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## INSTITUTIONAL REPOSITORY

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### **Abstract:**

*One of the leading objectives of the libraries is to provide the latest and timely information to its clientele and keep them updated with the new arrivals related to their subject areas. Institutional Repository (IR) disseminates rich source of digitized materials drafted and published by learned societies. Institutional repositories are emerged as a new strategy to allow institutions to accelerate in scholarly communication through digital content. (IR) disseminates and preserve the institutional research output to every user at one place. Institutional Repository (IR) is a new breed which has the potential to store any amount of information in little space and preserve it for a long-term perspective.*

**Keywords:** *Institutional Repository, Digital - Preservation, Digital – Archive, E - resources, E -Theses.*

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### **Introduction:**

Institutional repository initiatives consist of a suite of services intended to support the preservation and organization and access to the intellectual output of the institution in which they are housed. The institutional repository (IR) itself typically refers to the software infrastructure on which these initiatives depend. This paper discusses about the IR technology implementation in Maharashtra institutes, and also describes its objectives, software usages, growth and development of institutional repositories in Maharashtra. It is stated that most of the institutes adopt the open source IR software's for creating/developing their own repositories.

An Institutional Repository (IR) is a digital archive where a university community's intellectual work is made accessible and preserved for posterity. The concept of IR suggests the tantalizing

possibility of greater library influence over the full cycle of scholarly communication on campus, from research through publication, collection, and preservation. Institutional Repositories are mainly described as the aggregation of scholarship reflecting the range and scope of intellectual output generated by a community of scholars affiliated with any single academic institution. essentially, an institutional repository is a recognition that the intellectual life and scholarship of an academic institution will increasingly be represented, documented, and shared in digital form and that a primary responsibility of the academic institution is to exercise stewardship over these riches: both to make them available and to preserve them. The main function of an IR is, therefore, to ensure long-term preservation and availability of digital materials.

As such issues of digital preservation are usually not accorded much consideration and support in IRs. Indeed the focus of many IR activities in most academic libraries have concentrated in creating repositories, depositing content, promoting discovery and access and/or encouraging the necessary cultural change but not on how to preserve the content for long term accessibility. Consequently, although the need to have long term access to information in the IRs is understood, digital preservation management practices are not considered as priority areas and invariably ignored. However, posting intellectual assets into institutional repositories requires that all are able to trust the ability of the repository to secure the information over the long term. As such this study aims to find out digital preservation practices observed in the IRs in academic libraries.

### Definitions:

Before knowing Institutional repositories, it would be appropriate to know first about the repository. According to wikipedia “A repository is a central place where data is stored and mined. A repository can be a where multiple databases or files are located for distribution over a network or a repository can be a location that is directly accessible to the user without having to travel across a network”  
en.wikipedia.org/wiki/repository<sup>12</sup>

According to clifford lynch “a university-based institutional repository is a set of services that a university offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members. It is most essentially an organizational commitment to the stewardship of these digital materials,

including long-term preservation where appropriate, as well as organization and access or distribution.”<sup>8</sup>

According to Mark Ware “An Institutional Repository (IR) is defined to be a web-based database (repository) of scholarly material which is institutionally defined (as opposed to a subject-based repository); cumulative and perpetual (a collection of record); open and interoperable (e.g. using OAI-compliant software); and thus collects, stores and disseminates (is part of the process of scholarly communication). In addition, mostly is would include long-term preservation of digital materials as a key function of IRs.<sup>6</sup>

### Importance of Institutional Repository:

Research Scholars, Students and Faculty members increasingly recognize the need to store their intellectual output in the form of personal collections, and to make available the results of their work within and outside the institution. Institutions can develop the repositories of intellectual output for long term archival purposes.

### Benefits of Institutional Repository:

#### a) Individual benefits as author or creator<sup>3</sup>

- Increases the visibility of the intellectual output and acts as a marketing tool to reflect the research results of the researcher along with the department and the institution.
- The contents of the institutional repository are openly available on the web. As a result, the users can use the scholarly works without any fees which will raise the impact factor of the cited works. Therefore, it helps to

identify the use of matrices of the particular papers.

- Provides specific links to navigate access to content in other archives by following the citation analysis mentioned in the contents.
- Stores and preserves the institution's original research works for the long term. Thus, gives assurance for the greater security of work with some specific URL links.
- Serves as an archiving centre for institutional research work.
- Institutional repositories provide comments and feedback options where authors are able to give their opinions with the readers. This option facilitates communication between the author and the user which gives pathways to improve the knowledge and the quality of work on the concerned subject.
- Maintains the researcher's profile, compiling a comprehensive list of institutional research results conducted over the years.
- Institutional repositories gives benefits to the researchers by providing prestige, status, and prizes to them for their rewarding research work and attract the different funding agencies for the support of acquiring funds for their research projects.

#### b) Benefits to the Institution<sup>3</sup>

- The repository can enhance the visibility and reputation of the institution through its scholarly research works. The Institutional repository can also be useful in

commercial activities to attract highly qualified students, teachers or staff to join with the institution and generate grants from funding agencies.

- It collects stores and preserves all institutions research output including both published and unpublished works.
- In identifying the research assessment and quality assessment of the institutional intellectual output, institutional repositories are considered to be an important consideration.
- The contents of the institutional repository are easily searchable not even locally but globally. This open access facility of the research outcomes provides collaborative sharing of experiences between institutions.
- Maintains certain ratings of institutional records by compiling an Institutional CV and provides navigation links to access the full text of the articles.
- As a result of the establishment of the institutional repository the institutional libraries are free from the monopoly power of the publishers cost and access restrictions.
- No need of maintaining server or back up. Thus, cost effective for the libraries for giving a value added service without hampering on the limited budget.

#### c) Benefits to the User<sup>3</sup>

- Users can easily access the information content in the institutional repository by using a search engine.

- Users are not required to pay any fees for using digital content of an institutional repository and there are no subscription fees for the materials available in the repository.
- The information material on grey literature are not easily found through conventional means that includes pre-prints, patents, white papers, technical reports, project reports, documentations, manuals, working papers and discussion papers etc. But with the establishment of institutional repositories users can access these valuable resources anywhere.

#### d) **Benefits to the society**<sup>3</sup>

- Provides open access to institutional intellectual output at global context. Thus, gives access facility of world's research on different subject topics.
- An institutional repository can accommodate the research outputs without hampering the volume of research like no page limits, large- scale data-sets etc.
- Institutional repositories improve institutional content to reach the world's population at no cost.

#### **Elements of Institutional Repository:**

As the digital Institutional Repository can be any collection of digital material hosted, owned or controlled and disseminate by any institution irrespective of purpose of origin. Institutional Repository can assume many forms and serve a variety of purposes as per the functions and objectives of parent institution. A digital archive of the

intellectual product by the faculty, research staff and students/ research scholar of an institution and it should be accessible to end user without boundaries (with in and out of the institution).

#### **The content of an Institutional Repository could be:**

- Pre-prints of articles or research reports submitted for Publication
- The text of journal articles accepted for publication
- Revised texts of published work with comments from academic readers
- Conference papers
- Teaching materials
- Student projects
- Doctoral theses and dissertations
- Datasets resulting from research projects
- Committee papers • Computer software
- Works of art
- Photographs and video recordings

#### **Digital Repository Software's:**

IBM issued Digital Library Software in 1991 to manage collection of digital files. IBM groundbreaking technology grappled with key issue of storage, maintenance, retrieval and display digital content. This was the first effort towards the digital repository software and it showed path to others. There are number of software's available for creating/developing institutional digitals repositories; the brief of the some IR's are given below;

#### **Open Source Digital Repository Software's:**

1. **DSpace** Was developed jointly by the MIT library and HP. DSpace modestly describes itself as a

ground breaking digital repository system. It captures, stores, indexes, preserves and redistributes an organizations research material formats. DSpace support institutional repositories and electronic records management. DSpace is being used worldwide to meet many digital archiving needs.

2. **EPrints** Is the original digital repository software developed by the University of Southampton to manage an open archive. EPrints was the Open Archives Initiative (OAI) –Complaint repository software. It typically supports collections of pre-prints and technical reports often subject based in scope. Recently this software is being used / implemented to manage multidisciplinary institutional archives.
3. **Fedora**(Flexible Extensible Digital Object and Repository Architecture) is a digital repository system developed jointly by Cornell University Information Science and University of Virginia Library as project. The Fedora projects goal is to provide open-source repository software and related services to serve as the foundation for many different types of Information Management system. Fedora is not a complete system such as DSpace and EPrints whereas it provides an infrastructure upon which services can be developed. It also promotes the buildings of customs tools to expose the repository in creative ways.
4. **Greenstone** Is software for building and distributing digital

library collections. This software is produced by the New Zealand Digital Library Project at University of Waikato and developed and distributed in cooperation with UNESCO and the Human Info: An NGO. It has been issued as Open-Source, multilingual software under the GNU General Public License. Greenstones not only serve and harvest documents and collections over OAI-PMH but collections can be exported to or imported from METS (Metadata Encoding and Transmission Standards).

### **Commercial Digital Repository Software's:**

Apart from the above Open Source Software, some commercially developed software's also available for digital repository. The name of few is mentioned herein below;

1. **CONTENTdm®** -Developed at the University of Washington and distributed by OCLC. The software has tools for acquiring or creating collections; tools for storage of the content and a set of tools for display and retrieval of objects.
2. **Digi Tool** – This is a 'enterprise solution for the management of digital assets in Libraries and academic environment.
3. **EN Compass** – It is a one module of EN Compass or suite of software for managing and accessing digital content. EN Compass has many modules for various purposes.
4. **Hyperion** – It provides organisation, storage and access to digital files by searching both associated Meta data and full text of text files.



5. **Meta Source** – Meta source is a suite of tools used to manage digital collections, including, digital object storage, crawling external collections and support for Metadata schemes.
6. **VITAL** –VITAL is a institutional repository software developed by VTLS. VITAL is a set of workflow extensions, management utilities and enhanced searching capabilities build on Fedora Repository Architecture.

### Examples of Institutional Repositories:

Top 3 IRs available for open access in the world

#### 1. The Astrophysics Data System:

The ADS is a digital repository that primarily covers astronomy and physics and is operated by the Smithsonian Astrophysical Observatory under a NASA grant.

- **Size of the collection:** 15 million+
- **Topics covered:** Astronomy and Astrophysics, Planetary Sciences, and related research.
- **Items available:** Journal Article, Proceedings Article, Eprint, Book Chapter, Abstract, Circular, Tech Report, Proposal, Ph.D. Thesis, Book, Proceedings, Catalog, Press Release, Master Thesis, Software, Editorial, Images, and more.
- **Content language:** English
- **Accessibility:** Visitors can view or download the files without creating an account.

#### 2. NASA STI Repository (NTRS):

The NTRS is a digital repository that provides the general public access to scientific and technical information created or funded by NASA.

- **Size of the collection:** 4.3 million metadata records and over 500K full-text documents
- **Topics covered:** Aerospace
- **Items available:** Research Memorandum, Special Publications, Accepted Manuscripts, Videos, Thesis, Dissertations, Conference Proceedings, Technical Publications, Patent Information, Contractor or Grantee Report, Presentation, Preprints, Reprints, and more.
- **Content language:** English
- **Accessibility:** Most resources are open to everyone, except for NTRS-R content, which is only available for registered NASA Community members (civil servants, contractors, grantees, etc.).

#### 3. Repositório Digital Universidade Federal do Rio Grande do Sul LUME:

The LUME is the digital repository of scholarly work produced by Universidade Federal do Rio Grande do Sul, one of Brazil's largest public federal research universities.

- **Size of the collection:** 177555 (metadata count)
- **Topics covered:** Multidisciplinary
- **Items available:** Theses, Dissertations, Articles From Scholar or Professional Periodicals, Graduation and Post-graduation Monographs, Research Technical Reports, and Records of Work Produced and Presented in Events, Photographs, and Videos.
- **Language:** English, Spanish, and Portuguese

- **Accessibility:** Visitors can view or download the files without creating an account.

### Conclusion:

It is clear from this study that the institutional repository is a very powerful idea that can serve as an engine of change for institutions of higher education, and more broadly for the scholarly enterprises that they support. IRs are providing the scholarly material to the users for better communication among them. An institutional repository is an archive for collecting, preserving and disseminating digital resources of the intellectual output of an institution. The institutional repositories have tremendously influenced on library users and satisfying scholarly communication needs. And we can see examples of IRs and Basic information about Top 3 IRs available for open access in the world.

### References:

- 1) Ahmed, A., Alreyaee, S. and Rahman, A. (2014), "Theses and dissertations in institutional repositories: and Asian perspective", *New Library World*, Vol. 115 Nos 9-10, pp. 438-451.
- 2) Bhat, W. A. (2018), "Long-term preservation of big data: prospects of current storage technologies in digital libraries", *Library hi Tech*, Vol. 36 No. 3, pp. 539-555.
- 3) Digital Repositories infoKit(2021). Retrived from <https://wiki.lib.sun.ac.za/images/c/cf/Digital-repositories.pdf>
- 4) GaikwadM. (2014). Institutional Repositories: The Definition, Development and Its Benefits in Academic Libraries. Parameters

- and Perspectives of LIS Education Felicitation. *ABS Publication*.
- 5) Li, Y. and Banach, M. (2011), "Institutional repositories and digital preservation: assessing current practices at research libraries", *D-Lib Magazine*, Vol. 17 Nos 5/6, available at: [www.dlib.org/dlib/may11/yuanli/05yuanli.html](http://www.dlib.org/dlib/may11/yuanli/05yuanli.html)
  - 6) Loan, F. A. and Sheikh, S. (2016), "Analytical study of open access health and medical repositories", *The Electronic Library*, Vol. 34 No.3, pp. 419-434.
  - 7) Lynch, Clifford (2003), "institutional repositories: essential infrastructure for scholarship in digital age", *ARL bimonthly report*, No.226, ppl-7.
  - 8) Mahanta, P.K. (2020).Usage of Information and Communication Technology in the Degree College Libraries of Assam: A Study. *Library Philosophy and Practice* (ejournal). Retrived from <https://digitalcommons.unl.edu/libphilprac/3829>.
  - 9) Mark Ware, (2004), *Pathfinder Research on Web-Based Repositories* (London: Publisher and Library/ Learning solutions, 3.
  - 10) Mensah, M. (2015), "Digital preservation in the context of institutional repositories in public universities' libraries in Ghana", available at: [wiredspace.wits.ac.za](http://wiredspace.wits.ac.za)
  - 11) Mupulanga, P. (2013). Digitising library resources and building digital repositories in the University of Malawi Libraries. *The Electronic Library*, 31 (5), 635-647.
  - 12) Njagi, P.R. & Namande, B. (2018). The status of the implementation of

institutional repositories in selected newly established universities in Kenya. Regional Journal of Information and Knowledge Management, 3(1), 30-40.

13) [en.wikipedia.org/wiki/repository](http://en.wikipedia.org/wiki/repository)

14) <http://www.dspace.org>

15) <http://www.eprints.org>

16) [www.fedora.info](http://www.fedora.info)

17) <http://www.greenstone.org>

18) <https://ui.adsabs.harvard.edu/>

19) <https://ntrs.nasa.gov/>

20) <https://lume.ufrgs.br/handle/10183/98853>

21) <https://typeset.io/resources/top-institutional-repositories-available-for-open-access/>