Open Access Landscaping in India: Building Institutional Repositories (IRs) Using ‘DSpace’

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Presentation Plan

• India’s Scientific Potential
• Availability of Scholarly Literature
• Prescriptions
• OA and its missions
• OA Efforts in India
• IRs and its Features
• IR Softwares

• Features and Functionality
• DSpace presence in India
• DSpace Promotion in India and the Asian Region
• Training Programmes
• Support Organization
Higher Education Scenario in India

- A vast country having one of the largest higher education system in the World
- 171 Universities, 19 Central Universities
- 99 Deemed Universities
- 17000+ Colleges, 2000+ Polytechnics
- 100,00,000+ (100 Lakhs) Students
- 4,57,000+ (4.57 Lakhs) Teachers
- 888,000+ educational institutions
- World class institutions of higher learning such as IISc, IITs, NITs, IIMs, Universities...
Scientific Research

- The third largest scientific and technical manpower in the world
- Vision oriented efforts since Independence (1947 +)
- Exclusive Government Departments for Science & Technology, Atomic Energy, Space, Electronics, Oceanography, Biotechnology…
- Over 300 Research Laboratories belonging to CSIR, ICMR, ICAR, ICSSR, DRDO, ISRO…
- Education/Science performed by IISc, IITs, NITs, IIMs…and most of the Medical/Engineering/Business Schools, Universities and research labs are of international standards
Scientific Productivity

- Science in India presently shows sings of stagnation
- Number of Scholarly Articles in SCI – 12,000 (approx.)
- Total number of articles SCI + non-SCI – 30,000+
- A large number of articles are left uncaptured by international indexing / abstracting / full-text databases
- Contributes only a small percent to the International literature
Availability of Scholarly Information/Literature

- Widening Divide between Information Haves and HaveNots
- Non-availability of international science literature (peer reviewed scholarly content)
- Only a few of the Institutions have endowed infrastructure
- Lack of exposure and lack of a level playing ground to the academic/scientific community
- Adverse influence on India’s overall scientific productivity
Prescriptions

- Do Not Change the Scholarly Communication Practices
- Embrace and Promote Open Access
- Publish the findings in the publication of choice (national / international);
- Also contribute to Open Access Archives
- Consider Publishing in Open Access Publications
Open Access

- Open Access Publications (OAP)
- Open Access Archives (OAA)
Examples of OAP

- BMJ
- Indian Academy of Sciences
- BMC and PLoS
- High Wire Press: Delayed access
- Selected papers in a journal OA
Examples of OAA

- Central Archives: arXiv, CogPrints
- PubMed Central, CiteSeer
- Eprints@iisc, Idl@drtc, OpenMed@nic
- Though not an OA Archive, “PubMed”s Open Access Philosophy is Laudable
- Interoperability – the Key
Drivers of OAP and OAA

- Rising prices of journals
- ARL and SPARC initiatives
- Librarians want OA so they can afford
- Scientists want OA so they could be read and recognized
- People want OA because they pay for the research
Public Support for OA

- Budapest Open Access Initiative
- US House of Representatives Appropriations Committee [NIH]
- UK House of Commons Committee on S&T publications
- Similar initiatives in Australia (APSR…), Canada, Scotland
- Statement signed by 25 Nobel Laureates in USA
- Berlin Statement
- Bethesda Statement
Open Access Initiatives

- Projects
- Training Programmes
- Publishing
Open Access Publishing

- Indian Academy of Sciences
- INSA
- IndMed, MedInd, OpenMed
- MedKnow
- DOAJ Directory lists over 1200 Journals
  • …
Open Access Archiving Training Programmes

- DRTC
- NCSI, IISc
- INFLIBNET
- IIMK
- Individual and other isolated efforts…
Advantages of Archiving (for researchers)

- Dissemination
- Increased visibility (Google, OAI…)
- More visibility leads to more citations
- Research impact
- Preservation
- Control / Monitoring of one’s own Publications
Advantages of Archiving (for institutions)

- Pooling the Organization’s Intellectual Capital
- One Stop Source / Point for the research output of an Institution
- Scope for Introspection / Strategies / Action Plan
- Generation of reports
- Long term preservation
IR Software - Desirables

- Key component of an IR is the repository management software
- Several software are now available under open source license
- Comply with OAI metadata harvesting protocol
- Released and publicly available
IR Software - Features

- Capture and describe digital material using a workflow
- Provide interface for online submission of research material (Intranet)
- Provide access to this material over the web (metadata and/or full pub)
- Preserve digital material over long period of time
- Expose metadata through OAI-PMH protocol
  - Default: Unqualified Dublin Core
  - Other metadata standards
IR Softwares

- **ARNO** - Tilburg University, The Netherlands
- **CDSware** - CERN, Geneva, Switzerland
- **DSpace** - MIT Libraries and the HP Labs, USA
- **EPrints** - University of Southampton, U.K.
- **FEDORA** - University of Virginia, USA
- **i-Tor** - Netherlands Institute for Scientific Information Services
- **MyCoRe** - University of Duisburg-Essen, Germany
Content Categories

- **Published material**
  - Ex.: Journal papers (post-prints), book chapters, conference papers

- **Unpublished / gray material**
  - Ex.: Pre-prints, working papers, minutes, theses and dissertations, technical reports, progress/status reports, committee reports, course material, presentations, multimedia material, etc.

- **Supporting material**
  - Ex.: Data sets, models, simulations
Additional Functionality

- Multilingual content/ interface support
  - Unicode
- Batch import/export
- Other interoperability protocols
  - Z39.50, OpenURL
- Other metadata standards and crosswalks
  - (e.g. METS, MARC)
- Persistent URL (Identifier)
DSpace

- An Open Source Software – BSD License
- MIT Libraries and HP Labs
- Digital Object / Asset management system
- Create, search and retrieve digital objects
- Facilitate preservation of digital objects
- Allows open access and digital archiving
- Allows building Institutional Repositories
H/W and S/W requirements

- Let’s NOT underestimate!
- It’s a resource intensive platform
- Based on Java / JSP
- **UNIX** recommended (Java-based program should run on anything)
- Open source, built on Apache web server and Tomcat Servlet engine
- Uses postgreSQL relational database
DSpace Functionality

• Captures
  – Digital content in any format directly from creators (e.g. researchers, authors)

• Describes
  – Descriptive, technical, rights metadata
  – Persistent identifiers

• OAI-PMH version 2.0 compliant
  – Allow metadata creation
Content Categories / Publication Types

• Preprints, Articles
• Postprints
• Technical Reports
• Conference Papers
• Theses/Dissertations
• Working Papers
• Datasets
  – e.g. statistical, geospatial, scientific
File Formats

**Supported**: fully supports the format

**Known**: recognizes the format, but cannot guarantee full support

**Unsupported**: cannot recognize a format; these will be listed as "application/octet-stream", aka Unknown

**Known/supported**

- TIFF, SGML/XML, PDF

**Known/unsupported**

- MS Word, PowerPoint
- Lotus 1-2-3, WordPerfect
Information Model

• Communities
  – Departments, Labs, Research Centers, Schools…
• Collections
• Items
• Files (bitstreams)
  – Multiple formats - same content
  – Complex objects – multiple files
Special Features

• 100 % Open Source
• International Acceptance
• Modular, Scalable and Componentized Architecture
• Remote Publishing facility
• CNRI ‘Handles’ support for Persistent URLs
• OAI-PMH Compliance and Interoperability
• Open URL Compliance
Search Features

- Fielded
- Boolean
- Exact term
- Proximity
- Wild Cards
- Fuzzy
- Range
- Boosting Terms
Strengths of DSpace

• Communities / collections
• Backed up by MIT and HP
• Simple yet powerful documentation
• Strong workflow support
• Handle-based identifier
• Better articulation of preservation strategy
• Default support for qualified DC
• User (E-)Groups, Lists, User Meets …
DSpace Based Archives in India

- Indian National Science Academy (INSA)
- National Chemical Laboratory (NCL)
- ETD@IISc, Indian Institute of Science
- Indian Institute of Technology (IITD), Delhi
- INFLIBNET
- ISI, Bangalore
- University of Hyderabad
- National Centre for Radio Astrophysics
- National Institute of Technology (NIT), Rourkela
- LDL: Librarians' Digital Library, DRTC
- Indian Institute of Management Kozhikode (IIMK)
Welcome to IIMK’s Scholarship Repository DSpace@iimk

Welcome to IIMK’s institutional repository, a scholarly archiving facility for the IIMK community developed on the BSD DSpace software, Jointly developed by MIT Libraries and Hewlett-Packard Labs. This enables the Institute community to archive their preprints, postprints and other publications. In keeping with the objectives of the Open Access movement, we expect this to facilitate the Institute researchers in self-archiving and long-term preservation of their publications, provide easy access to these publications world wide and improve impact of research. While dspace@iimk can be accessed by anybody, submission of documents to this is limited to the IIMK research community. Your comments and suggestions for improving this are most welcome. Please send your feedback to the Archive Administrator.

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Title: Agriculture and Economic Reforms: Growth and Welfare

Authors: Balakrishnan, Pulapre

Keywords: Agriculture
Economic Reforms
Agricultural Development
Agricultural Reforms

Issue Date: 2000

Publisher: Economic and Political Weekly

Abstract: This paper provides the overview of the principal developments in the agricultural sector since 1991, since the economic reforms and their likely consequence for the standard of living. The paper
Special articles

Agriculture and Economic Reforms
Growth and Welfare

This paper provides an overview of the principal developments in the agricultural sector since 1991, i.e., since the economic reforms, and of their likely consequence for the standard of living. The paper has been conceived more with a view to raising essential questions than providing complete solutions.

PULAPRE BALAKRISHNAN

Growth

An examination of the principal policy of excessive protection for industry hurt Indian agriculture in several ways. It raised the price of industrial products relative to agricultural products which hurt to be. For a start, it assumed a much greater inter-sectoral flow of resources than it is perhaps wise to do. In particular, it is an argument regarding resource allocation, a
Welcome to the Public Knowledge Project’s metadata archive...

To improve the accuracy of searching within the PKP System, authors have been asked to index their work, where applicable, by discipline(s), topics, genre, method, coverage, and sample. This allows you to search for "empirical" versus "historical" studies, for example, under "index terms." You can also view a document’s index terms by selecting the complete record from among the search results.

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Browsing DSpace@IIMK

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  Sreekumar, M.G.
  Sunitha, T.
  December 29, 2005
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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.
Communities and Collections

Shown below is a list of communities and the collections and sub-communities within them. Click on a name to view that community or collection home page.

- **Library and Information Science**
  - A. Publications and Articles [166]
  - B. Theses and Dissertations [2]
  - C. Presentations [8]
  - D. Demo of Multi Lingual Documents [5]
  - E. Photographs of LIS Activitis [1]
SDL: Search Digital Libraries

Welcome to SDL
SDL harvests metadata from open access digital libraries and e-journals in the area of Library and Information Science. You can see the list of Digital repositories SDL harvests by clicking 'Browse Archives'. You can browse all the documents in each repository.
The search results display the metadata, you can see full metadata by clicking 'View Record' or you can access the full text of the document by clicking 'View Original'.
NOTE: If you wish your digital library to be harvested by SDL, please add your archive's baseURL, only if your repository contains LIS related documents.
Thank you for visiting SDL

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Advanced Search  |  Browse Archives

Search papers for:  in  All  Search
Select an archive to browse...

- **All Archives** (5340 records)
- **Australian Library and Information Science Association (ALIA)** (56 records)
- **CALTECHLIB** (35 records)
- **CCSD: Sciences de l'Information et de la Communication, France** (647 records)
- **CNR Bologna Research Library, Italy** (21 records)
- **Diálogo Científico utiliza, Brazil** (231 records)
- **DLIST, University of Arizona** (512 records)
- **DSpace inra Avignon** (0 records)
- **E-LIS: E-Prints in Library and Information Science** (2960 records)
- **LDL** (176 records)
- **OCLC Research Publications** (8 records)
- **Subject Gateway of Library and Information Services (LIS)** (0 records)
- **University of North Carolina, USA** (190 records)
- **WWW Conference Archive EPrint servers** (504 records)
DSpace Promotion in India

- Conducive Environment
- Growing Interest in Building IRs by the Indian Library / Information / Academic Fraternity
- Scope for Institutional as well as Central Archives
- Growing Acceptance of DSpace
- Training Programmes
- Regional Support Organization (Virtual)
DSpace Training in India

- Training Programmes
  - DRTC, IIMK, INFLIBNET…

- Institutional Repositories Workshop in Chennai (December 2-4, 2005)
  - MALA-CSI – 45 participants (URL)

- E-Publishing Workshop at IIMK (December 12-14, 2005)
  - 15 participants (URL)
Participants of the Chennai Workshop (December 2-4 2005)
Participants of the IIMK Workshop (December 12-14 2005)
DSpace Workshop in Progress
DSpace Training in India…

➢ Forthcoming Training Programmes
  • MHRD Institutions (40 Institutions)
  • ICMR Institutions (20 Institutions)
  • IIMK’s E-Publishing Workshop (30 Institutions)
  • Programmes Hosted by other Organizations/Institutions
    Eg.: MANLIBNET, KLA etc.
DSpace Support Organization for India and Asian Region

- Identify a Core Group for Technical Support
- Identify an Institute as the DSpace Nodal Center for the Region
- Coordinate DSpace Support (Online as well as face-to-face) Actively
- Candidates: DRTC, INFLIBNET, IIMK
Acknowledgement

• DSpace.org
• MIT, Boston
• Hewlett Packard
• APSR, Australia
• EPrints.org
• Dr. T.B. Rajashekar (Late) & Team, NCSI
• Prof. A.R.D. Prasad & Team, DRTC
• Prof. Subbiah Arunachalam, MSSRF
• Prof. A. Amudhavalli, University of Madras
• DL Team, IIMK
Thank you