

DIGITAL LIBRARY SYSTEMS

A growing number of libraries are involved with creating or maintaining their own digital collections. Although the amount of electronic content that can be acquired through licenses with commercial companies or even from other libraries is huge, vast amounts of information, especially in the realm of local and specialized resources, have yet to be digitized. Digital library projects can include almost any kind of material:

- Collections of photographs or slides
- Videotapes
- Audio tapes
- Documents and manuscripts
- Public records
- Local newspapers or other publications

You can use many software applications to create a digital library collection. Many libraries use an add-on module to their integrated library system (ILS) designed for the creation of local collections. Some libraries use digital asset management systems, which are well-suited for large and complex projects. Other libraries may use software that is written or customized locally. Most digital library systems include a set of common components:

- A database that manages the metadata for each item in the collection
- A Web-based search and retrieval system
- Storage system for the digitized objects
- System for creating metadata records and ingesting digitized files
- Scanning or digitizing hardware and software
- Digital rights management module for tracking what categories of users can access each class of digital object
- Authentication and authorization components

All the same issues that apply to measuring the access of a digital library system apply to the library's online catalog. Like the online catalog, the emphasis in measuring use lies more in the queries performed on the system and the objects viewed, and less on simple page hits.

A collection initially digitized for local use often gains a broader level of interest. In some cases, a digital library system is either shared without cost or is licensed for use to other libraries. In such cases, many of the requirements libraries place on vendors for reporting use statistics apply locally as the library becomes the publisher or information provider.

Some of the use statistics the library can produce with a digital library system include:

- Number of search sessions initiated
- Counts of local versus remote users
- Categories of users (faculty, student, staff, affiliated, nonaffiliated, and so on)
- Types of queries performed
- Length of search session
- Number of simultaneous users
- Number of objects requested

Some digital library collections include material that may need to be restricted to specified categories of users because of copyright restrictions. In

these cases, the system will need to include authentication, authorization, and digital rights management capabilities.

Most digital libraries create access logs that can be used to study use patterns. The same types of transaction log analysis techniques used for other Web-based systems can be applied here as well. The transaction logs can reveal details of how the system is used and whether the users are making effective use of the system.

Those libraries involved with the creation of digital collections must account for the costs of maintaining such a system. In addition to the software and hardware that comprise the system, libraries need to track the costs of the staff time involved in digitizing objects, creating metadata, and managing the collection. Statistics should characterize the collection in terms of the numbers and types of digitized items available.