KNoor: Knowledge Repository Open Network.

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ABSTRACT

The paper discusses KNoor (Knowledge Repository Open Network) which aims at harvesting and aggregating the scholarly products emanating from research and scientific institutions of Jammu & Kashmir. The paper highlights genesis, significance, cooperation and various modules of access etc with screen shots as a unique cooperative, multilingual repository of research papers, ETDs and conference proceedings of three premier institutes of valley (University of Kashmir, Sher-e-Kashmir Institute of Medical sciences, Sher-e-Kashmir university of Agricultural Sciences) in the first phase. It also discusses challenges and lessons learnt in the process with a view to help other institutions to advance the mission of Open access movement in the country.

Keywords
Electronic Thesis and Dissertation (ETD), Research papers, multilingual repository, Cooperative repository

1. INTRODUCTION

The Institutional repositories are fast becoming key factors for facilitating world-wide effort to provide free online access to scholarly literature especially peer-reviewed journal articles and other preprints. Some research libraries see IRs as a means to expand on the amount and diversity of scholarly material that is collected and preserved, thus enhancing teaching, learning, and research at the host institution and beyond. While institutional repositories centralize, preserve, and make accessible an institution’s intellectual capital, at the same time they will form part of a global system of distributed, interoperable repositories that provides the foundation for a new disaggregated model of scholarly publishing (Johnson, 2002); Institutional Repositories provide librarians with new challenges because self-archiving makes the authors more active partners in collection development, and implies them to redefine their role as educators and stewards to assure maximum accessibility to the documents housed in the IR Allard (2005). The need for maximizing the research impact of scholarly publications and to improve the scholarly communication process has resulted in the proliferation of access methods and experimental models of publishing. Institutional research repositories can create positive outcomes for all interested groups. Authors gain visibility; information seekers find research more easily; institutions raise their research profile; and funders see wider research dissemination (Rankin, 2005). In the light of the above facts the paper examines significance, process, challenges and opportunities for using networked Institutional repositories to promote scholarship and lay a foundation for exploring new scholarly publishing options, enhance and enrich scholarly communication by way of exploring opportunities to contribute to the global IR community.

2. GENESIS

The work towards open access to scholarly literature started in March 2008 when University of Kashmir decided to launch an Open Access Movement in the state with the aim to defuse the crisis in scholarly pursuits due to escalating journal prices coupled with decreasing support for journal publications faced by research institutions and their resource centers. Seminars and workshops were organized to make the stakeholders well aware about various facets of open access movement. The awareness campaign proved a success with authorities giving nod to the launch of first networked multidisciplinary institutional repository of the state of Jammu & Kashmir named as KNoor (Knowledge Repository Open Network) as a collaborative venture for hosting research contributions from the three premier institutions of the state with the aim to increase the visibility of research output of all the participating institutions.

3. SIGNIFICANCE

Knowledge Open Repository open Network (KNoor) launched as interdisciplinary, multilingual repository for hosting Electronic Theses and Dissertations, Research papers and Conference Proceedings emanating from the contributing in-
4. LITERATURE REVIEW

The literature review here provides a baseline understanding of the current state of research and practice in the sustainability of digital libraries. Some papers and studies examine technical aspects of library building, case studies of individual projects and other related topics. Study by Bess & Branschofsky (2001) found that DSpace enables an organization to establish an electronic system to capture, preserve, manage, disseminate and share metadata and intellectual output. The view is supported by Prasad (n.d) by listing the features of DSpace to justify its choice over competing open source DL software. The paper also discusses the OAI-PMH, handles for identification of digital documents and Lucene search engines query language. Meitei and Purnima (2009) tested Open Source Software such as Eprints, Fedora, and Dspace in Digital Preservation in India. Krejci (2009) has experimented mapping DML-CZ structure onto DSpace structures and importing tools and managing requested features which are not supported by the default version of DSpace. The paper also build a web user interface using Manakin - implementing new functionality and creating a new design for DML-CZ.

Preliminary findings on the deployment of metadata for a project using DSpace at the University of Washington Libraries are presented by Forsythe, Grosenheider, Eileen & Ward (2003). Smith and et.al (2003) describes the DSpace system including its functionality and design, and its approach to various problems in digital library and archives design in the first part. The second part discusses the implementation of DSpace at MIT, plans for federating the system, and issues of sustainability. Baudoin & Branschofsky (2004) also describe MIT Libraries’ experience implementing Dspace. The paper discusses some of the policies developed and organizational changes undertaken, the kinds of questions future implementers of DSpace may like to answer.

Wise, Spiro, Henry & Sidneybyrd (2007) reports adaptation of the DSpace platform by Rice University for its institutional repository initially and later enriching its technical infrastructure by performing additional programming to integrate functionality for GIS and educational modules. Devakos and waddell (2008) describe a project of The Ontario Legislative Library to extend the longevity and accessibility of electronic government documents using DSpace. A Survey conducted by Gayatri and Ramachandran (2008) ascertain different considerations for implementing an institutional repository and the creation of the pilot Institutional Repository at the ICFAI Business School, Ahmadabad using the DSpace. Houssos, Stavrakis, Stamatis, Stathopoulou & Paschou (2008) describes the scope and implementation of Pandektis, an open access repository containing resources of Greek history and culture developed by the Hellenics National Documentation Center of the National Hellenic Research Institute. The paper reports the main enhancements or customizations performed on the DSpace platform to accommodate the requirements of specific digital repository implementation. The main issues that have been addressed include context-sensitive presentation and browsing of material, support of custom metadata, linking among digital artifacts and support of range queries in advanced search.

5. THE REPOSITORY

KNoor was created using Open source repository software DSpace. It provides a user friendly interface for uploading, searching, browsing resources, besides it also provides links to various open access resources in the fields of Agricultural and Health Sciences from J and K state (Fig 1).

5.1 Process

Fig 1 underlines the types of contributions uploaded so far by the participating institutions after thorough review by the subject experts.

Figure 1: The main page of the Repository

5.2 Structure

The Knowledge Open Repository Network is a result of cooperation of three major research institutions of Jammu and Kashmir State where in each participating institution has been represented as a separate community. Each community further includes collections under three sub communities like Conference Papers and Proceedings, Research papers and Theses and dissertations (Fig 2).

5.3 Submission

The submissions to the KNoor are handled by subject experts of all the three participating institutions. Each eprint submitted to the repository is subjected to expert review before it is made visible to the users. Instructions and Guide-
lines have been provided to guide users in their submission procedure including information about rules governing self archiving of research. KNoor accepts original e-submissions including electronic theses and dissertations, conference proceedings, Research Papers etc. Each participating institution is responsible for managing and maintaining their respective communities. Submission is a seven step process of uploading of resources and assigning of required metadata. (Fig 4)

5.4 Access

It is a user friendly repository accessible at subject, author, title and date level either for whole Repository or at each community (Institution) or sub-community level (each discipline) for three broad categories like I) conference proceedings, II) Research Papers (both preprint and post print) and III) ETD PhD/D.M; MPhil; M.D/MS theses and dissertations.

Optimised Search Facility makes it easy for anybody to find any item within very short span of time. Users can also access at advance level using more than one indicator to have more precision at different levels such as subject or author level. Users can browse through:

- Communities and Sub Communities.
- Browsing at Author, Subject, and Titles is arranged in a hierarchical way from 0-9 and A-Z. (Fig 5)
- Collection can also be browsed by latest date of submission. (Fig 1.5) The full record of each item is in the Dublin core format and can be viewed by clicking "show full item record".

5.5 Multilingual Features

Theses and Dissertations are being submitted in native scripts of various languages. Users can access Languages like Hindi, Urdu, Persian, Arabic and Kashmiri. The other features like Non Roman Browsing etc are under development. Unicode Character set is used to provide bibliographic details for non roman script materials and interface for retrieving materials for accuracy(Fig 7 and 8).

6. CHALLENGES AND OPPORTUNITIES

Many challenges are being faced while gathering resources for uploading into the repository. Wide publicity is required in order to motivate users to encourage faculty and researchers to submit research papers that they would like to make freely available through the repository. Sustainability issues pertaining to the ETDs collection needs to be addressed keeping in view the economic aspects. Digitization of full text theses submitted earlier is a big challenge so far as identification, availability and financial constraints are concerned. Various types of abstracts need to be identified for their inclusion in the repository so as to make the repository a comprehensive one. Multilingual and other access problems need to be addressed so as to enable more accurate, precise and relevant retrieval across various resources.
available through the repository. KNoor will be providing opportunity for hosting material pertaining to multimedia courseware development in near future. Materials that are in need of archiving and preservation will be uploaded on priority basis after due approval and clearance of various pertaining to the digitization and archiving of such materials.

7. AREAS OF EXPLORATION
With the availability of free and open source software for creating and managing digital objects, new initiatives can be executed in developing open access networks for uploading and managing course contents of research institutions and universities opting for curriculum reshaping to keep pace with the latest developments in knowledge society. It provides ample opportunities for coordination and cooperation at various levels among various research bodies to share and expand their knowledge base. With the involvement of various regional and national research bodies and institutions KNoor can play a pivotal role towards creating a cooperative National e-repository for hosting research and other resources across the country.

8. CONCLUSION
The repository is a humble beginning and need to develop a strategy for more cooperation, content enrichment and sustainability to help the stakeholders of knowledge society for preservation, dissemination and accessibility of intellectual capital for the welfare and development of humanity at local and global level.

9. REFERENCES


