localization**
 - **Language Technology Human Resource Development**
 - **Standardization**
(ISCII, Unicode, INSFOC, INSROT)

- **Translation Support System:** A software for translation from English to Hindi based on Angla Bharati, Indian Institute of Technology, Kanpur
- **GyanNidhi**
 - 1 Million Pages Multilingual Parallel Corpus in English and 12 Indian languages.
 - Text in UNICODE format (International Standard).
 - State of the art GUI.
 - Corpus collected from various domains.
 - Data availability in XML / HTML format.
 - Corpus management tools.

- **Text to Speech Synthesis**
- **Dware Dware Gyan Sampada - Mobile Digital Library**
- **Chitraksharika: Optical Character Recognition for Devanagari Script**
- **Lekhika: Platform Independent Word Processor (Linux, Solaris, Windows, etc.)**
- **On-Line Hindi Vishwakosh**

- **ISCII** - forms the basis for UNICODE code assignments for Indian scripts
- Computer Processing of Indian Languages and scripts started in early seventies at IIT Kanpur
- **INSCRIPT** Keyboard
- **ANGLABHARATI** Technology (1993) : **Machine Aided Translation** system for translation from English to Indian Languages

- Indian language WORDNET
named **Shabd KalpTaru**
- Devanagari OCR
- Working on Spell-Checker
design
- Shakti Machine Translation Kit

- **INSROT** – Indian Script Roman Transliteration Table: proposed as a standard transliteration scheme.
- **INSFOC** (Indian Standard Font Code)- Devanagari

Language Technologies Research Centre, IIT Hyderabad (<http://ltrc.iit.net/>)

- **Shakti** Machine Translation system
- **Morphological analyzers** for Indian languages
- **Shabdaanjali**: English to Hindi free e-dictionary
- Font converters and **ISCII plugins** for Indian scripts
- Text to **speech synthesizer** for Telugu
- **Information extraction** from resume

Other Indian Contributions



- **Chitrakan:** basic technology from ISI Calcutta
- Localization of Linux Operating System: **CDAC**, Mumbai

Google Search in Indian Languages

[Andhar Jaayiye](#)

Google™
भारत

वेब छवियाँ समूह नरिदेशिका

Google खोज आज मेरी कस्मिमत अच्छी है

खोजें: वेब भारत के पन्ने

[वसितुत खोज](#)
[पसन्द](#)
[भाषा सहायक](#)

Google.co.in इस भाषा में: [English](#) [বাংলা](#) [ಕನ್ನಡ](#) [मराठी](#) [தமிழ்](#)

[वजिआपन-पुरसार कार्यक्रम](#) - [Google के बारे में सब कुछ](#) - [Google.com in English](#)

©2006 Google

A Proposal

- Evolve a national network of distributed, inter-operable, open access digital repositories of S&T research material
 - Institutional digital repositories
 - Open access science journals, conferences...
- Network with global open access services

Open Access Digital Library Model for India... [2]



- Steps towards Realizing the Model
 - Academic & R&D institutions: Set up online digital repositories of their research output
 - Science journals (academic and R&D institutions, and professional societies) - adopt open access publishing
 - Establish new online-only open access journals
 - Areas of local strength (e.g. agriculture, medicine)
 - Graduate student journals
 - Incorporate peer review / quality control

Open Access Digital Library Model for India... [3]



- Operation of the model
 - Digital repositories - act as data providers and expose their metadata for harvesting
 - Use freely available OAI compliant software (e.g. DSpace, ePrint.org, CERN CDSWare, OJS, Greenstone DL) or develop necessary support
 - Service providers - harvest metadata from the repositories and offer variety of services at national level

- **Role of libraries**
 - **Establish and operate institutional repositories**
 - **Support researchers with open access publishing activities**
 - **Best suited to provide document preparation and content management expertise**

Open Source Institutional Archives Software

- Dspace <http://cdsware.cern.ch/www.dspace.org>
- Eprints <http://cdsware.cern.ch/www.eprints.org>
- i-ToR <http://cdsware.cern.ch/www.i-tor.org/en/toon>
- MyCoRe
<http://cdsware.cern.ch/www.mycore.de/engl/index.html>
- CDSWare <http://cdsware.cern.ch/>
- FEDORA <http://www.fedora.info/>
- For more details on above a guide to Institutional Repository software is available at <http://www.soros.org/openaccess/software/>

Conclusions

- Digital Libraries are redefining the role of libraries in society & the role of librarians & information specialists
- National level mechanism is essential to promote and coordinate open access and public domain digital library systems
 - Improve awareness of open access
 - Regular training – tools, processes, standards
 - Support setting up of working models, services
 - National Resource Centre for open access publishing
- International agencies like UNESCO, ICSU, ICSTI, CODATA need to actively promote and support digital initiatives in developing country initiatives
- Think globally and act locally
- Forging collaborative partnerships

Possible Areas of Indo-German Inter Library Cooperation



- Digital Libraries
- Preservation and Conservation including Digital Preservation
- Open Access Initiatives
- Collaborative Project on development of databases and digital libraries on alternative medicine such as Ayurveda, Homeopathy and Yoga
- Training
- And so on.....

Acknowledgements

- Ms. Martina Bartel and Ms. Renu Seth of Max Mueller Bhawan, New Delhi, India
- **Goethe Institute**
- **Die Deutsche Bibliothek, Frankfurt, Germany**
- **SUB Goettingen, Germany**
- **Universitaatsbibliothek John Christian Senckenberg, Frankfurt**
- **Indira Gandhi National Centre for the Arts, New Delhi, India**
- **For this presentation – Dr. Usha Munshi, Dr. Jagdish Arora, Dr. Devika, Dr. Manjunath and Dr Aditya Tripathi**
- *To my lovely wife- Kavita and sweet daughters Ritu & Nanu*
- **Many other Professionals, organizations and other colleagues in both Germany and India for providing various support during this visit**



Thank you
Namaskar
Questions are of welcome ?