

DSpace Software for the Digital Preservation Library Repositories at the NUACA

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ABSTRACT

Digital and automated libraries currently are of utmost necessity. Henceforth, the modernization of this issue posits the fact of implementing automated systems in educational institutions. It is worth mentioning that the automation activities have already been launched at the National University of Architecture and Construction of Armenia (hereinafter NUACA). The foremost objective of the activities is the urge of having an up-to-date digital library. Secondly, it is respectively aimed at implementing general university library systems with those universities of having digitalized resources. Some standards have been processed, and accordingly, an appropriate storing and easy-search system have been outlined for NUACA. Interim with the studies and discussions, the structural tree of the library has also been processed.

Keywords

Open source software, digital library, DSpace, information technology.

1. INTRODUCTION

Mahatma Gandhi General Library (MGCL)[1] periodically organizes workshops and trainings to share some knowledge and skills concerning the developments of library systems. There are various library software systems for resource digitalization. Consequently, it is still impossible to determine a concrete system to be implemented as a library system digital toolkit. It should then be conditioned by the functional specialization of the university and by the inclusion level in the field of digitalizing scientific-methodological materials. However, there are also some benefits and drawbacks between the systems.

2.DSPACE SOFTWARE FOR THE DIGITAL PRESERVATION LIBRARY

Every educational institution should, therefore, follow the following standards while choosing and implementing the system:

- System prevalence
- Usage availability

Studying the system prevalence, the following image is obtainable.

Table 1.

Category	DSpace	Eprints	Fedora	Greenstone	Total
Educational institutions	13	11	2	5	31
Research institutions	6	3	-	1	10
Consortia	-	2	-	-	2
Cultural organizations	-	-	-	1	1
	17	16	2	7	44

DSpace is considered the most widespread pattern among the given digital solutions. It is a well-known software system aimed at developing library repositories, enabling data preservation in different formats. All the system work is available among users. Being a digital library resource, it ensures the professional preservation of research-scientific materials and publications. Resultant to it, it provides greater visibility and accessibility over the time [2]:

In Armenia, the educational institutions of carrying out scientific activities mostly use Koha as a systemic toolkit. As for the American University of Armenia, it is worth to mention that they use Dspace program package. The main difference between these packages is that Koha ensures library automation systems and DSpace is considered to be a toolkit of digital library system existence. Yet, the main aim of any kind of software is to create a library digitalization node. (Fig.1).

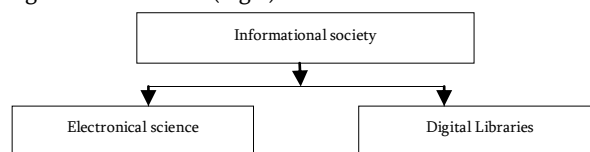


Fig. 1. Digital node

3. THE STRUCTURE OF THE LIBRARY AND ITS DIGITAL COLLECTION

Information Model of DSpace is broadly divided into four components: Communities, Collections, Items and Bitstreams[4].

Based on the studies and discussions, the DSpace system is going to serve as an information software for automated digital library at NUACA [5].

Every implementing informational model in the system (Fig. 2) should outline the structure of the library and the digital collection. Taking into account the following requirement, the existing data system of the university has been processed interim with the requirements of the chosen system.

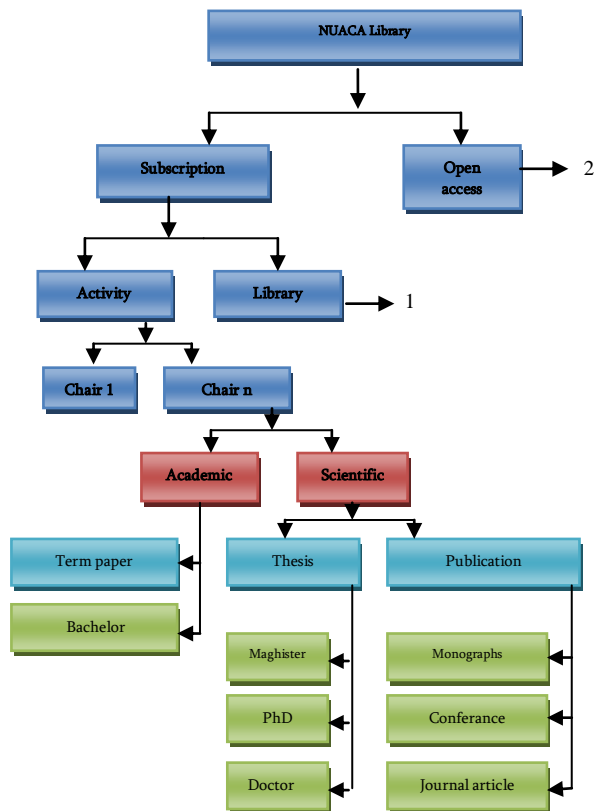


Fig. 2. The data model of DSpace system implementing in NUACA

Separate functional representation of system sub-nodes.

- Library (1) (Figure 4)
- Open Access (2) (Figure 3)

Open Access

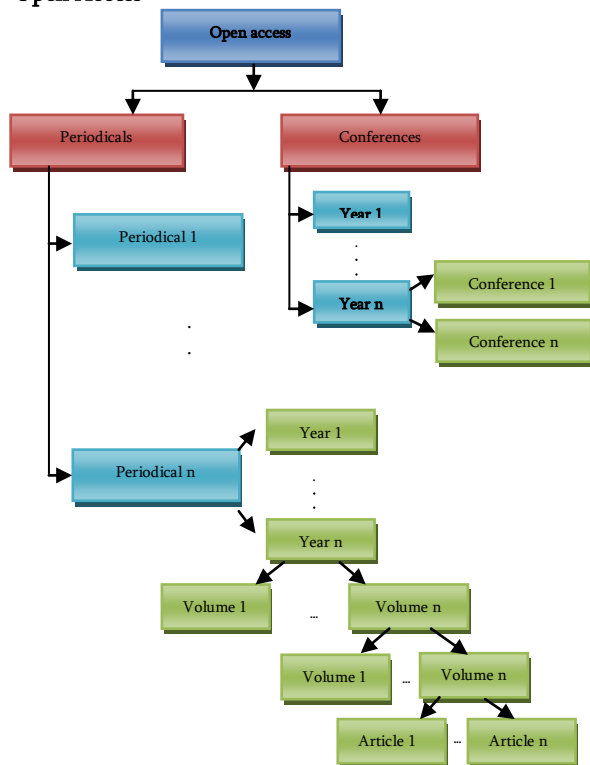


Fig.3. Hierarchical structure of Open Access tree

Library

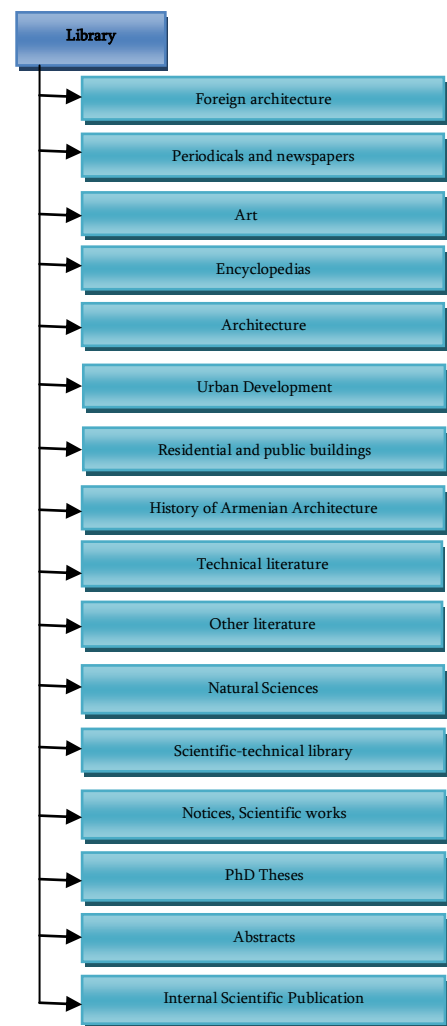


Fig. 4. Hierarchical structure of Library tree

The processed data model is to be implanted in DSpace system in the form of hierarchic tree. The implemented system is supposed to solve the following problems in the universities.

- Book storing
- Scientific work storing
- Storing of Scientific periodicals and conference materials
- Storing of graduation and term papers
- Procession of search systems

DSpace package is envisioned to be a unique toolkit of controlling library activities. Moreover, an idea of having expanded library systems will become prevalent, which, in turn, will enable to process a model of ensuring the availability of digital resources.

4. ACKNOWLEDGEMENT

The main issue of library automation is to make the library an object of high technologies with the help of IT and automation tools, which, in turn, will satisfy the educational needs of readers.

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