eLibrary and ARTE: Two OpenDLib Digital Libraries

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ABSTRACT

This demonstration shows two experimental digital libraries, e-Library and ARTE, which have been built by configuring appropriately the OpenDLib digital library system and then acquiring content with different approaches. Through these DLs we intend to demonstrate the capability of the OpenDLib system to be exploited in different application contexts.

Categories and Subject Descriptors

H.3.7 Digital Libraries

General Terms: Algorithms, Experimentation

Keywords: Digital Libraries

1. OpenDLib

OpenDLib[1,2] is a software toolkit that can be used to create a digital library (DL) that satisfies the requirements of a given user community, by instantiating the software appropriately and then either loading or harvesting the content to be managed. OpenDLib consists of an open federation of services that can be distributed and replicated. The basic release of OpenDLib provides services to support the submission, description, indexing, search, browsing, retrieval, access, preservation and visualization of documents and the management of the user accesses. In addition, the toolkit is able to dynamically manage the service instances and their access policies. The OpenDLib services implement the DL functionality making few assumptions about the nature of the documents to be stored and disseminated. If necessary, the system can be extended with other services to meet particular needs. The entire set of services can be managed and hosted either by a single or by a multitude of organizations that collaborate to the maintenance of the shared DL, each according to their own computational and human resources. An orthogonal system facility enables different user groups to define their own virtual view of the shared digital library. A powerful document model allows to support the handling of a wide variety of document types with different format, media, and structure. OpenDLib can also manage new types of documents that have no physical counterpart. It can also maintain multiple editions, versions, and manifestations of the same document, each described by one or more metadata records in different formats. Thanks to these functionality, OpenDLib can be used in many different application scenarios. The aim of this demo is to demonstrate this key feature of the toolkit.

2. eLibrary

eLibrary is a case-study DL created to demonstrate the OpenDLib functionality on collections of documents published by distributed heterogeneous information sources. These sources are managed by different systems, that range from the EPrints Software to Web portals. Currently, the eLibrary services provide access to:

1. the EPprints archives of the Italian Universities of Florence, Bologna, and Trento by preserving their original structure and organization in sets;
2. publications, technical reports and images of the French INRIA Institute which includes textual, images, and video documents;
3. gray literature produced by a number of CNR institutes and by the FORTH Institute of Computer Science

The relevant characteristics of this DL are: (i) not all the archives has been imported into OpenDLib repositories, some of them are maintained as external resources. This difference is not be perceived by the user, that can access uniformly both internal and external archives; (ii) an user can make cross- archive searches in any of the published metadata formats. Moreover, there is no need to provide multiple format of the same metadata since the system has the capability to generate automatically all the supported formats from a starting one; (iii) the presence of documents, such as French ones, that contain non-ASCII characters that permits to demonstrate the support of the system for UTF-8 characters.

3. ARTE

ARTE is a DL created to support the activities of the homonymous project. This project has been proposed by a multidisciplinary community of researchers that study the learning processes and, specifically, the complex interactions between words and images, from different perspectives (i.e., perceptive, cognitive, communicative). The ARTE DL has been built to support these researchers in two typical activities: the collection and access to documents (mainly texts and images) related to a specific topic under study, from world-wide distributed and heterogeneous archives; and the generation of courses, lectures and mixed-media composite documents.

Specific characteristics of this OpenDLib instance are: (i) the wide heterogeneity of the documentation and description formats; (ii) the existence of many collections covered by access policies; (iii) the need of virtual views focused on the topic of the organized courses; (iv) the variety of new documents and complex relationships that can be created by the members of the project by composing existing documents.

4. REFERENCES

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