

Developing a Digital Repository for International Symposium on Information Management in a Changing World



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INTRODUCTION

Internet and web technologies provide many opportunities in terms of registering, keeping, and archiving digital materials and dedicating them to the service of users through institutional repositories (Tansley et al., 2003a). Universities, in particular, benefit from institutional repositories, as they can manage their intellectual heritage resources, usually scattered all over the campus both off-line and online, and serve their users. Digital objects in such repositories can be made available on a permanent basis, accessible through various platforms including mobiles from anywhere and any time of the day.

PURPOSE

The aim of this study is to develop a digital repository for the “International Symposium on Information Management in a Changing World” using DSpace open source software. DSpace enables designers to transfer digital objects (e.g., full-texts of papers, sound recordings, animated video, and so on) into the repository by using a customized workflow process, manage them and allow users to search for works in the collection and get full use thereof.

DIGITAL REPOSITORY

DSpace, one of the most widely used digital repository software, was developed collectively by HP (Hewlett-Packard) laboratories and MIT (Massachusetts Institute of Technology) libraries and introduced to the markets in 2002 (Tansley et al., 2003b, p.446). It can be ensured through the use of open-source Dspace software that every kind of document can be archived in electronic centers, protected for a long time and connected with internet access (DSpace, 2010).

Installation

DSpace has been built on Windows 7 operating system. Six programs are needed for the installation of Dspace software, developed with the use of java programming language (Table 1).

| Software Name | Version | Description |
|---------------------------------|-----------------|---|
| PostgreSQL | 8.4 | Open source relational database system. |
| Java JDK (Java Development Kit) | JDK 6 Update 20 | A software development environment for writing applets and application in Java. |
| Apache | 2.2.15 | Web server program |
| Tomcat | 5.5.29 | An open source servlet container |
| Apache Ant | 1.8.0 | A software tool for automating software build processes |
| Apache Maven | 2.2.1 | A software tool for Java project management and build automation |

Table 1. Prerequisite Softwares

Properties

- DSpace gives an opportunity of regulating the workflow process of the communities following the policy of digital archiving.
- A controlling process can be created by means of an authorization module and materials submitted to the symposium can be supervised editorially. Symposium materials (e.g., papers, posters, video footages of presentations) are accessible through the use of DSpace authorization module.
- The data input process consists of the stages of description of objects (metadata), uploading files, verification and licensing.
- Depending on their interests, users can search one, some or all collections in the repository using titles, authors, dates or keywords and use the full-texts of works. In Dspace, Lucene search engine (<http://tr.wikipedia.org/wiki/Lucene>) allows searching through Boolean operators.
- Every registered user has a ‘My DSpace’ space. Users might initiate new data input by using this space, control previously loaded inputs or complete their unfinished data input process. DSpace also provides users an opportunity to subscribe to various collections in the repository.
- DSpace supports the Metadata Harvesting Protocol of the Open Archives Initiative (OAI-PMH) and the OpenURL standard. Thus, the Internet users can get access to the full-texts of titles that are available through the symposium digital repository using various search engines such as OAIster and Google Scholar.

DIGITAL REPOSITORY (cont'd)

- In DSpace, data can be imported from/exported to different systems such as Eprints (<http://www.eprints.org/>) and Greenstone (<http://www.greenstone.org/>).
- Many features such as comment field, social network links, tag clouds, controlled index terms have been added to the user interface so that repository could be more functional (Fig. 1).

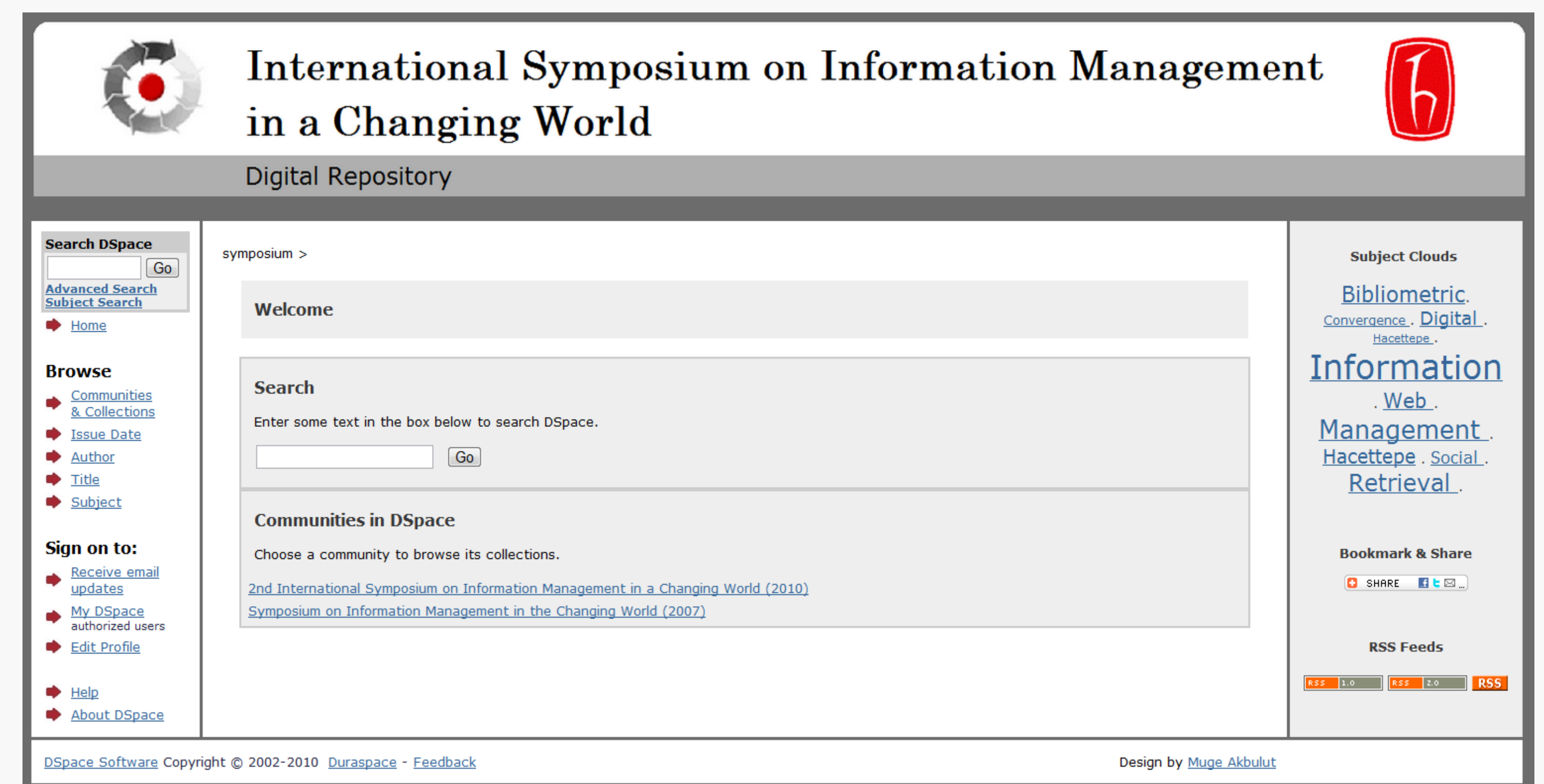


Fig.1 :Homepage

CONCLUSION

The International Symposium on Information Management in a Changing World Digital Repository has been developed through using DSpace open source software. It provides users a flexible workflow process to enter, edit and update records as well as digital objects and allows searching the collections using the capabilities of the Lucene search engine.

Some of the suggestions based on this study are as follows:

- Teaching staff might increase the visibility of their works by uploading the pre-print or post-prints of papers, project reports etc. to the digital repository instead of filing them in their personal web sites.
- Accessibility of scientific knowledge can be increased and the results of research projects can be shared more effectively.
- A central database of works produced by universities can be created and made accessible via web.
- DSpace might be utilized in the evaluation of the project proposals as well as in the management of theses and dissertations.

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