

*North Carolina State University Libraries
Report to the Digital Library Federation
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I. Collections, services, and systems

A. Collections

InsideWood

InsideWood is an Internet-accessible wood anatomy reference, research, and teaching tool designed for use by a community of users that includes botanists, archaeologists, park naturalists, paleontologists, museum conservators, and forensic scientists, as well as educators in the natural sciences. This resource integrates information from a wood anatomy database for modern wood compiled at North Carolina State University with descriptions and photomicrographs contributed by 10 international partners. Broad taxonomic coverage provides over 5,500 descriptions that represent at least 8,000 species. Currently, over 35,000 digital images are archived. These images will be loaded and linked to description records. The InsideWood database, developed in Oracle, is comprised of three major components: taxonomic information, image information, and descriptive information. Four search options in the user interface provide flexibility in retrieving wood anatomical information, with options for searches by features, scientific names, or keyword. Luna Insight provides browse and search access to the images, which may be retrieved by family, genus, species, contributor, or any field configured as searchable from Insight.

<http://insidewood.lib.ncsu.edu/search/>

University Archives Photograph Collection Project

The Special Collections Research Center is engaged in a multi-year project to digitize and create metadata for selected photographs from the 250,000-image University Archives Photograph Collection using Luna Imaging's Insight and Inscribe software to capture metadata and manage the digital content. The collection--one of the most frequently used collections in Special Collections --documents the history of North

Carolina State University from its founding in 1887 to the present. A significant part of the collection highlights North Carolina agrarian history and rural sociology through NCSU's involvement in Cooperative Extension and Agricultural Research services. The collection was built using an extended Dublin Core metadata standard allowing this collection to be searched with other collections. To date, 1600 University Archives photographs have been scanned and imported into Luna. When fully implemented, Luna Imaging's Insight software will allow online access to these visual materials and support the ability of students, faculty, and scholars to utilize images in teaching and research. Information is lacking for many of the photographs and the Libraries will be investigating ways that the NC State community can help in describing the subjects of certain images in the collection.

Living off the Land

The NCSU Libraries Special Collections Research Center is laying the groundwork for "Living off the Land," an online research site intended to bring together historical tobacco and crop science-related resources available in this state. The goal of this project is to digitize primary source research materials on tobacco and crop science and to synthesize them into an educational resource emphasizing the rise of the agricultural economy in North Carolina. Among the topics represented in the collection, which will focus on the period from 1850-1950, will be education, history, economics, culture, entomology, cultivation, and the literature of tobacco. The collection will have sufficient breadth to be of interest to K-12 students, the advanced researcher, and the general public. Original documents relating to the establishment of NC State University will be included, beginning with records drawn from the state's Agricultural Experiment Station. Research reports on various crops, correspondence, and photographs of agricultural activity affiliated with the university will be digitized and featured in the site.

B. Services

Services may include user-profiling services, online reference services, services supporting interlibrary loan or the use of electronic reserves. Details below.

Learning Commons

With the renovation of the major public spaces of D.H. Hill Library (a 1950's era library), the library is taking the opportunity to create a learning commons. The new space will focus on flexible and inviting computing and study spaces for students, and will complement services already in place in the Learning and Research Center for the Digital Age, including the Digital Media Lab, instructional classrooms, the Usability Research Lab, and Collaboratory. The learning commons is scheduled to open Spring 2006 with approximately 150 fixed computing seats that will run the campus lab software image.

Endeca ProFind

The library is acquiring Endeca ProFind faceted browse software to support improved keyword searching in the online catalog. Current keyword search functionality in ILS catalogs falls far short of user expectations in terms of relevance ranking of results, being able to filter and manipulate the result set, and system suggestions of related resources of interest. ProFind's integration with our current ILS, Sirsi Unicorn, will greatly improve our users' catalog searching experience. We anticipate that ProFind will be installed by fall 2005.

Next-Generation Metasearch

The library is acquiring Ex Libris's MetaLib software to replace the currently used metasearch software, BlueAngel Metastar. We will rely on our locally-developed ERM (E-Matrix) to deliver collection lists, descriptions, and connection information and use MetaLib's X-Server API to integrate search boxes and result sets into the look-and-feel of our redesigned website.

Next-Generation My Library

Next-Generation My Library is a collection of web-based personalization and customization tools to library collections and services for the NC State community. The initial release of the Next-Generation My Library service will consist of a single campus-authenticated interface for accessing library borrowing record information, managing journal table of contents alerts, and course-based access to library resources. The course-based access tool will provide students with a personalized view of library resources, such as library course reserves and related subject resources, based on the courses they are currently taking. The selection of tools was informed by findings from several student focus groups, and reflects an interest in increasing the audience and appeal of the My Library service, particularly for undergraduate students.

Quick Search

Quick Search is a search tool designed to provide users with quick and comfortable access to the diverse set of content and services available through the NCSU Libraries website, from a single search box. This search tool will replace the current Google-based site search tool when it is released as part of a larger website redesign. A "sponsored-links" component of the tool provides users with a direct link to relevant high-use library resources and information. A subject identification component provides contextual links to subject resource guides, thus encouraging subject-based resource discovery. An integrated frequently asked questions component responds to common institutional queries. Additional integrated search modules are planned. The Quick Search tool is an in-house solution based on open source tools such as Nutch and SWISH-E.

C. Systems

Systems may include reports by members on their development, implementation or experience of various applications and software whether developed locally, acquired from a third party. etc. Reports might focus on integrated library systems, application specific software or software components, applications developed by members for specific functions. Details below.

E-Matrix

In 2002, NCSU Libraries began development of an electronic resources management system to support acquisition and licensing, collection management, and resource discovery for the Libraries' journals and databases. Working from the baseline functionality and data dictionary of the DLF-ERMI, the scope of E-Matrix has expanded significantly to include not only current print periodical data, but also a robust module for resource evaluation and reports. Built with an Oracle back-end and Java front-end interfaces, E-Matrix will integrate with both the Ex Libris SFX Knowledge Base and the Sirsi Unicorn ILS to present both staff and public views of e-resource and periodical information. By integrating existing datastores, E-Matrix will avoid the necessity of re-keying or double-keying of important data, while at the same time creating an authoritative datastore for information not previously centralized in a single system. E-Matrix will drive web displays

Digital Repository Development

Development is ongoing for a library-based digital repository system. Using DSpace as a common backbone, the repository will consist of a number of atomically presented collections. First among these will be the redevelopment and redeployment of two existing collections: NCSU Electronic Theses and Dissertations, and an enhanced Faculty Publications Repository. The ETD project will involve merging our current implementation of the Virginia Tech ETD-db system as a submission management system connected to a DSpace implementation that will act as repository, discovery and presentation layers. The Faculty Publications Repository will be an extension of our existing NCSU Authors Database and will include citations for articles, coupled with submitted full-text copies of post-prints when authors choose to contribute them. Future collections presented through this digital repository system might include campus technical reports and an electronic government documents collection. For this project, DSpace will be run on a Solaris system and connected to an Oracle database.

II. Projects and programs

A. Projects

New Project Announcements

NDIIPP Project: Collection and Preservation of At-Risk Digital Geospatial Data

The NCSU Libraries is partnering with the North Carolina Center for Geographic Information and Analysis on a three-year project to collect and preserve at-risk digital geospatial data resources from state and local government agencies. This project is being conducted under a cooperative agreement with the Library of Congress in conjunction with the National Digital Information Infrastructure and Preservation Program. Although the effort will focus solely on North Carolina, it is expected to serve as a demonstration project for other states. Targeted resources include digitized maps, geographic information systems (GIS) data sets, and remote sensing data resources such as digital aerial photography. The project partners will develop a digital repository architecture for geospatial data through use of open source software tools such as DSpace and metadata standards such as METS and FGDC. In addition, the partners will investigate application of emerging Open Geospatial Consortium specifications for data interoperability in the archive development process.

Sociolinguistics Digital Audio Analytical Archive

The NCSU Libraries is planning to build a digital analytical archive of the recordings of Professor Walt Wolfram, William C. Friday Distinguished Professor of English at NCSU. Professor Wolfram has been making recordings of North Carolina accents and dialects since the nineteen-sixties; this private collection will serve as the basis for a collaborative project that combines the information management skills of digital librarians with the subject knowledge of sociolinguists. The as-yet-unnamed project will have two prongs: first, digitizing and ensuring preservation of and access to the audio recordings; second, developing an integrated application designed specifically for sociolinguists engaged in phonological analysis. Digitization standards and metadata standards will be tested in the course of developing the archive.

III. Specific Digital Library Challenges

Community

One of the new sections of the library's redesigned website, scheduled for deployment August 2005, will be "Community." In this space, the library will offer collaborative tools (blogs, wikis) for general campus use, a conceptual virtual counterpart to the learning commons physical space. The library has familiarity and expertise with these tools, using them for a variety of internal communication and library publication purposes. Challenges include effectively building on the experience of other institutions (University of Minnesota's UThink project) and working closely with others on campus who are also exploring expanding use of these technologies to support student learning, teaching and research.

Metasearch Integration

Over the last two years, the library has acquired a significant body of log and usability data on how our users make use of and feel about metasearching. With the new implementation, we will seek to address identified issues related to usability, technical integration, and collection "framing." Balancing institutional investment in this tool with user benefit will also be closely examined.

Integrating with Campus Infrastructure and Data Stores

The library is increasing efforts to link users with campus resources--such as facilities, services, information resources, people and expertise--which reside outside of the library. At the same time, there is increasing interest in making library resources and services contextually available in online campus environments outside of the library. A related challenge is that of more effectively integrating library systems with campus data stores such registration data and faculty instruction schedules.