Digitization in the Real World

Lessons Learned from Small and Medium-Sized Digitization Projects

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Digitizing Civil Rights: An Omeka-based Pilot Digital Presence for the Queens College Civil Rights Archive

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Abstract

The Queens College Civil Rights Archive of the Department of Special Collections partnered with the Queens College Graduate School of Library and Information Studies to create a pilot web presentation using the open-source Omeka platform. Phase I of the project, conducted during the Spring 2010 semester, outlined a method for institutions of limited means to enter into the world of digitization using existing resources while highlighting the difficulties involved with metadata and IT support, and the advantages of involving graduate students.

Keywords: Civil rights, Digitization project, Omeka, Plug-ins.

Introduction

In the spring of 2010, the Queens College Civil Rights Archive of the Department of Special Collections partnered with the Queens College Graduate School of Library and Information Studies to create a pilot web presentation using the open-source Omeka platform. The synergy created between the technological skills found in the library school faculty and student body and the desire of the Civil Rights Archive to begin digitization of key holdings allowed the rapid

creation of a powerful web presentation platform. The process also outlined a method for institutions of limited means to enter into the world of digitization.

Queens College Civil Rights Archive

The Civil Rights Archive of the Queens College Department of Special Collections and Archives collects published and unpublished works relating to civil rights activities such as personal papers, community materials, organizational records, non-print materials, and artifacts. It also conducts oral histories to supplement its collections. The archive is particularly strong in materials documenting civil rights work by Queens College students during the early 1960s. The Archive seeks to provide evidences of the under-documented Northern involvement in the civil rights movement.

The Archive was founded in late 2008 around an estimable collection of personal papers donated by alumnus Mark Levy. Since then almost a dozen other personal collections relating to civil rights work in the 1960s have been donated by College alumni, and the Archive continues to actively collect in this area.

Queens College Graduate School of Library and Information Studies

The Queens College Graduate School of Library and Information Studies prepares library/information service professionals to meet the information and literacy needs of the New York metropolitan region and beyond. It is the only American Library Association accredited program for library and information studies within the City University of New York. The school prepares graduates to serve a broad segment of the metropolitan area's multicultural, multiethnic and multi-lingual population in a variety of institutional and informational settings. Through research, publication and other forms of scholarly activity, the school contributes and transmits new knowledge to society and the profession. The faculty provides opportunities for students to attain the competencies needed to participate in the evolving

electronic age by providing a technologically rich teaching/learning environment.

Project Origin

The Queens College Department of Special Collections, wherein the Civil Rights Archive is located, was acutely aware of the need for its collections to have a digital presence. It will soon be true that archival materials that are not electronically accessible in some way, whether via an OPAC or on website, will be no better served than in a dark archive. Given the limited resources of an urban public university, the Department had been unable to secure sufficient financial and technological support for an independent digitization project. Head of Special Collections Dr. Ben Alexander is also teaching in the Graduate School of Library and Information Studies, and he approached Dr. Kwong Bor Ng to discuss a mutually beneficial way to begin the process of building a digital presence. Drs. Ng and Alexander decided to expand the Special Collections Fellowship program, which provides archival graduate students at Queens College with a broad range of professional archival experience, to include a technology component. Dr. Ng selected two graduate students with extensive coding skills to do the actual work of creating an Omeka presentation website. The hope was to create a mutually beneficial arrangement: under Dr. Ng's supervision, the two graduate students were able to gain real-world experience in building an Omeka platform, while the Civil Rights Archive was able to lay sufficient groundwork to seek grant funding in support of a larger digitization project.

Staffing/Workflow

Drs. Alexander and Ng served as project coordinators. The semantic team, which was co-extensive with the Department of Special Collections staff, consisted of Dr. Alexander, Archives Adjunct Katie Hughes and Archives Assistant Kevin Schlottmann. The technical team was headed up by Dr. Ng, who supervised two of his technology graduate students, Valery Chen and Jing Si Feng. They were given academic credit as independent study students and Special Collections

Fellows to build the Omeka website. The semantic team was responsible for selection, digitization, and metadata creation. The technological team was responsible for the installation and development of the Omeka presentation. Both teams were involved in the development of the Dublin Core metadata schema, and they also collaborated in creating the user experience of the website.

The project began with a meeting in February 2010. This meeting was initially a brainstorming session, but the teams were able to agree to the basic semester goal of a pilot website, as well as a rough timeline. Once the semantic team completed selection and the metadata schema was ready, a few items from the Civil Rights Archive were digitized per week and forwarded to the technological team. Meanwhile, the technological team was preparing the Omeka website for import of digital items. This continued as an iterative process for the entire Spring 2010 semester. At biweekly meetings, the website and the digital items were discussed, and both were constantly improved.

Implementation – Semantic Team

The semantic team, consisting of the Department of Special Collections staff (Department Head Dr. Benjamin Alexander, Archives Adjunct Katie Hughes and Archives Assistant Kevin Schlottmann) was responsible for selection, digitization, and metadata creation.

Selection

When the semantic team began discussing what to digitize, it considered materials from the Civil Rights Archive, the College Archive, the Performing Arts collection, and the Rare Book, Zine, and Artists Book collections. It quickly became clear that the civil rights materials were best suited for this pilot project, for reasons such as processing status, donor relations, fitting into the Archive's specific mission of engaging with the broader community, copyright status of the materials, and the attraction of having students continue to work with the material.

First and foremost, the Civil Rights Archive had the best-cataloged collections in the Department. The majority of the Archive's holdings are fully processed, have finding aids, and are under archival control. This level of processing also allowed for existing contextual information to be used by the teams.

The civil rights materials are among the most prized and high-profile holdings in Special Collections. The recent founding of the Archive garnered attention from campus and activist communities, and received local press coverage as well. From a donor relations viewpoint, digitizing these collections would generate goodwill within the alumni activist community that contains future donors and supporters. The Archive's living donors are still very interested in their materials and legacies, and have repeatedly expressed strong interest having their materials digitized.

The semantic team also conducted a review of existing civil rights digital archives, which showed many worthy efforts already underway. The University of Southern Mississippi, which holds one of the largest archival collections about civil rights work in Mississippi, created the Civil Rights in Mississippi Digital Archive, an "Internet-accessible, fully searchable database of digitized versions of rare and unique library and archival resources on race relations in Mississippi" (University of Southern Mississippi Special Collections, 2006a). The Civil Rights Digital Library, hosted by the University of Georgia, is "a partnership among librarians, technologists, archivists, educators, scholars, academic publishers, and public broadcasters" that provides federated searching of digital civil rights materials from almost 100 different institutions (Digital Library of Georgia, 2009).

These two excellent examples, among dozens of others, illustrated two major reasons why the semantic team chose to digitize materials from the Civil Rights Archive, rather than from other special collections. First, it was found that there exists a vigorous online community that any institution holding archival civil rights materials must join to remain relevant and accessible. Second, the team found a paucity of material that relates specifically to Northern contributions to the civil rights movement, and thus digitization of the Queens

College Civil Rights Archive would add new perspectives to the online community, in keeping with the Archive's stated mission of engaging the broader archival civil rights community.

The copyright status of the many of the materials in the Civil Rights Archive was clear, because photographs and personal papers of known provenance could be easily cleared by the creators with whom the Department has a relationship. Many of the other areas in special collections have a murkier copyright status, which is a major potential impediment to digitization.

Finally, the civil rights materials were primarily processed by archival students from the Queens College Graduate School of Library and Information Studies as part of the Special Collections Fellowship program. It seemed natural to continue the collaborative effort between the library school and Special Collections by having the student-processed materials brought into the digital realm by Fellows as well.

Digitization

The actual scanning of the items was not the focus of this pilot project. A proper scanning procedure that will create archival images in the TIFF format, such as that developed by the University of Southern Mississippi (University of Southern Mississippi Special Collections, 2006b), will be developed during Phase II in conjunction with implementation of a digital asset management system. The items digitized for this project were scanned with an Epson 10000XL scanner using Adobe Photoshop CS3. After cropping, deskewing, and adjustments to contrast and level, the images were saved as 300-dpi Web-optimized jpegs and provided to the technical team.

Metadata

The development of a robust metadata schema was a primary goal of this project. The semantic team examined a range of available schemas, such as METS, MODS, and PREMIS, but it very quickly became clear that Dublin Core (DC) was ideal for a variety of reasons. Unqualified DC is compatible with basic Omeka; it is a simple and easily-understood schema; it can be extended by using qualified DC; it

is well-established; and similar projects are using it. The latter was a particular influence, both because the Civil Rights Archive hopes to digitally collaborate with other institutions as well as because there are a wealth of relevant resources available. The two key sources used by the semantic team were published DC schemas from the University of Southern Mississippi and the North Carolina Exploring Cultural Heritage Online project (Graham & Ross, 2003; NC ECHO, 2007).

The semantic team created a detailed qualified Dublin Core schema, but after much discussion the teams decided to work with an unqualified schema, because that was the Omeka default. The semantic team continued to create qualified DC, so that in the future the project will be able to implement this more detailed schema.

The project utilized many controlled vocabularies. Library of Congress Name and Subject Authorities were used for person and subject terms; DCMI and IAMA for type and digital format, respectively; and ISO 8601 for dates. For the analog Medium field, the Getty's Art and Architecture Thesaurus proved most useful. Geographic data were placed in the Coverage field. LC subjects were used for the general geographic area, such as the town or state, while latitude and longitude data were taken from Google Maps by manually entering a known address and harvesting the geospatial data provided. The technology team was able to use the latitude and longitude data to create a Google Map reflecting the geographic location of the digitized items.

The teams both felt it important to offer maximum searchability, and the semantic team thus also provided the full text of digitized items, using OCR software. This proved to be a time-consuming additional step, in particular the proofreading of the computer-generated text. The print quality of some materials was quite poor, and the many drawings and photographs were also difficult for the software to interpret. Better software and more experience creating OCR text should make this easier as the project moves forward.

Omeka also has the ability for users to add tags. The teams decided to take selected controlled-subject values from the Dublin Core metadata and use them as tags as well, to allow testing of

features such as the tag cloud. The teams engaged in an interesting discussion about how tags would be used in this project – some wanted to keep the vocabulary controlled, while others wanted to encourage users to add tags as they saw fit. The teams decided to allow tags to be used as user-generated metadata, in keeping with the Web 2.0 spirit of Omeka.

The metadata was created manually by the semantic team in an MS Word table, and transferred into Omeka by the technology team. A future goal is an automated process for metadata transfer.

Implementation – Technology Team

The technology team for the project consisted of two independent study graduate students, Valery Chen and Jing Si Feng, as part of the Special Collections Fellows program, and their instructor and project coordinator Dr. Ng. These Fellows began working on the project after the first meeting with the semantic team on February 16, 2010. Over the next ten weeks, the Fellows downloaded, installed, and modified Omeka, an open-source web-publishing system, and completed the first phase of the project on May 13, 2010.

Why Omeka?

The purpose of this project was to create a web presentation to showcase the unique and valuable holdings of the Queens College Civil Rights Archive, and at the same time provide the Fellows an opportunity to learn how to build a digital archive using a web-publishing system. In any project, it is important to consider the use of proprietary system versus nonproprietary/open-source. Omeka is relatively a new software package that describes itself as a web-publishing platform on its website:

Omeka is a free, flexible, and open source web-publishing platform for the display of library, museum, archives, and scholarly collections and exhibitions. Its "five-minute setup" makes launching an online exhibition as easy as launching a blog. Omeka is designed with non-IT specialists in mind, allowing users to focus on content and interpretation rather than programming. It brings Web 2.0

technologies and approaches to academic and cultural websites to foster user interaction and participation. It makes top-shelf design easy with a simple and flexible templating system. Its robust open-source developer and user communities underwrite Omeka's stability and sustainability. (Omeka, 2010, Project section.)

Omeka is an open-source web-publishing system developed by the Center for History and New Media at George Mason University. According to the Omeka web site (Center for History and New Media, George Mason University, 2010) Omeka is easy to install, allows great flexibility for customized web interface, and supports multiple plugins. All these features were appealing for this project.

Another compelling reason to choose Omeka was the potential inherent in the exhibit feature. Omeka has the Web 2.0 ability of allowing users to create their own exhibits from the digital collections. A primary goal of the Civil Rights Archive is to engage the educational community and encourage use of its materials. By providing digital surrogates and contextual information, this website would allow a teacher or professor to tailor their use of the materials in an exhibit, and also make them accessible to other educators seeking similar uses. This type of educational contextualization was a key reason to digitize the collection.

Description of Phase I (Feb 16, 2010 – May 13, 2010)

This section discusses the installation of Omeka, the addition of various plugins, the details of the most heavily manipulated pages, and examines particular technical problems and solutions encountered during Phase I of this project.

Installation

Initially, separate Omeka instances were created for each Fellow on the technology team to experiment independently. After both instances were adequately developed, the best features were selected from each and transferred over to a new Omeka installation, running on version 1.2.

Omeka 1.1, the latest version available at the time of the first installation process, was downloaded by the technology team and

installed. The Omeka system was in a zip file, and the technology team had to unzip the file to extract all the necessary files for installation. Each Fellow downloaded the zip file and unzipped the files successfully. The next step was to connect to the server remotely and upload the files for installation. Omeka consists of thousands of files, and Adobe Dreamweaver could not handle such a massive upload. Using an FTP client, such as FireFTP, was found to be the best practice. FireFTP supports large uploads and does not terminate in the middle of an upload. If termination does occur, FireFTP automatically reconnects to the server to continue with the upload.

The Omeka installation folder in the directory was removed by bash shell script for security. Administrator and Super accounts were created, and the system was up and running.

Creating Items, Tags, and Collections

A collection can be created in the Omeka Admin page by filling in the name and description of a collection. An item can be created by filling in the Dublin Core fields in the Omeka Admin page and adding the item to a collection. Tags can be added to each item to create more access points.

All image values in the Omeka General Setting should be defined before importing any image files. The values Fullsize Image Size, Thumbnail Size, and Square Thumbnail Size are crucial for Omeka to generate image output. Omeka automatically generates full size image and thumbnails during item creation. The technology team decided to change the full size image output and thumbnail size in the middle of the project, thus resulting in two different image sizes throughout the site. This meant that all the files needed to be uploaded again at the conclusion of the project, to ensure uniform image sizes.

Selecting a Theme

The public interface of Omeka was controlled by the files inside the "themes" folder. The Super can log on to the Omeka Admin page to choose a desired theme. More themes can be downloaded from the Omeka website and uploaded to the server. Both Fellows selected a different theme for their individual pilot Omeka sites. One chose "santa-fe" while the other chose "spring."

Plugins

Many plugins are available for download from the Omeka website. The technology team installed Geolocation, Simple Pages, Dublin Core Extended, Dropbox, ExhibitBuilder, and Lightbox for the pilot site. Several outside interactive effects were also installed, including animated collapsible panels, text truncation, and a slideshow. Most of the plugins were easy to use and install without any hassles; the plugins specifically named above are discussed in more detail below. One plugin issue was that some of the plugins were written in plain JavaScript while others were written using jQuery. This often created clashes in the code as the dollar sign symbol ($) was used for different purposes in both JavaScript and jQuery. In JavaScript, the $ indicates a variable, while in jQuery the $ represents the start of a command. Since jQuery is technically a JavaScript library, the double meaning of the $ was problematic.

Geolocation

Geolocation uses features from Google Maps and allows users to view items in various geographic locations by clicking on the balloon pointers. The technology team decided to install this plugin because it gives users a visual, spatial representation of the materials in the archive. This visual aid can be useful for quickly identifying locations of particular interest, and it allows users an additional non-textual method of accessing digitized items.

In order to use the Google Map functionality, the technology team first had to obtain a Google Maps API (application programming interface) key by creating an account with Google. Once the key was obtained, the team downloaded the packaged Google Map plugin from Omeka and uploaded it to the server. The key was then supplied through the administrator interface to activate the plugin. From the administrator interface, it is possible to customize the Google Map API. For example, the administrator can set the default location, which is controlled by latitude and longitude, and the zoom level ranging from 1 to 20, where 1 displays a view of the Earth and 20 displays a street level map.

The geographic location was added manually through the administrator interface. The latitude and longitude were entered for each digital item's metadata. The technology team hopes to create a plugin in the future that will automatically locate the spatial location information from the Dublin Core metadata and supply it accordingly so that as items are uploaded they will automatically appear on the map.

All items with geographical coordinates are represented by the default red pinWhen users click on the marker, the corresponding item will pop up in a balloon with limited metadata identifying the item. Users can then click on the balloon, which brings them to the particular item's display page. The team plans to enhance the map by creating a color-coding scheme that will correspond to an item's categorization. For example, items relating to a protest could have a red marker, while Freedom School items could have a blue marker. This functionality will add additional visual meaning to the map.

Simple Pages

Simple Pages provides the ability to handle html codes input by the Super at the admin page. The team used the Simple Page plugin to create the "About Us" section of the website.

Dublin Core Extended

Omeka defaults to Unqualified Dublin Core. A Dublin Core Extended Plugin can be installed to create more descriptive fields. A primary consideration when installing Dublin Core Extended is whether all the additional fields are necessary for a given project. Too many fields slow down the data entry process and scrolling time, and since all the Omeka data entries are web-based, a wrong click by the mouse can result in loss of data. The teams hope to take advantage of qualified Dublin Core in Phase II.

Dropbox

Omeka uses a web-based data entry system; each field needs to be typed in separately. A Dropbox plugin can be installed to facilitate bulk file uploads, allowing multiple files to be uploaded at the same time into a Dropbox Folder. When adding a digital item to the

collection, the user can then select that item from the Dropbox. Dropbox also supports the creation of multiple items, and allows bulk creation of Tags, Collections, and Titles. Other Dublin Core fields still need to be entered separately.

ExhibitBuilder

ExhibitBuilder was a more complex installation, as the architecture of the exhibit pages had to first be determined. The structure of the exhibit was defined as a Main Title Page with descriptions, a Sub-Section with descriptions, and individual pages with items in the layout of choice. The interface of an exhibit can be changed by accessing the screen.css file under the ExhibitBuilder directory.

Lightbox

In order to enhance the user experience, a Lightbox was installed for viewing full size images. The Lightbox feature creates an overlay around an image and enhances the clarity of the image in the center. The latest version of Lightbox was downloaded from http://www.huddletogether.com/projects/lightbox2/, and installation process was closely followed from the Omeka Documentation page (Ebellempire, 2009).

Heavily Manipulated files

This section describes two particular areas of the Omeka platform that were heavily edited by the technology team.

Item Display Page

The default display page for each item is a non-stylized, exhaustive list of metadata that requires extensive vertical scrolling. Moreover, some of the DC and Omeka metadata are duplicative. In order to create a more user-friendly display of information, multiple files were heavily manipulated and outside plugins were incorporated to make the display page more interactive.

The technology team found it challenging to determine which files control the item display page, because there are many files with the same name in different directories. However, once the structure of

how Omeka arranges its files was ascertained, the team was able to manipulate the code and customize the display.

The first step after locating the correct file was to understand the predefined functions created by Omeka. This was achieved with the help from the documentation on the Omeka website. This stage was time consuming, as the team used a trial-and-error approach to learn how to use the different available functions. Once it was determined which function handled the selection of individual metadata, the team was able to control where each piece of metadata would be displayed.

The display page was designed so that the most important information was provided in a clear, easy-to-read format. To minimize the scrolling, certain technical metadata was hidden from the user. The technology and semantic teams jointly examined each DC and Omeka data field, and decided on a short of list of fields to display. These included the collection, subject, tag, and rights fields. Creator, date, location and citation were included under the item's thumbnail image. Hidden fields included type, source, publisher, upload date, and extent. These fields were merely hidden – users may click on the "show" link to reveal the hidden metadata if desired. The show-and-hide functionality was made possible by installing jQuery, a lightweight JavaScript library, and the appropriate toggle-display code. The teams agreed that while an average user would not need to see this information on first viewing a page, more sophisticated users might want the option. The semantic team in particular found in its review of similar web projects that many sites did not include technical metadata, to the disappointment of archivists and librarians seeking to learn from how other institutions handle metadata.

If a particular item had an accompanying full text, it was made available to the user. However, since a typical full text would cover an extensive area of the display page, the technology team used a truncation function to display a snippet of the full text along with a link to show more. This was also accomplished through jQuery.

While most of the display page reorganization was controlled by the php files, CSS files controlled the final style touches, such as spacing, font sizes, and background color.

Homepage

The default homepage also underwent a major redesign. Instead of the default static thumbnails representing the featured item, the team added a dynamic slideshow with captions that rotate through the featured items. The initial plan was to implement the slideshow using Adobe Flash. However, that idea was discarded as inefficient because new .swf files would have to be created for each new imaged added and each image taken down. Therefore, the best solution with the least amount of maintenance was to find a method to automatically pull images for display. The team achieved this by installing a jQuery slideshow. These images are thus easily maintained by a few lines of code.

The technology team also added a right sidebar that allowed users to browse by various categories, including tag, date, location, subject, and type. The sidebar was initially occupied by a list of recently accessed items, but in conversation with the semantic team it was decided that creating multiple access points would be more useful to the user for navigation purposes. Currently, the list of categories is manually created through simple HTML code. The technology team hopes to automate the generation of categories in this sidebar, to simplify site maintenance.

Goals and Discussion

Phase II Goals

The teams have many goals for Phase II. The stabilization and scalability of the project are a top priority, and this includes development of a scanning process and a streamlined metadata creation process, as well as finding stable server space and implementing a digital asset management system behind the Omeka website.

In terms of the Omeka, the technology team hopes to add more sophisticated features to the map, such as item categorization. On the metadata side, it will implement qualified Dublin Core, and may

attempt to install the OAI-PMH Harvester. Finally, a long-term goal is the creation of a plugin that would allow use of TEI.

Discussion

This pilot project identified issues that might be similar in other institutions with limited resources. The three key lessons from Phase I of this project relate to technical support, metadata, and the involvement of graduate students.

Technical Support

Proper server space is absolutely vital for any digitization project. The extremely limited IT resources available at Queens College mean that this pilot project is limited in its ability to grow beyond Phase I. This also impacts the Department of Special Collection's ability to implement a digital asset management system. If continued efforts to obtain College server space are unsuccessful, the project will examine other options such as approaching another CUNY school for a partnership, or perhaps even renting commercial server space.

Metadata

The semantic team spent the majority of its time and effort on metadata, both in developing the schema and creating the actual records.

Creating metadata from scratch is extremely time-consuming. For each individual image, the team created titles and descriptions, applied a variety of controlled vocabularies, harvested geographic data, and proofread OCR text. With the current human resources, this process would be impossible to scale up. Thus, in Phase II the teams will attempt to streamline the process by automating some aspects of metadata creation. For example, technical specifications could be automatically imported and drop-down menus created for oft-repeated controlled vocabulary terms. Once a robust and well-described process is in place, Special Collections Fellows working on civil rights materials could be recruited to enter much of the metadata, which would provide the administrative team time to engage in other tasks, such as selection, quality control, and project planning.

Another issue the teams discussed was the extent to which existing archival description is helpful. As archival description by definition is not item-level, existing finding aids were only of limited use this pilot project, primarily providing contextual information. In the future however, incorporation of EAD finding aids would certainly allow additional types of categorization and searching.

Bulk Metadata Creation in Omeka

In order to facilitate the slow process of metadata entry for each item in Omeka, the technology team is experimenting with CSV Import in Phase II of the project. CSV Import, a plugin that handles bulk metadata creation, allows each Dublin Core field to be imported via a comma-separated file. However, more technical support is needed to define the PHP-CLO path setting with the server administrator.

Graduate Students

The collaboration of the Department of Special Collections with the Graduate School of Library and Information Studies was beneficial to both parties. Special Collections was able to lay the groundwork for future digitization and also to create a prototype Omeka website to show potential donors and partners, while the graduate Fellows gained valuable skills in actual implementation of a sophisticated software package. It should be noted that such a collaboration requires continuous interaction between and dedication from both the library school faculty and Department of Special Collections, to maintain standards and momentum as different classes of Fellows participate in the semantic and technology sides of the project.

References

Center for History and New Media, George Mason University. (2010). *Omeka: about.* Retrieved from http://omeka.org/about/

Ebellempire. (2009). *Adding Lightbox to Omeka.* Retrieved from http://omeka.org/codex/Adding_LightBox_to_Omeka

Digital Library of Georgia. (2009). *Welcome to the Civil Rights Digital Library.* Retrieved from http://crdl.usg.edu/?Welcome

Graham, S. R. & Ross, D. D. (2003). Metadata and authority control in the Civil Rights in Mississippi Digital Archive. *Journal of Internet Cataloging 6*(10), 33-42.

NC ECHO. (2007). *North Carolina Dublin Core implementation guidelines.* Retrieved from http://www.ncecho.org/dig/ncdc2007.shtml

University of Southern Mississippi Special Collections. (2006). *About the Civil Rights in Mississippi Digital Archive.* Retrieved from http://www.lib.usm.edu/~spcol/crda/about.htm

University of Southern Mississippi Special Collections. (2006). *Guidelines for digitization.* Retrieved from http://www.lib.usm.edu/~spcol/crda/guidelines/index.html