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I. Collections, services, and systems

A. Collections

Maryland ArtSource

Based at the Sheridan Libraries, Maryland ArtSource is the collaborative effort of eight cultural and arts organizations in Baltimore dedicated to promoting art information resources that illuminate Maryland art and artists. The site showcases Maryland’s artistic and cultural heritage, and features:

- selected art collections
- biographies of Maryland artists
- links to art and photography collections at area colleges and universities, libraries, museums, and historical societies.

Medieval Manuscripts – Le Roman de la Rose

A virtual collection of Medieval manuscripts from four libraries has been created to test ways of presenting manuscripts in digital format. This collection enables scholars to conduct comparative research on different versions of Le Roman de la Rose. Designed by librarians, scholars and information technology specialists, the site features:

- Complete transcriptions of three manuscripts and the ability to search the entire text of three manuscripts including searches for word frequency, spelling variations, and rhyming patterns.
- Images of each folio in 6 manuscripts of Le Roman de la Rose, a principal Medieval text, from the collections of the Walters Art Museum, the Getty Museum, Oxford University, and the Morgan Library.
- Ability to "page" through the manuscripts folio by folio and access the transcription from the folio image screen.

- Ability to view the same passage in all three manuscripts as a result of a search query, and to view multiple folio images and/or transcriptions on the same screen.

- Ability to search the miniatures of three manuscripts using controlled vocabulary

**Lester S. Levy Collection of Sheet Music**

The Lester S. Levy Collection of Sheet Music contains 30,000 pieces of music and focuses on popular American music spanning the period 1780 to 1960. Both the sheet music covers and the scores have been digitized. Highlights include:

- Images of the covers and each page of music published before 1923 and in the public domain

- Search capability

- Digital workflow management system is currently under development which is designed to reduce the amount of human labor for large-scale digitization projects.

- Optical Music Recognition (OMR) capability, allowing pages of sheet music to be interpreted by a computer, is also being developed within the framework of the Gamera system. OMR will allow users to play the music on a MIDI synthesizer and will enable the storage of large quantities of music in a database which can then be searched with a music search engine and/or analyzed with automatic musical analysis tools.

**Digital Workflow Management Project Overview**

Optical Music Recognition Demo

N.B. The Johns Hopkins University Sheridan Libraries and the Library of Congress are sponsoring the 4th annual International Conference on Music Information Retrieval (ISMIR), to be held from Oct. 26 to Oct. 30, in Baltimore, Md.

**B. Services**

**Center for Educational Resources**

The Center for Educational Resources (CER) partners with faculty to extend their instructional impact through the integration of digital technologies and innovative teaching strategies. Located in the library the Center's mission aligns with the evolving role of university libraries as they advance from print-based repositories to electronic collaboratories that enable application of digital collections and networked services to new approaches in instructional and scholarly communication. The CER’s popular Technology Fellows Program awards mini-grants to faculty and students projects that enhance pedagogy, facilitate access to course materials, encourage active learning and promote student/teacher collaboration.
C. Systems

**Digital Hammurabi**

Digital Hammurabi is a major, cross-disciplinary effort originating at Johns Hopkins aimed both at making very high resolution, three dimensional models of cuneiform tablets available to every researcher's desktop and at producing an international standard Unicode encoding for cuneiform text. Major goals include:

- Production of a portable, non-contact, user-friendly, very high resolution 3D surface scanner that can scan all facets of an average cuneiform tablet in under a minute while implementing scantime adaptive resolution down to 10 micrometers (i.e., 100 lines per millimeter - at least 4 times finer than currently available resolutions)

- Creation of new computer algorithms to stitch gigabytes of raw data together into coherent, virtual tablets for real-time, multi-resolution rendering, self-shading, and manipulation by researchers over fast Internet2 connections using software of our own design.

**CAPM (Comprehensive Access to Print Materials)**

CAPM focuses on the evaluation and development of a robotic system that will provide real-time access, through a Web interface, to materials shelved in off-site locations. Also collaborating on the project are faculty from the Departments of Mechanical Engineering and Geography and Environmental Engineering at Johns Hopkins and faculty from the Economics Department at the University of Colorado at Boulder.

**Gamera**

The Gamera system is a tool for developing document recognition applications, though it is not designed to be a packaged document recognition system. Developing a recognizer for Gamera is designed to be as easy as possible, but still requires a considerable time commitment.

**Information Technology Research**

The proposed Information Technology Research, funded by the National Science Foundation, will result in a fully automated robotic system to include:

- An on-demand and batch scanning of print materials (CAPM)

- An open-source software framework for document analysis that can be trained and calibrated by Humanities scholars (Gamera).

The resulting system will include an inter-linked mechanism between CAPM and Gamera. To evaluate different techniques for document analysis, including Gamera, we will build a testbed of digital images. Gamera will be designed according to the principles of usability which include effectiveness, efficiency and satisfaction.

**Services for a Customizable Authority Linking Environment (SCALE)**

Johns Hopkins and Tufts University researchers are collaborating to provide two broad classes of service to National Science Digital Library users:
automatic linking services that bind key words and phrases to supplementary information; such automatic linking services are already in place in the Perseus Digital Library

infrastructure to support automatic linking based on authority control of names and terms and on links among different authority lists such as thesauri, glossaries, encyclopedias, subject hierarchies, and object catalogs.

http://nils/lib/tufts.edu/scale/

II. Projects

Projects in progress in 2003:

Peabody Digital Audio Archive Project (PDAAP)

The main goal of the initial phase of the Peabody Digital Audio Archive project is to digitize about one third of music in the Archives of the Peabody Institute, which holds about 10,000 hours of tape recordings of concerts and recitals at Peabody over the past thirty years. Completion of the first phase will ensure scalability and assist in determining the cost and feasibility of digitizing the entire Archive and similar collections. The long-term goal is to digitize the entire collection. All ensemble recordings in the Archives are believed to be in the public domain. Evaluation of repository, e-publishing, and digital preservation technologies (Web site not available yet). Systems include:

Dspace
Fedora
DiVA (Uppsala University)
ETD Software
e-prints
WebWare (commercial digital asset management system)
METIS
Open Journal System
OKI-compliant courseware
LOCKSS

III. Specific Digital Library Challenges

Usability

Ubiquity does not guarantee usability. “Click here.” Familiar words and common interface elements contribute to the usability of a Web site, but many other aspects are involved. The Sheridan Libraries are engaged in evaluating the “usability” of sites to determine how to create an interface that is efficient, satisfying, and easy to use, to learn, and to remember. Usability evaluation involves selecting some of the various methods designed to glean this information and applying them iteratively, from the early stages of a Web site's development through its active use. Methods include:

Interviews
focus groups
card-sorting tests
link-naming tests
scenario-based tests
cognitive walkthroughs
heuristic evaluations
Many of these methods invite the library's "target users" to discuss their needs and goals in using the library's Web resources and to participate in sessions in which library staff observe their use of a library Web site. In addition to providing usability evaluation for various library web projects, research is also conducted on digital library usability, with the goal of finding the best methods for evaluating the usability of digital library resources.

IV. Digital library publications, policies, working papers, and other documents

Publications


Presentations


