Chapter IV

Dynamic Metadata Management System for Digital Archives: Design and Construction

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Abstract

This chapter describes metalogy, an XML/metadata framework that can handle several different metadata formats. Metalogy was developed under the Digital Museum Project funded by the National Science Council of Taiwan. It is common to have different data types and catalog formats even within one organization. In order to accommodate a variety of objects, it is often necessary to adopt several metadata formats. Thus, when designing a metadata management system, one needs to be able to handle heterogeneous metadata formats. XML, being a standard gaining increasing popularity, is also often used as data format so that exchange between data can be done in a uniform way.
Introduction

The rapid advancement of information technologies has led to new architecture and format for managing all disciplines. This significantly enhances the performance of the operation and management. However, different formats may crucially affect system integration and information sharing among different institutions. Although current information structure can serve the need of printing and audio/video media, its scope should be much broader because of the evolutorial changes of applications and development of electronic publication, user interface, and information media. It is therefore necessary to develop a new information operation model that can effectively reduce the cost of system development and automate data management.

Metadata, a traditional tool of libraries, is playing a fundamental role of information organization of digital content. It has, therefore, become an important part of the global information construction in planning, processing, restoring, and managing.

A number of metadata tools are presented in IFLANET (IFLA, 2003). By using these metadata tools, the metadata of heterogeneous documents can be input and managed. These tools are listed below:

- Distributed Systems Technology Center (DTSC). Reggie - The Metadata Editor. URL: http://metadata.net/dstc/.
- Interleaf. URL: http://www.interleaf.com/products/.
- MARC.pm. URL: http://marcpm.sourceforge.net.
- MetaManage. URL: http://www.metamanage.com/.

The Dublin Core Metadata Initiative Web site further classifies metadata tools into following categories (DCMI, 2004):