Design and Development of Institutional Repository at Annamalai University

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Abstract

To describe how an Institutional repository (IR) has to be setup for the intellectual thought content and output of an institution. This is now recognized as essential infrastructure for the ICT era. Nowadays, Universities are producing more digital objects like research articles, reports, thesis, Audio/Video, clippings and datasets in ever increasing number. Many Libraries are building up their own Institutional repository centre using a variety of software packages for digital asset and content management to collect, preserve and provide access, to its users to these digital objects. This paper is the result of an effort to develop a model to create IR of Annamalai University by Using Dspace.

Keywords

Institutional Repository, DSpace, Annamalai University, Digital Libraries, benefits of IR.

Electronic access

The journal is available at www.jalis.in
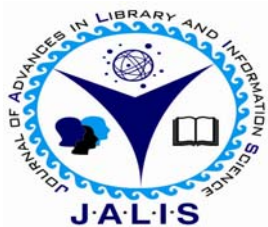
Introduction

Institutional repositories are digital collections capturing and preserving the intellectual output of a single or multi-university community (Crow, 2002). In the age of information technology, the concept of the traditional library has changed. Now, digital library concepts are being popularized. Libraries are not only the store houses of printed documents but also the centre of digital information. With the development and application of ICT, the services and the collection of the libraries are globalised. The prime objective of libraries is to keep their clientele up-to-date in their areas of interest. It can be in any format, eg. preparing bibliographies of the latest literature published in their area of research in a broad way, or simply providing them with the information published in the newspapers, websites, personal blogs, etc. The impact of information explosion, dwindling budget of the library, space problem, high information demand, increasing subscribing of journals have forced the libraries to seek other ways by which we can collect store and disseminate information among the users. To solve these types of problems, the concept of IR's emerged started among the academic institutions in India. Now the academic institutions have started to build their own repositories.

This article particularly focuses the development of institutional repositories, using DSpace software in Annamalai University,   provides a review of the current situation and examines the prospects of IR.

Institutional Repository .

Institutional Repositories (IR) are the "digital archives of intellectual products created by the faculty, staff and students of an institution or group of institutions accessible to end users both within and outside the institution." The IR may hold various types of publications, such as pre-prints and post-prints of journal articles, conference papers, research reports, theses, dissertations, seminar presentations, working papers and other scholarly items

Objectives

1. To publish and archive the scholarly work of an institution locally, using authentic information sources.
2.To enable long-term preservation of the scholarly work.
3.To facilitate constituent members of an institution

an easy and rapid way to publish and archive their research locally.

4.To provide an integrated view of and act as a single entry point to scholarly work of an institution.

5.To provide wider accessibility, visibility and distribution of the scholarly work of an institution.

6.To act as a self-evaluation tool for the management.

Review of Literature

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" (Rajashekar,2005). In context

of academic institutions, Branin argues that "more and more faculty and students in a university utilize information technology not only to access information but also to create new intellectual output in digital form" (Branin, 2005). He suggests that the approach to knowledge management is relevant to the implementation of Institutional Repositories that manage a wide range of digital information created in a University.

Implementing an Institutional Repository as a tool to capture the intellectual capital and enable knowledge sharing at Annamalai University was to be explored. A model Institutional Repository was thus to be implemented at Annamalai University.

Institution Repository in Annamalai University   overview

Figure:1Main page of the Institutional Repository at Annamalai University with many Departments.

The basic and fundamental level of Annamalai University Institutional repository is that it is a recognition that the intellectual life and scholarship of the University will, increasingly, be represented, documented and shared in digital form the primary responsibility of a University is to exercise and   make available and   preserve them. University will address the responsibility of both the members of their communities and to the public.

Types of Collection

(1) Conference papers (2) Faculty publications (3) PhD theses (4) Question papers/class lecture notes/convocation addresses/annual reports.

Hardware system requirement

To convert the printed and audio video documents tt is required, In addition, a high-speed face-up book scanner with Optical Character Recognition (OCR) software was acquired to digitize print documents and an MPEG card was acquired to convert video recorded documents into digital form.

Figure : 2 Shows the Department of Library and Information Science

Software system requirement

Dspace (1.7.1 version) was chosen as it provided the following facilities:

1. An open source technology platform, which can be customized to meet our future needs;
2. A suitable windows/linux platform for building an IR;
3.Inter-institutional sharing of digital information, scholarly rly communications with easy interoperability of resources and systems;
4.It has OAI-PMH compliance;
6.The other software needed to run the DSpace (1.7.1 version) including:

UNIX-like OS (Linux, HP/UX, etc.); Oracle Java 6 or greater ; Apache Maven 2.2.x (Java build tool) or later Postgre SQL 8.2 to 8.4 or later, an open source relational database; and Apache Tomcat 5.5 or later. And also, an Acrobat PDF maker to convert MS documents to Adobe PDF.

Intellectual property (IP) and licensing concerns .
In determining the policies to be adopted concerning the IP of deposited material staff at Annamalai University studied the policies of other similar organizations which had developed the IRs. For instance, at the Hong Kong University of Science and Technology the following policy is in place: The author must grant HKUST, the non-exclusive distribution rights when material, is deposited in the Repository. This non-exclusive distribution right in no way prevents the author from publishing the work in a research journal or distributing it in any other fashion.

Submitting content to the IR at Annamalai University
Dspace software has been successfully installed with accessing in local network. For submitting content in the specific community user must register with the software.User chooses a collection; user describes the content of the item by adding metadata and keywords;
New users who wish to submit content have to register on the IR by completing a special form. The following are then the basic steps, which need to be followed for the submission of material:
User uploads the file(s); user verifies the submitted item; user accepts the license.
DSpace management system "processes" the submission according to the work flow steps outlined in
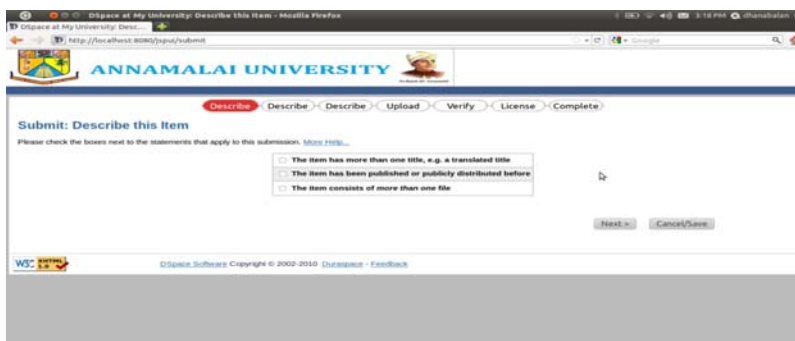

Figure 3; The content is submitted into the IR at Annamalai University .

As this users enter the information about an item, the status line at the top of the relevant window shows where they are in the submission process. Users can change their entries and return to a previous step to make changes by clicking on that step in the status bar. The seven-step chain, as shown in Figure 3, indicates the submission process. The chain appears at the top of all the screens with the current screen highlighted. The first screen asks for the "type" of digital item (animation, article, book, book chapter, dataset and so on), the language of the content (English (US), English, Spanish, German, French and so on) as well as whether the item has more than one title, whether it has been published before and the number of files to be included. The second and third screens present the forms for the user to enter Dublin core metadata elements (such as author, title, publisher, subject keywords, abstract, and sponsors). The fourth screen allows the uploading of the digital document which may be MS-Word, HTML, PDF or image files or other acceptable formats. The fifth screen allows verifying and making any corrections on the data submitted in the last four screens. The users can verify the information submitted and can correct information, add or remove the files as and when necessary.

Withdrawal of items from the IR at Annamalai University

If there is need, or demand, items can be removed from view within the IR at Annamalai University However, to retain the historical record, such transactions will be noted in the metadata record. Since, any IR item that has existed at some time may have been cited, we will always supply a "tombstone" when the item is requested, which will provide a withdrawal statement in place of the link to the object.

Figure: 4. License Verification stage for one digital item to be included in the IR at Annamalai University
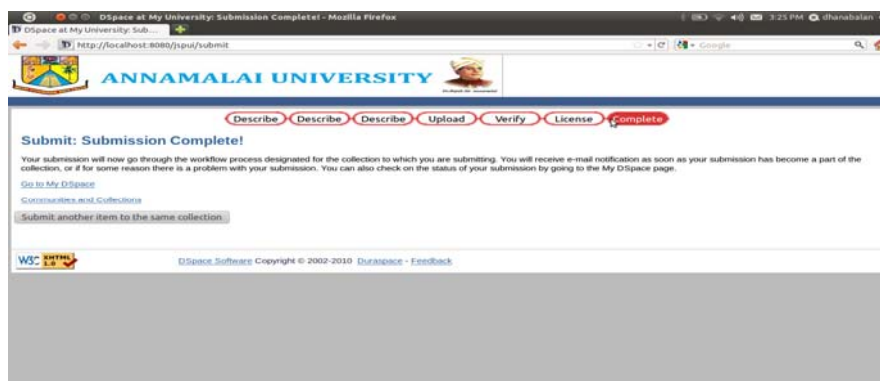
Figure :Various in submitting Content into the IR at Annamalai University

Benefits of the IR at Annamalai University

There are many benefits of the IR identified at Annamalai University as it

Enhances the professional visibility of the faculty, and raises the prestige of Annamalai University.
Provides a global platform for local research and hence improved visibility
Facilitates improved research collaboration and information flow
Brings together the intellectual output of the Annamalai University in an organized fashion, which otherwise would be scattered
Lowers access barriers and offers the widest possible dissemination of an individual scholar's work

Conclusion

The Annamalai University has successfully created a model IR using the DSpace software and this model could be replicated in all the Faculties. Institutional Repositories, significantly, extend the role of a library. And it is very clear that the Institutional repository is a very powerful idea that can serve as an engine of change in Annamalai University and more broadly for the scholarly enterprises that they support. It can advance a surprising number of goals and address an impressive range of needs. Institutional repositories build on a growing grassroots faculty practice of posting research online, most often on personal web sites, and also on departmental sites or in disciplinary repositories. This demonstrates a desire for expanded exposure and access to their work. The need for consortia repositories is an urgent more since every academic Institution may not want to run a repository and it is the right time the Annamalai University has initiated this program for the whole of academic community.

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