

Building a Digital Cultural Heritage Community

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Lincoln Trail Libraries System, Champaign

McLean County Museum of History, Bloomington

Rare Book and Special Collections Library, University of Illinois Library

Lincoln Trail Elementary School, Mahomet

Oakland Elementary School, Bloomington

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1. Introduction

The Institute of Museum and Library Services awarded a National Leadership "Model Program of Cooperation" grant of \$158,000 to the University of Illinois at Urbana-Champaign Library. The Digital Cultural Heritage Community (DCHC) project is for an eighteen-month period, commencing April 1st, 1999. This report covers the second six-month period of the grant. The grant is intended to support the creation of an electronic database of historical material, helping teachers to meet statewide goals for education that have been mandated by the Illinois State Board of Education, with third-, fourth- and fifth-grade social studies curricula being the primary focus. As the DCHC progresses, we strive to adhere to the original time line which was set up before the project commenced, ensuring that the project remains true to its initial goals. The time line, accessible on the project Web site, is updated continually as the project progresses with new activities and achievements.

2. People

2.1. Staff Changes

We had a change of staff at the end of December. Amanda Grunden, half-time Research Information Specialist, chose to assume a full-time position elsewhere and departed from the DCHC. To take over her responsibilities in a timely manner, we advertised for a part-time student from the University of Illinois campus, and were fortunate to find Richard Wigstone, an extremely capable undergraduate Computer Science major. Richard has taken over the programming aspects of the database and search engine.

2.2. Advisory Group

The formation of the Advisory Group for the DCHC was finalized during October and November 1999. Several experts from the museum, library, and educational communities were invited to form an advisory council. We invited them to monitor the threaded discussions and other activities of the project and review the materials being created for the Web Site. We are honored that the following people agreed to be part of our advisory group: Ann Bishop, Assistant Professor at UIUC Graduate School of Library and Information Science; Frederick Drake, History Professor at Illinois State University; E. Duane Elbert, Professor Emeritus of History at Eastern Illinois University; Paula Kaufman, UIUC Librarian; Melanie Loots, Senior Associate Director at the NCSA; Lawrence McBride, History Professor at Illinois State University; Evangeline Pianfetti, Visiting Assistant Professor at UIUC College of Education; and Jan Waas, Curator at the Illinois State Museum. We have set up a dedicated listserv as a discussion forum for the Advisory Group and from time to time, we give them updates on the status of the project and ask for their feedback.

3. Presentations

3.1. Local Meetings

During the past six months, we have received several more visitors to see and hear about the DCHC. A presentation was given to Fred Wilson¹, MacArthur Fellow and Linda Duke, Audience Education Director of the Krannert Art Museum². Mr. Wilson is an installation artist who explores the relationship between museums, works of art, and other collections. He is well known for rearranging museum displays, and reclaiming pieces from museum storage to bring

¹ http://www.macfdn.org/programs/fel/1999fellows/fred_wilson.htm

² <http://www.art.uiuc.edu/kam>

out hidden or neglected possibilities, and creating new installations that highlight important social and cultural themes.

Presentations were also given to Elisabeth Lalou, Directeur adjoint of the Institut de Recherche et d'Histoire des Textes³ in France, and a large group of librarians from the China Academic Library and Information System⁴. An IMLS-sponsored project at the Missouri Botanical Gardens⁵ also sent three visitors to Urbana to hear about the DCHC and share common ideas. A very fruitful discussion took place with personnel from both projects learning from each other.

3.2. Conference Presentations and Publications

Pat Miller and Nuala Bennett attended the IMLS Web-wise⁶ conference in Washington, DC, held March 15-17, 2000. They both agreed that it had been a very successful and helpful meeting, where they had a wonderful opportunity to hear about other IMLS projects. Nuala also gave a 45-minute poster session at the conference. Using large posters and an online connection to the DCHC web site, she gave a presentation to quite a large number of those attending the conference. The attendees also took away a brochure⁷ giving a summary of the project. Those who attended the poster session asked a variety of questions but their main interest appeared to be in the design of the database and the use of Dublin Core. Some people also contacted Nuala later during the conference to ask further questions.

More recently, Nuala attended the Museums and the Web 2000⁸ conference in Minneapolis, MN. Over 500 participants from 20 countries attended this conference. Nuala presented our publication, *Integration of Primary Resource Materials into Elementary School Curricula*⁹, at the conference. Again, there was much interest in the DCHC from a number of attendees and questions were posed during her presentation and later during the conference.

Finally, we have submitted a project brochure to the Walters Art Gallery for their "Education for EdCom Marketplace" presentation. This will be held Monday, May 15, 2000 at the American Association of Museums Annual Meeting in Baltimore, MD.

4. Collaborations

Collaborative communication continues throughout the project development. As well as using the WebboardTM (an on-line threaded discussion board), we have continued our in-person meetings. The museum curators and librarians have made visits to classrooms to meet the teachers and schoolchildren. This has been a wonderful opportunity to advance the understanding of curators and librarians in how the teachers work with the students and to appreciate the amount of time and work which teachers need for a large classroom full of 8-, 9- or 10-year-olds.

At the end of December, museum curators and librarians were invited to an afternoon get-together at the Rare Book and Special Collections Library. The Rare Book Library had been

³ <http://irht.cnrs-orleans.fr>

⁴ <http://www.calis.edu.cn>

⁵ <http://www.mobot.org>

⁶ <http://cecssrv1.cecs.missouri.edu/webwise>

⁷ An on-line version of the brochure is also available at <http://images.library.uiuc.edu/projects/dchc/page1.html>, and <http://images.library.uiuc.edu/projects/dchc/page2.html>

⁸ <http://www.archimuse.com/mw2000/index.html>

⁹ N.A. Bennett, B. Sandore, A.M. Grunden, P.L. Miller, *Integration of Primary Resource Materials in Elementary School Curricula*, pp. 31-38, Selected Papers from an International Conference, Museums and the Web 2000, Minneapolis, MN.

hosting a four-month exhibit on Lincoln¹⁰, so this end of year celebration provided a fabulous occasion for the teachers, librarians and curators from other libraries and museums to come together and see a large collection in person where the collection will be extremely valuable to the DCHC database development.

In February, we invited Charly Bauer, Assistant Director of Library Systems and Multimedia Databases at OhioLINK¹¹ to consult with us for two days. Mr. Bauer came and spent his time looking at all aspects of our database design and implementation. We were fortunate that Mr. Bauer had spent part of his graduate studies at the University of Illinois and was completely familiar with our equipment capabilities, both hardware and software. We used the time beneficially to address issues in the database design and development, some of which we had not previously considered. As a result, the database is now well designed and could be easily transferred for use with other data sets in the future.

5. Copyright and Intellectual Property

During the metadata workshop at the end of October, we took some time out to start a discussion on copyright and intellectual property issues. At that workshop, Beth Sandore gave an introductory presentation¹² to workshop participants. Subsequent to the introductory presentation, we continued discussions on the project Webboard. Discussions finalized with a "Conditions of Use" statement¹³ on the DCHC Web site, and a 4-page Collaborative Agreement being signed by all DCHC partner institutions and executed by the University of Illinois at Urbana-Champaign legal counsel.

As well as local copyright efforts, Pat Miller and Nuala Bennett attended a copyright meeting¹⁴ at the Chicago Historical Society, held January 11, 2000. The town meeting was co-sponsored by the National Initiative for a Networked Cultural Heritage (NINCH), the Chicago Historical Society, the Society for American Archivists, the Art Institute of Chicago, and the Library at the University of Illinois, Chicago. The focus of the daylong meeting was on the impact of the Internet on copyright, and on issues and tradeoffs involved in the creation and dissemination of information and visual materials. The day offered some insights on the impact of the Internet on copyright, the consequences of the Digital Millennium Copyright Act, and the complicated problems associated with access to information.

6. Scanning and Digitization Workshops

In order that the museum curators and librarians would be able to proceed with scanning their artifacts, or putting their digital cameras to the best possible use, we held a number of scanning and digitization workshops. We first held a one-day workshop for all partners. At this workshop, they learned about different types of digitization and the fundamentals of imaging and scanning such as pixel primers, format primers and capture format choices.

A major portion of the workshop was also devoted to benchmarking of images. As each of the institutions participating in the DCHC has different collections and methods, we had to ensure that certain standards were adhered to while scanning and imaging of material was undertaken at each site. We agreed on the Library of Congress imaging standards¹⁵ for the DCHC project.

¹⁰ *Learning About Lincoln At The University Of Illinois At Urbana-Champaign*, <http://www.library.uiuc.edu/rbx/lincoln.htm>

¹¹ <http://www.ohiolink.edu>

¹² <http://images.library.uiuc.edu/projects/dchc/IntellectualProperty.htm>

¹³ <http://images.library.uiuc.edu/projects/dchc/conditions.htm>

¹⁴ <http://www.ninch.org/copyright/townmeetings/chicagoreport.html>

¹⁵ Carl Fleischhauer, *Digital Formats for Content Reproductions*, Library of Congress. Last updated July 13, 1998, Consulted February 4, 2000, <http://lcweb2.loc.gov/ammem/formats.html>

Each attendee at the workshop was issued with a bound workbook with all of the standards included. All DCHC partners now follow the same standards for scanning text, photographs, maps and graphic materials. This helps ensure consistency in all of the images in the database.

As well as a general workshop on scanning for all of the partners together, we have made several site visits to each of the museum and library partners, ensuring that individuals understand every part of the scanning process, manipulation of images and of course, entering of corresponding data into the database.

7. Web Site

7.1. Web Pages

The DCHC Web site has been active since the beginning, but has already undergone many changes. The server hosting the Web site was re-organized with the result that the URL for the DCHC changed address. The DCHC Web site now includes information such as the project proposal abstract, links to newspaper publications, project reports and presentations; project time line, workshops and conferences; images of visits to classrooms; conditions of use statement; useful web links for project participants; links to the Web sites of all those involved in the project; on-line resources (Webboard, on-line timesheet entry form) for participants, and finally, access to the searchable database of digitized images and associated text from the museums and libraries.

7.2. User Evaluation

In order to monitor use of the DCHC Web site, we purchased Webtrends™ from Webtrends Corporation. Having Webtrends has enabled us to closely monitor traffic on the DCHC Web site. We are now in a position to monitor the number of users at our site, but more importantly, to track their actual usage, such as which of our pages are the most frequently viewed, and also, what methods the users are using to enter our Web site. The software package also allows us to regularly analyze all links on our site for correctness, thus ensuring good quality control and integrity at the DCHC site.

8. Database Design and Implementation

8.1. Database

Our first Interim Report discussed the database being in the early stages of development. We are now able to report that much progress has been made on the database. The DCHC database will hold digitized materials that museum curators and librarians, in collaboration with the teachers, have chosen from their collections in order to meet the Illinois State Board of Education Learning Standards and teacher-supplied Curriculum Units, focusing on the Social Sciences for 3rd, 4th and 5th grade classrooms.

At the end of October, we had just held a workshop on metadata issues. Subsequent to this workshop, all project participants discussed the design of the database. This was a crucial discussion as the different museum and library participant institutions invariably each had very different methods of cataloging and describing their collections. The discussion centered on design of a database that could be used by all parties and which would be easily understood by both types of user – those entering data into the database, and those end-users (teachers) who would be using the complete database. Our paper submitted to *Museums and the Web 2000*¹⁶, and which is also in the Appendix, includes a lengthy discussion of the final field design used for

¹⁶ Also available at http://www.archimuse.com/mw2000/abstracts/prg_80000209.html

the database. The database was put on-line at the end of February 2000 and made available to all partner institutions to add their data. Each partner institution was supplied with a number of access passwords so that they may enter new data or make edits to existing data from their own institution. They can all view data from other institutions but are prevented from editing that data, thus ensuring integrity of data. As the database develops and grows, it is being monitored closely at the Digital Imaging and Media Technology Initiative (DIMTI) to ensure that everything is consistent and correct.

8.2. Equipment

In order for each partner institution to enter data into the database, they must use their modem connections to the Internet. We quickly realized that downloading images from their local servers directly into the database would cause severe delays in entering all the data. It would also be very aggravating to all users who, as well as downloading thumbnail images and jpeg images, would be downloading large tiff files. In order to alleviate this situation, we had to come up with an alternative method. We decided to purchase CD-Writers for each of our museum and library partners. We also purchased blank CDs for each partner. It is now possible to save time in the database entry. Museum and library partners need only enter the textual data for each database record. This textual data includes references to the images for the database. When they have sufficient numbers of images on a CD, they then mail the discs to DIMTI from where they will be directly loaded into the database. This method has an added advantage in that, once the images are downloaded on the DIMTI server, the CDs can be returned to the museum and library partners who will have an archival copy of each of their images.

8.3. Search Engine

As the partners enter their textual data on-line into the database, we are concurrently developing the search engine to the database. We have made available a Browse screen, where users can browse through a listing of records in the database. From this listing, they can link to any individual record. Through the actual search engine, users have numerous possibilities to search for specific records. They can do a simple search of data by entering in a search term from an Author or Other Contributor field, as well as a text word from the Description, Interpretation and Subject fields. Searches can also be made across time periods. The Advanced Search allows the user to search for records applicable to specific Learning Goals or Curriculum Units, as well as Resource Identifiers. The latter field refers to the Accession Number of an artifact at its holding institution. Users can now browse through a list of those numbers (or enter a number into a blank search box) to find a specific item at a specific partner institution.

Finally, the search engine has been equipped with a "Favorites" link. This option allows users, having looked at the results of their specific search, to mark their favorite records from the result set and then to save this shorter set of marked records, thus saving time in not having to repeat a search at a later date. Included in the Appendix is a screenshot of the various types of search that a user can make of the DCHC database. The search engine is still being developed and we look forward to seeing it progress even further.

9. Accomplishments

The DCHC has always involved a clear progression of tasks that build upon one another. In the first six months of the project, all partners reviewed the teaching goals for Socials Sciences in the Illinois Learning Standards, focusing on the early and late elementary grades. Teachers shared their curriculum units for Social Sciences Goals 14-16 with the museum curators and librarians, also identifying examples of the types of primary source materials to which they

would like to have access. Curators and librarians reviewed the units, together with the learning goals.

The last six months has seen the curators, librarians and archivists looking closely at materials in their collections that had already been digitized or would need to be digitized for inclusion into a digital repository. Simultaneously, they examined metadata issues with each other and the teachers to determine information needs. Together, the project participants determined the steps necessary to make the data elements available to teachers, and to create a digital repository that would be accessible through the Internet. This in turn would enable teachers to integrate digital cultural heritage materials into the curricula. An important issue for the museums and libraries at the same time was to develop a set of terms and conditions for digital access to their collections, and this has also been accomplished. We are now at the point where time is being spent adding materials to the database for the teachers and in the next six months of the project, we hope to see the teachers using this material in their classrooms. The teachers will soon be able to integrate the material into the social science curriculum units in their classrooms.

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