Community-Based Digitization Manual and Exercises

DRAFT last updated September 6, 2011
Please add comments, corrections and additions to the Project Manual Wiki at http://manual.eblackcu.net.

This manual is being released as a DRAFT to generate feedback and comments from people like you. Please take the time to send us your thoughts.

Website also contains exercises to be completed in tandem with reading manual.

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Website: http://www.eBlackCU.net/
For more information on the eBlackCU project see: Noah Lenstra, "E-Black Champaign-Urbana: Community Informatics and Cultural Heritage Information in a Low-Income Community" (C.A.S.: UIUC, 2010). http://eblackcu.net/CASAppendices/CAS-CD.htm

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Acknowledgments

The eBlackCU project emerges out of the Graduate School of Library and Information Science and the Department of African-American Studies, both at the University of Illinois at Urbana-Champaign, with funding from the Office of the Vice Chancellor for Public Engagement, University of Illinois. It has public partners at the Champaign County Historical Archives, Urbana Free Library; Museum of the Grand Prairie, Champaign County Forest Preserve District; Student Life and Culture Archival Program, University of Illinois Archives; Salem Baptist Church Cyber-Church Committee; Champaign Central High School; Urbana High School; National Council of Negro Women; and the North First Street Business District Association.

Introduction

eBlack Champaign-Urbana (eBlackCU) is a collaborative portal on African-American history in Champaign-Urbana, Illinois. The portal brings together online multiple collections of information on the local African-American community.

The goals of this portal are to:

a) Make dispersed documentation on local African-American history centrally accessible;
b) Enhance community memory through digital technology;
c) Enhance the visibility and recognition of the importance of local African-American history;
d) Find innovative ways to use large amounts of information on a specific geographic, historical community that will have benefit and meaning for that community;
e) Address digital inequalities facing the community by holding public computing workshops and public programming related to the portal.

This manual provides a technical and social overview to the eBlackCU project. This manual will provide you with practical and theoretical tools useful for community-based digitization projects.

Memory and Communities

Memory is critical for every community. Memory is not just in people's heads -- it is practiced and lived in communities. Community memory practices can be divided into:

1) celebrations/special events,
2) everyday memory, and
3) formalized memory.

Overlaps between the three divisions are to be expected (see Table 1, below). Here in Champaign-Urbana every **African-American church** has an annual church anniversary, and **most** publish commemorative programs for special anniversaries. We also know that when a community leader passes away the community comes together to celebrate his or her legacy. We also know that African-American History Month, Martin Luther King Day, Juneteenth and summer community and family reunions are occasions for the community to remember, celebrate and build on its past. There are also the everyday, ongoing memory practices in communities, such as passing through familiar neighborhoods (which can be enhanced through historical markers and murals commemorating particular events or individuals), researching one's family history, or reading newspaper articles on historical topics. Finally, there are also more formal, educational venues for remembering the past, such as K-12 social science curriculum involving community history, and lifelong and continuing education courses through local institutions of higher education, adult education centers, or libraries and museums that teach community history. In this project we think about how these community memory practices will survive, change, remain the same, and/or be enhanced, through the community's use of digital technologies. This is a moment for everyone to pool their resources, including universities, public libraries, museums, churches, schools, and community groups, to collaboratively build digital community memory.

The above list does not comprehensively describe community memory practices. However it does point to the importance of memory in communities, and suggests some opportunities for**:**

a) Digital technology to enhance community memory; and
b) Community memory to drive community adoption and productive use of digital technologies.

On the first point, we can imagine ways in which digital technology could be embedded within all the different types of community memory practices. On the second point, as the community sees that digital technology can play a role in enhancing the community's memory, the digital memory project could drive adoption and effective use of digital tools.

In conclusion, key goals of the eBlackCU project, and, we argue, for all community-based digitization projects, are to find ways to enhance and extend community memory through digital technology, and through this work enhance a community's ability to effectively use digital technologies for many other self-determined community purposes.

	Celebrations/Events	Everyday Memory	Formalized Memory
Religious	Church Anniversaries	Church as historic space	Researching and publishing church history (as in church newsletter)
Civic Community	Community Celebrations with Civic Support	Official Street designations for historic individuals	Library & Museum public programming
Grassroots community	"Unofficial" community celebrations & reunions	Community Spaces / Community Produced Murals	Independent Historical and genealogical societies
Formal Education	M.L.K. / Black History Month Scholastic Events	Schools as historic community spaces	Research and teaching as part of curriculum (any level)
Family	Family Reunions	Family photographs on walls / in scrapbooks	Researching and publishing family history

Table 1: Typology of Memory Practices, based on ethnography in the Champaign-Urbana African-American Community.

Local History: Dying or Being Revitalized Online?

A point of contention over at least the last 20 years is the health of local history and local historical consciousness in American society. In a nation-wide survey of Americans' uses of the past carried out in the early and mid-1990s, public historians Roy Rosenzweig and David Thelen discovered that across every age group, every gender, every educational level, every income level and every ethnic group the "the past of the community in which you now live" was consistently the *least important* past for Americans -- with only 2-7 % of the sample ranking it as their most important past. In contrast, for every single category "the past of your family" was ranked as the single most important past -- with between 50 - 73% of the sample ranking it as their most important past, and with 73% of all women ranking it as the most important past. What do we make of this finding? It could be that those individuals who think family history is their *most* important past also see local history as important, but not *as* important (it should be noted that the survey did not ask respondents to rank the four types of pasts surveyd for -- The past of your family, The past of your racial or ethnic group, The past of the community in which you now live, The past of the community in which you now live -- so it is difficult to make inferences about the comparative importance of local history, as opposed to the absolute importance of local history. Regardless of this ambiguity, it is clear that for most Americans local history is not something that is of critical importance. For more information on this survey, and to interpret the results for yourself, visit http://chnm.gmu.edu/survey/.

In contrast to this gloomy pronouncement on local history, Daniel Cohen and Roy Rosenzweig returned to some of these ideas in 2005 in their publication *Digital History: A Guide to Gathering, Preserving and Presenting the Past on the Web* (freely accessible at http://chnm.gmu.edu/digitalhistory/). Based on anecdotal information, as opposed to survey data, Cohen and Rosenzweig argue that "[v]irtually every historical archive, historical museum, historical society, historic house, and historic site—even the very smallest—has its own website. So does just about every reenactment group, genealogical society, and body of historical enthusiasts." This flourishing of grassroots history on the web, much of it no doubt locally-based, suggests that one of the social affordances of digital technology is to create an environment in which those 2-7% of Americans who *do* see local history as the important past in their lives can broadcast that history, attracting both casual and serious visitors with an interest in a local place's history, and possibly changing people's opinions about the worth of local history.

Although the importance of community history may differ from community to community, we nonetheless believe that there are at least a handful of individuals in every place who are passionate about holding onto a community's past and keeping that past alive in the present. It is this passion, however muted it may be, and however disconnected it may be from the flows of digital technology, that community-based digitization projects have to latch onto to survive and grow in the community.

Structure of the Manual

This manual is divided into two parts: 1) a narrative description of steps to take and additional resources to support you through a community-based collaborative digitization project, and 2) a number of exercises you and your project team can work through to practice implementing some of the ideas and concepts discussed in the first part.

The first section of the manual focuses on fundamental ideas and things to consider before getting started. Chapters 1 and 2 of the manual are foundational - they provide a clear overview of things to consider before launching into a community-based digitization project to make sure you are going in with eyes open and a clear sense of purpose. Chapters 3 and 4 focus on the social side of community-based digitization, examining the ethics, logistics and information collection procedures that may be used in community-based digitization. The purpose of these chapters is to address the need to respect the community as a living entity and not treat it as a moribund object to be digitized.

The second section of the manual focuses on technical procedures and logistics involved in mounting a functional community-based digitization project. Chapter 5 focuses on technicalities of digitization, including some procedures for a variety of formats, as well as how to capture and store born-digital information already available online. Chapter 6 provides an overview of Omeka, the content management system (CMS) utilized by eBlackCU. Although there are many other CMS that could be used -- some of which are described in the additional resources section -- we speak to what has worked for us. Chapter 7 goes over the procedures of adding digitized information into your Omeka digital library. Again, although the manual is premised on a particular piece of software, the principles are transferable. For example, Omeka's library software is based on the Dublin Core metadata standard, a standard used by a wide variety of digital library CMS. As such, the procedures outlined in Chapter 7 could, with a little thought, be applied to another environment.

Finally, the last section of the manual focuses on feeding the community-based digitization project back into both the community itself and into academic and professional scholarship. Chapter 8 provides an overview of some, but not all, of the types of workshops you could create based around the digital portal. Chapter 9 provides an overview of some of the steps you could take to transform your portal, and the processes taken to create it, into scholarship. It is important to not neglect scholarship since it represents a vehicle for you to spread the work you have done beyond your particular community, creating something that interacts with and helps to shape the numerous community-based digitization projects of different types, scopes and orientation, that exist around the world.

The manual concludes with some thoughts of how to sustain community-based digitization projects and how to keep going even when things seem stuck or ineffective.

1) What supplies are needed to make the project possible?

Learning Outcomes of Chapter 1:

- Be able to communicate and take stock of different types of capital at your disposal
- Be able to communicate about the capital needs of your project, and to find ways to meet these needs
- Be able to find and download software that will be used in this project

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This chapter provides an overview of the types of resources needed to develop and sustain a project like eBlackCU. Prior to embarking on a community-based digitization project it is necessary to take stock of the assets you have for the project -- in this manual we discuss these assets in terms of capital, and sub-divide capital into:

- Financial Capital - Money
- Human Capital - Skilled individuals, or individuals you can train
- Social Capital - Resources embedded in communities, or the ability to acquire and use resources from the connections you and your project have in the community
- Technical Capital - Software, hardware and other technical resources

The balances of these four different types of capital will differ from project to project -- however we recommend **prioritizing social capital** in the construction of digital community memory projects so that the project becomes a community asset owned and contributed to by all.

1a) Financial Capital

A community-based digitization project is not necessarily expensive. Almost all the software used in the project is open source, and thus free to download and use. Furthermore, even if you do not personally own all the technical equipment needed to make a digital community library, it may be possible to leverage community social capital to make up for financial shortcomings.

The main, and unavoidable cost of a community-based digitization project is purchasing and maintaining server space for the project. However, it may be possible to even avoid this cost, if necessary. For example, DreamHost, the web hosting service hosting eBlackCU, offers free hosting for 501(c)(3) Non-Profits (http://www.dreamhost.com/hosting-nonprofit.html). Alternatively, you may find that a local web hosting company in your town may be willing to host your project for free, or at a reduced rate, as part of its civic engagement mission.

Other costs that may come up in the project include:

1. Paying people for particular parts of the project
2. Purchasing equipment and software
3. Paying for technical support
4. Paying to organize and carry out workshops
5. Paying for advertising and other public programming to build mobilization around the project.

Although a community-based digitization project *could* cost a great deal of money, if you leverage social capital in support of the project you *can* carry out and sustain the project at no cost whatsoever.

1b) Human Capital

Community-based digitization projects do require technical competencies. We recommend that instead of waiting until you have mastered digital technology to start the project, you start with whatever skills you **do** have and develop the skills you will need as the project develops. In this way, the **process** of creating a digital community memory project can address digital divides in communities, starting with whatever the digital inadequacies of you and your project team have.

1c) Social Capital

The most important supply for a community-based digitization project is social capital. In creating the eBlackCU library we rely on social capital that tie our project to a growing number of local libraries, archives, museums, churches, schools and community individuals and institutions. We define social capital as resources accessed and mobilized in networks. Networks could be thought of as the people you know and trust in your community. Resources could be thought of as both material resources, such as technology; emotional resources, such as support; or human resources, such as volunteer time. Social capital is a succinct way to describe the process and availability of such resources in community networks. Indeed, in a very real sense social capital is what sustains communities. We recommend both building on existing social capital you may be able to leverage in your community and building new social capital in the process of creating your digital memory project.

A few examples will illustrate what we mean by social capital and how it can be used:

Example 1: We personally knew the directors of a number of area archives, libraries and museums. This personal contact and trust inspired them to trust us with their collections. One museum allowed us to transport their holdings off-site so that a team of youth interns could digitize them at an historically African-American church. The mobilization of social capital also allowed us to have access to technical tools such as oversize scanners and camcorders, which we could use without having to purchase our own equipment.

Example 2: In working at said African-American church we also built social capital that fed back into the process of digital library creation. By working with the Cyber-Church Committee -- charged to integrate digital technology into the church -- we were able to digitize personal scrapbooks, personal archives and collect oral histories that would be difficult, if not impossible, to digitize without the presence of social capital.

These two examples illustrate the importance of social capital for community-based digitization efforts.We recommend constantly revisiting throughout your work both the social capital you have at your disposal and the social capital you have helped to create and sustain. The end goal for community-based digitization projects should be to achieve enough community buy-in so that the community can sustain the digital library beyond any initial project development, in the same way that communities sustain churches, public libraries, community-based businesses and non-profit organizations .

1d) Technical Capital

Particular technical tools need to be secured to make a community-based digitization project work. Many of these tools are free to download and install on computers. The tools that are not free may be acquired either through financial capital (buying them) or social capital (finding someone in your community who has them and is willing to let you use them). Another option is to find someone in your community who has both the technical tools and the willingness to do the work themselves. In this way your project takes advantage of technical, human and social capital circulating in your community without requiring financial capital.

What follows is a list of technical supplies utilized in the eBlackCU project, and mentioned in this manual. Please note that this list is based on software and tools available in 2010-2011. Technological tools change very rapidly. We recommend you review this list with this caveat in mind before making decisions on the specific tools you will use in your project.

a) Scanner. The decision of what tool to use for digitizing books and images will depend on what you have available. There are at least three options for scanning, each of which have drawbacks and advantages:

1) A flat-bed image scanner (http://en.wikipedia.org/wiki/Image_scanner) can produce high-resolution, full-color digital scans that capture the full detail of the original;

2) A multi-function photocopier (http://en.wikipedia.org/wiki/Multifunction_printer) can produce scans at a much quicker pace than flat-bed scanners, and are becoming increasingly available in many office environments, but often do not produce digitized images at as high of resolutions as flat-bed image scanners; and

3) Do-It-Yourself Book Scanning (http://www.diybookscanner.org/), or DIY scanning, involves building your own digitization mount based on the tools used by large scale digitization entities such as Google Books. These mounts could be constructed as a project of a high school construction class and require an SLR digital camera (http://en.wikipedia.org/wiki/SLR_camera/). The benefit of these DIY mounts is that they enable quick and high-resolution digitization -- all you need to do is press "click" on the camera--but they are also more time-intensive in terms of construction, and less mobile, making them difficult to take to people's houses or to different community centers.

b) Digitization tools for audio and video. The tools needed to digitize audio and visual material are becoming easier to find and to use. Stores such as Best Buy and RadioShack sell over-the-counter tools you can use to connect your cassette or VHS player to a computer and transfer the audio and video from analog to digital format. These tools vary and we recommend you research online before making a purchase. Another, free, option is to see if your community has any community media outlets that may be able to provide you with the equipment and expertise to do this digitization work. Examples of common community media outlets include: cultural or youth centers, schools, churches, libraries, and newspaper offices.

c) Camcorder, Camera and tripod. Both to document the process of creating the digital library and to document the community through oral histories and memory workshops, we recommend securing access to a camcorder and tripod. Some public libraries have begun allowing community members to check out this equipment. We recommend seeing if this option is available in your community, and if not, we recommend asking your public library to begin offering this type of service.

d) External hard-drives, and back-up CDs and DVDs. In order to back-up your digital library you will need to secure external hard-drives and/or CDs and DVDs to back up your digitized content in case the server that hosts the content crashes. External hard-drives with 1 Terabyte (1000 GBs) of storage space can be purchased at most office supply stores for around $100.

e) Finally, there are particular software tools used in the eBlackCU project. This manual discusses using these tools. However, we envision that as technology changes new tools will emerge and we recommend users of this guide do internet searching to locate similar software based on changing technological systems.

1) Omeka - http://omeka.org/ - an open-source tool designed to allow people to "create complex narratives and share rich collections, adhering to Dublin Core standards, designed for scholars, museums, libraries, archives, enthusiasts." Cost: Free.

2) OpenOffice - http://www.openoffice.org/ - a full office suite, supports creation of speadsheets, word processing, slide presentation and databases. Cost: Free.

3) WinFF - http://winff.org/ - a free video conversion tool to switch between different video formats (such as avi, mpg, flv, etc.). Cost: Free.

4) Adobe Acrobat Pro - http://www.adobe.com/products/acrobatpro.html - a tool to convert documents, images, and html files into pdfs, which can be very valuable for long-term preservation of files. Unfortunately this item costs between $50-$200. However, you may be able to access Adobe Pro at your local library.

5) HTTrack -http://www.httrack.com/ - Website crawler. Good for backing up digital content and adding it to your digital library. Cost: Free.

6) Audacity - http://audacity.sourceforge.net/ - Audio editor. Can also be used to record audio on a computer with a microphone. Cost: Free.

7) Windows Movie Maker – http://windows.microsoft.com/ - Video editor. Comes bundled with most computers that have Windows installed. For Macs try iMovie, http://www.apple.com/ilife/imovie/. Free with most new Macs.
8) GIMP - http://www.gimp.org/ - Fully functional photograph editor. Cost: Free.
9) Filezilla – http://www.filezilla-project.org/ - A File Transfer Protocol (FTP) software that will allow you to upload content to, and download content from, your server. Cost: Free.

Additional Resources:

Kate Williams and Joan C. Durrance, "Social Networks and Social Capital: Rethinking Theory in Community Informatics," in Journal of Community Informatics, 2008. http://people.lis.illinois.edu/~katewill/rethinking-theory-williams-durrance.pdf.

Tony A. Moore. "Digital Libraries and Design for Social Engagement" *Proceedings of the American Society for Information Science and Technology* 43, 1, 2007.

Huvila, I. "Participatory archive: towards decentralised curation, radical user orientation, and broader contextualisation of records management" *Archival Science* 8, 1,2008. http://istohuvila.eu/files/IstoHuvila _Participatory ArchivePrePrint. pdf.

Robb, E.E. "Gleaning Local History: Community-based Digitization Experiences in Rural Washington" Microform & Imaging Review. 39, 1,2010.

Stevens, M., Flinn, A., Shepherd, E. "New frameworks for community engagement in the archive sector: from handing over to handing on." *International Journal of Heritage Studies* Volume 16 Issues 1 & 2, 2010.

Fabre, Genevieve and Robert O'Meally (eds). *History and Memory in African-American Culture.* Oxford University Press. 1994.

Brecher, Jeremy. *History from Below: how to uncover and tell the story of your community, association, or union*. Commonwork/Advocate Press 1997. First chapters available at: http://www.stonesoup.coop/historybelow/historybelow.htm.

Sinnette, Elinor Des Verney, *Black Bibliophiles and Collectors: Preservers of Black History*, Washington, D.C.: Howard University Press, 1990)

2) Getting started: Time-line, Scope and Informational Landscape

Learning Outcomes of Chapter 2:

- Be able to move from asset mapping to a time-line for steps to be taken
- Be able to develop a coherent, if flexible, scope for your project
- Become familiar with similar projects to get inspiration for your project
- Learn how to develop a map of the informational landscape within the scope of your project

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2a) Making a time-line for the project

After you have decided with what capital resources the digital library will begin, you next need to come up with a time-line for how the project will develop, along with benchmarks that can be referred to as the project develops. As these benchmarks are reached the community will stay motivated and enthused as the project develops. Based on the experience of building eBlackCU we recommend the following elements be incorporated into your time-line:

a) Construction of best practices for meta-data for different types of media (see Chapter 7 for more information).

b) Building people into the project. For example, after six months 500 local individuals will be on the project mailing list.

c) Building the library. For example, after six months 1000 pages will be in the digital library.

d) Enhancing use of the library. For example, after six months 3 public workshops will have been held in which we show people how to use the library, what it contains, why it matters, and how they can add to it.

e) Media messages. For example, after six months we will have received 3 newspaper stories and one television broadcast on the project.

f) Capital campaign. For example, after six months we will have received $500 from local donors to sustain the project.

g) Teaching goals. For example, after six months the library will have been used in at least three K-12 classrooms and at least two higher education classrooms.

h) Enhancing community technology access. For example, after six months the project will have identified at least three obstacles in the local community that hamper access to and use of the library. Based on this knowledge, the project will develop strategies to address these obstacles through education and advocacy. As an example of an obstacle, you may find that many people know how to use and are comfortable with Facebook, but are lost when it comes to uses of the Internet outside of Facebook, suggesting an opportunity for an educational intervention. In addition, you may find in working with the community that in under-served areas of the city many people don't have access to high-speed Internet or digital content creation tools, suggesting an opportunity to become an advocate for your community's access to information technology.

Ideally the goals articulated in the time-line will be connected together. For example, the project's ability to mobilize volunteers and supporters will feed into the project's ability to sustain interest.

There may be other goals that your project wishes to attain. We recommend at the very early stages of the project that you and your project team sit down to coherently articulate goals and come up with concrete measures that can be used to chart the progress of the project over time. The goals can then be returned to after a given amount of time, reformulated, and built on.

In thinking about how to scope your project you should also think about its long-term residence. Digital technology is ephemeral and making pro-active plans for long-term preservation at the beginning of the project

will put you in a better position down the road. It is best to make these types of decisions with others in your community, ideally with individuals extremely knowledgeable about information technology, servers, and/or digital archives. For more on this topic see Chapter 5 of this manual.

2b) Scoping the project

To start building the digital library you first have to articulate the scope of the project. Of course the project scope can be expanded or contracted at a later date, but it is helpful to initially give the project some constraints so that it retains focus as it develops. In our project we started with a focus on the African-American community in Champaign-Urbana. As the project grew we expanded beyond a focus just on the African-American community to the entire Champaign-Urbana community -- this expansion involved a summer project to digitize yearbooks of area high schools, which of course also document African-American life in the twin cities.

To get a sense of topics for other collaborative digitization projects visit http://omeka.org/codex/View_Sites_Powered_by_Omeka and http://www.lyrasis.org/Products-and-Services/Digital-Services/Collaborative-Digitization-Programs-in-the-United-States.aspx. Each of these sites showcase projects using collaborative digitization.

Examples of community-based digital projects include:

- Hurricane Digital Memory Bank, http://hurricanearchive.org/, whose focuses on collecting, preserving, and presenting the stories and digital record of Hurricanes Katrina and Rita;
- My Brighton and Hove, http://www.mybrightonandhove.org.uk/, a living history of Brighton and Hove in the United Kingdom with one of the most active community-bases of any digital project on the Internet;
- The Catawaba River Docs, http://www.catawbariverdocs.com/, which documents this river in the Carolinas;
- Maine Memory Network, http://www.mainememory.net/, a state-wide project built on many local projects in libraries, schools and historical societies;
- Mystic River Jewish Communities Project, http://mysticriverjews.jcam.org/, documenting the Jewish communities in North Boston;
- Encyclopedia Dubuque, http://www.encyclopediadubuque.org/, a digital encyclopedia of Dubuque, Iowa;
- Wall of Respect, http://www.blockmuseum.northwestern.edu/wallofrespect/, documenting a Black Arts Movement mural in Chicago;
- PhilaPlace, http://www.philaplace.org/, a space for sharing stories on Philadelphia neighborhoods;
- The Underground Railroad in Madison, Indiana, http://railroad.wikispaces.com/The+Underground+Railroad+in+Madison,+Indiana, a wiki-based community library on the topic;
- An African-American Community in the Jim Crow South, http://www2.vcdh.virginia.edu/afam/raceandplace/, documenting one community's segregation and resilience of a black community under repression;
- Massachusetts Memory Road Show, http://www.massmemories.org/, a traveling digital project;
- Washington Rural Heritage, http://wrh.statelib.lib.wa.us/, a network of rural communities making their memories available online;
- L.A. as subject, http://www.laassubject.org/, a network of both well-funded and grassroots archives and special collections networked through digital technology in the greater Los Angeles area.
- The boom days of coal: An intergenerational oral history project documenting life in the coal camps of the Upper Kanawha Valley, West Virginia, http://www.hsc.wvu.edu/coa/msgec/boomdaysofcoal/, a project involving community elders, schools and geriatric specialists in creating community memory.

As this small list suggests there are many different types of projects with many types of scopes in terms of time period, geography, and subject matter. In this manual we are particularly interested in community-based digital libraries, or digitization projects that use digital technology to collaboratively document and share information on particular local, historical communities. Even if this is not your scope, it is essential to be as clear as possible for what the focus of your digital library will be so that you can make strategic decisions on how to build it.

2c) Mapping the information landscape

After you have scoped your project you can then begin mapping the landscape of information that exists about that topic. Sources that will exist for nearly every topic include:

a) Oral Memory
b) Newspaper clippings
c) Personal and institutional archives

You may also find other sources of information that exist on your topic that you can target for digitization and aggregation into the library.

We began the eBlackCU project by getting a sense of the informational resources on the African-community in Champaign-Urbana. We began this search in professionally staffed libraries, archives and museums. These informational resources included: a) Complete runs of mainstream newspapers in Champaign-Urbana (that were already partially digitized); b) Partial runs of African-American newspapers and newsletters in Champaign-Urbana; c) Oral history collections of local African-Americans; d) Institutional archives of the local Urban League; e) Personal papers of leaders in the African-American community; f) Records of African-American churches, including commemorative histories and church newsletters; g) A collection of community documentation amassed by an elderly African-American woman who shortly before passing away donated her collection to a local museum; h) Theses, dissertations and articles written by students and faculty at the University of Illinois on the local African-American experience; i) Video recordings of African-American events recorded both by an independent, African-American videographer and by mainstream media outlets; j) Yearbooks of an annual Debutante ball organized by a sorority alumni chapter to fund scholarships for young women in the community; and k) Records touching on local African-American history among governmental records, such as city council board minutes, census records, school board records and other types of governmental documentation of all types.

In addition to this wealth of publicly accessible documentation, which existed in multiple libraries, archives, and museums without any easy, central access point, we also discovered that a growing number of African-American individuals and institutions had begun using digital technology to document themselves. For example, in Summer 2010 an historically African-American church posted photographs of its choir from the 1970s to Facebook.

We recommend consulting with all possible sources of documentation for your topic of interest, beginning with those that have a public mandate to make information accessible, such as libraries, archives and museums, and extending to digital documentation and privately held collections.

In confronting such large volumes of documentation, strategic decisions are necessary and essential. In terms of building social capital, it is also essential to connect to, and to seek to involve, individuals that are personally connected to the information being digitized. These individuals may become advocates and supporters of the project, and may also add additional information, take part in digitization efforts, and, ideally, take ownership of the project. To advance these goals, our project began working with an historically African-American congregation, an historically African-American business district and an artist of a community mural. As the project expanded, we connected with` more individuals and groups in the community. Our engagement has extended further and deeper into the community. We recommend trying to see where there is a lot of

grassroots, spontaneous energy in whatever topic you are interested in within the community and focusing your energies and time there.

Additional Resources and best practice models:

Digitization in the Real World: Lessons Learned from Small to Medium-Sized Digitization Projects. Metropolitan New York Library Council. Excerpts from Book Chapters at: http://metroblogs.typepad.com/ditrw/.

KCResearch. Kansas City Public Library. http://kcresearch.org/.

SkdkieNet. Skokie Public Library. http://www.skokienet.org/.

Maine Memory Network. Maine Historical Society. http://www.mainememory.net/.

AfriGeneas: African Ancestored Genealogy. http://www.afrigeneas.com/.

OurGlasgowStory. TheGlasgowStory. http://www.ourglasgowstory.com/.

Massachusetts Memories Road Show at UMass Boston. http://www.massmemories.net/.

LocalWiki. University of California at Davis. http://localwiki.org/.

Black Metropolis Research Consortium. University of Chicago. *http://www.*blackmetropolisresearch.o*rg/*

L.A. As Subject: Collectively Preserving, archiving and sharing the history and culture of the Los Angeles Region. http://www.laassubject.org/.

Collaborative Digitization Programs in the United States. Lyrasis. http://www.lyrasis.org/Products-andServices/Digital-Services/Collaborative-Digitization-Programs-in-the-United-States.aspx.

StoryCorps. Library of Congress. http://storycorps.org/.

3) Ethics and Logistics of Community-Based Digital Projects

Learning Outcomes of Chapter 3:

- Be able to articulate some of the ethical considerations around your community based project
- Be able to develop a logistical time-table for engagement in the community, including an exit strategy
- Be able to develop some talking points for your project that can be taken into the community

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3a) Ethics of Community-Based Digital Projects

This section begins with some caveats on the current state of ethics in community-based university research. Although community-based digital memory projects emerge in many contexts, including museums, public libraries, historical societies, and other settings, there are lessons to be learned from the university model that may apply beyond the particular context of a university setting.

The main tool for research accountability is the Institutional Review Board, or IRB, which most universities and colleges across the United States are required to adhere to. The IRB has been formally designated to approve, monitor, and review biomedical and behavioral research involving humans with the aim to protect the rights and welfare of the research subjects" (http://en.wikipedia.org/wiki/Institutional_review_board). However, the IRB does not have to be used in a number of settings, including, with the most relevance for community-based digitization projects:

a) Oral History

b) Research involving the collection or study of existing data, documents, records ... if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects

c) Research and demonstration projects which are conducted by or subject to the approval of department or agency heads, and which are designed to study, evaluate, or otherwise examine:

1. public benefit or service programs;
2. procedures for obtaining benefits or services under those programs.

These exceptions severely limit the wholesale application of IRB in community-based research, such as in the eBlackCU project, where we have an explicit goals to:

a) Enhance the public historical record through oral history and other tools;

b) Analyze existing data, documents and records [Note: it is an ethical gray area if documents that emerge out of, and circulate within, the African-American *counter-public* should be considered *public* records] .

c) Analyze the public benefit and public service of the eBlackCU digital library so as to enhance that benefit and service.

Adding another layer of complication is the local context of the eBlackCU project. Emerging in the context of a university that dominates the local political economy, the eBlackCU project shares territory with roughly 80 different research and service projects moving from the University into the African-American community. In addition, the eBlackCU project shares territory with extant community memory engagement efforts of public libraries, museums and local media outlets. Table 2 provides a snap-shot of recent research and service projects in this community. As this table shows, only 25 % of this engagement is explicitly research, and

thus would fall under the purview of IRB requirements. Furthermore, within that 25%, 22% are entirely based on historical research of public documentation and/or oral histories. In other words, less than 20 % of all recent University of Illinois research and service in the local African-American community would fall under the legislative purview of the IRB.

Type of campus community engagement	**Number of Projects**
Service	43
Research	19
Service-learning	16
TOTAL	77

Table 2: Types of campus-community engagement from 2008-2010. Three projects had an unknown orientation. Source: http://eblackcu.net/CASAppendices/CAS-CD.htm.

These limitations of the IRB are both a hindrance and an opportunity. They are a hindrance in that they severely limit the legal recourse communities (as opposed to individuals) have to secure accountability against large universities. However, they are also an opportunity since the model of the IRB, and the importance of protecting research subjects, can be re-imagined for community engagement in the Twenty-First century university. This re-imagination could take the form of a Community Review Board, as opposed to an Institutional Review Board. An institutional review board is composed of members of an institution that are charged to supervise research involving human subjects so that those human subjects are protected from any damage resulting from the research. A community review board could be composed of both members of an institution and members of a community with a history of interaction with an institution, that could supervise and authorize research and engagement in their own community.

Although this step would be an ambitious goal there are concrete steps engagement projects between institutions (including public libraries/museums, city governments as well as Universities) could follow to advance such a goal. In the eBlackCU project we attempted to advance this goal through holding small, public meetings in March, July, August, September, October 2010 on the project, and mass, public meetings in November 2010 and January, March and May 2011. An obstacle of holding such meetings is the dilemma of self-selection, or how someone nominates themselves to represent the community, and whether or not such individuals have the best interests of the community as a whole. There is no clean, generalizable solution to this issue, but steps can be taken to address it. For example, in our November 2010 mass meeting, held on-campus at the University of Illinois we arranged a free shuttle between a community church and the meeting location to make it easier for people from the community to attend.

In addition to these public meetings, steps were also taken to shield the identity of community individuals who participated in the project from any unintended, negative consequences. For example, even though the names of the ten youth interns we hired were public since they were paid employees of the University of Illinois (as opposed to paid research subjects), all quotes given by the interns and included in research reports were anonymously cited. However, quotes from individuals at public meetings were treated as attributable to those individuals since those meetings were considered public forums and the audio and visual record of the events was placed online.

The ethics of Internet-based research are also, as of now, largely ambiguous territory requiring further theorization and institutionalization. There is a sense that private and public spaces on the Internet become blurred, especially in social networking tools such as Facebook where digital inequalities and literacy issues may impact the awareness of a human subject (or of a community) about the implications of posting material online (http://en.wikipedia.org/wiki/Internet_research_ethics). In research reports emanating from eBlackCU we treated data emerging from Facebook as sensitive information and did not provide any identifying information on the source of such data that could be used to trace the information back to its source. This step is especially important to take for data that comes from Facebook "Friends" in the community, in which such data

is only accessible after one has become a Facebook "Friend" with another individual.

In conclusion, the terrain of community-based engagement and ethics, especially digitally-mediated engagement, is not settled. We argue that the best steps to take in any community-based research, service or engagement project is to: a) struggle as best as possible to create venues and opportunities for the community to articulate its desires, needs and goals regarding institution-community engagement; b) whenever there is doubt on whether or not data you collect is a public record it is probably best to anonymize the source material in any research reports and on the project webstie; c) work both to make your particular engagement project accountable to the community *and* work to make the institution you represent accountable to the community beyond your particular project.

3b) Logistics of Community-Based Digital Projects

This section focuses on the logistics of community research. Whether your point of origin is a college or university (such as in University of Washington School of Public Health, "Community-Based Research Principles," http://sph.washington.edu/research/community.asp) a public library (such as in Anthony C. "Building community bit by byte," P 99-107 in eChicago 2009: Proceedings, Kate Williams, ed., http://hdl.handle.net/2142/15442), a museum (such as in Karp, E., ed. *Museums and Communities: The Politics of Public Culture*, Smithsonian, 1992), or another entity, research and engagement with local, historical, organic communities is often essential to the work you do. In this section we include both descriptions of the logistics of the eBlackCU community-based engagement as well as some lessons from that research project applicable to other projects.

3b-1) Establishing a base-line portrait of the community

Prior to engaging in the community it behooves the community-based researcher to establish a base-line portrait of the community. In the eBlackChampaign-Urbana project we went through a number of dissertations, reports, articles and newspaper clippings on the African-American community in Champaign-Urbana prior to starting direct engagement (see http://www.eBlackCU.net for this material). Our approach in these readings was to look for historical contexts that would ground the present engagement project. Review must also be made of present documentation, especially from newspaper clippings, and from minutes of governmental agencies.

However, all of this documentation must be taken for what it is, and not assumed to be what it is not. In other words, we found in eBlackCU that much of the easily found documentation on the local African-American community emerged out of previous community-based research and/or coverage by local media. This documentation must be consulted so that you can present yourself as someone who has done their homework prior to engagement, but this documentation should not be assumed to have all the answers you need about the community.

In any case, doing pre-engagement research is also essential to find out what other connections may exist between your institution and the community, and if projects in the past have been carried out that have connections or parallels to your own project. For example, in Champaign-Urbana we found that the Library Research Center at the Graduate School of Library Science had in the early 1970s embarked on a comprehensive survey of information about the local African-American community. Unfortunately, most of the information cited by this work seems to have disappeared in the intervening forty years.

3b-2) Establishing your identity in the community

After you have done your homework and are ready to begin the community-based research you next need to remember the maxim that "first impressions" matter. This step is where it is important to think about the norms and expectations of the community you are entering. If your first visit to a community is church on Sunday make sure you dress nice. Also come prepared with a short, no more than one to two sentence, script

about what you are doing and why it matters. The sound byte should cover who you are -- limited to the essentials, Don't say "Hi! I'm XX and I'm a third-year graduate student in Library and Information Science interested in x, y and z," rather say "Hello! My name is XX and I'm a student at the University," -- what you are doing, and why it matters for the community. In the ideal case you will come into the community with some kind of invitation from a community individual, so it is also important to make sure anyone introducing you also has your sound-byte memorized and internalized as well to avoid any false expectations.

If you don't have a community sponsor in place at the start of the engagement, one way to achieve a sponsor is through a letter of introduction, ideally from someone the community knows, that explains who you are and what you are doing, and why your project matters for the community. Even if you don't have a letter of introduction, come with business cards you can give to people so that they immediately identify you as someone with professional credentials and skills that may have value for the community. Finally, make sure that those in leadership positions know who you are, ideally before anyone else. A community-based research project can quickly go sour if you attempt to make a bee-line around a community leader. That leader, feeling slighted, may retaliate by blocking the project.

In the case of eBlackCU we worked to secure introductions at both of the initial community sites we worked with. At one site we secured an introduction by another university staff member who had volunteered with the organization; at another we secured an introduction through channels that had been established through prior digital divide work. Although the introduction you receive may come from weak ties to the community organization, they can at least get you in the door and give you a chance to make your proposals.

3b-3) Establishing contacts with the community

After your identity has been established, at least with the leadership of one community institution, and you have received some form of official or informal community blessing for your work, work can begin on establishing deeper contacts within the community. The same care that you took establishing your initial identity with a community institution applies to your establishing contacts within the community. Take care not to offend community leaders, but also take care not to appear as a community leader's lackey, especially in situations where community politics may have individuals and institutions competing against each other for scarce resources and prestige.

Try to work the strong ties of the contacts you have made to establish more contacts in the community. For example, in the context of recruiting summer interns for the eBlackCU project we attempted to recruit interns, parents and community sponsors into the project, achieving community endorsement as well as youth commitment for the project. This goal was operationalized by circulating the call for applicants among the individuals and institutions with which we had established contacts. We ended up receiving interns from the two community institutions we had begun participating in regularly, as well as four applicants from recruitment made by local Black activists with strong ties in the community.

A lesson that grew out of this recruitment was the critical importance of establishing a quick, easy-to-remember sound-byte that people can turn around and say to others in the community without losing meaning. As a local activist recruited applicants on our behalf among her strong ties somehow the message got distorted so that confusion was created regarding the scope of the program. One of the interns who heard about the opportunity through the channels of this activist told us that she was told the program was aimed only at African-American women, which was not true. The lessons of this anecdote are:

1) Have a short, easy-to-remember, easy-to-repeat sound-byte;

2) Ensure that anyone representing the project in the community has the sound-byte internalized;

3)If you find out the sound-byte has become distorted as it goes throughout the community take steps to distribute accurate information to correct any distortions that could lead to false expectations.

In addition to using word-of-mouth and the strong ties of community contacts to establish and deepen contacts in the community, you can use digital technology to establish and sustain contacts in the community. A few months into the eBlackCU project we realized that many individuals in the African-American community

had begun using Facebook to represent themselves online and to share community information. We made this discovery through simple web-searching -- as we searched for websites of community institutions we increasingly noted the presence of Facebook groups for community institutions. Recognizing this community-based activity in Facebook we attempted to also use Facebook as a tool to establish contacts in the community by "Friending" the contacts we had already established and then "Friending" on Facebook any additional contacts that were made or found, in a snowballing methodology. At five different points within Summer 2010 and Spring 2011 we established contact with community individuals first via Facebook and second in-person. The initial realization that someone from the community is your "Facebook Friend," although you have never met them in person before, immediately sets the stage for a dialogue on information technologies and their transformation of community life.

3b-4) Sustaining contact with the community

After contacts have been made and relationships established, both at an individual level and at a community level, you need to work to sustain your engagement in the community throughout the course of the community-based project. We recommend making decisions as early as possible in the engagement on what level of commitment you can realistically make to whatever community you are working with so that false expectations are not created.

The best way to sustain engagement is by attending *their* events. In the context of eBlackCU we attended a number of services at the Church we worked with beginning Spring 2010 and also visited businesses and community events in the business district we were working with. Furthermore, as we began to deepen our community connections through Summer 2010, and beyond, we continued **both** to bring people to our events for mobilization around community technology, and to attend community events and meetings with key community contacts and community churches that had expressed an interest in the project to broaden and deepen our engagement. The main point, however, is reciprocity -- if you expect the community to do something for you (such as provide you with community information, attend meetings, or become invested in the digital portal) then the community will expect some level of participation from you in their events.

An anecdote from the project illustrates this reciprocal process: In October 2010 we met with a community leader on the Urbana School Board and discussed her work. She then invited us to attend her Church. Our attendance at that church the following Sunday led to an announcement on an upcoming eBlackCU meeting during the church service that then led to firming of commitments by church members (including the minister) to attend and participate in the meeting. Although this anecdote represents the ideal case, the point is that engagement requires commitment and showing up at community events. However, your goal is not simply to join the community and become a community member – your goal is to find ways to bring new resources into the community *and* to find ways to close down unequal power barriers that may exist between your sponsoring institution (such as a university, library or museum) and the community. We attempted to walk this line by both attending community events and mobilizing the community to attend community forums we organized on community technology and the University of Illinois's role in the community.

Finally, we share a few notes on sustaining contact with the community using virtual channels. As our contact list within the community swelled from January 2010 to Summer 2011 we ended up with a list of over 1000 e-mails of both past and present community members, as well as individuals outside of, but committed to engaging with, the community. Furthermore, our Facebook group had over 300 members, and some active redistribution of eBlackCU communications on community listserves. Engagement must also be sustained over these virtual channels. Thus far we have primarily used these virtual channels as tools to share project announcements and updates, such as announcing newly digitized items in the eBlackCU digital library, circulating calls for volunteers, and announcing upcoming events. In other words the virtual communication channels have been predominantly unidirectional, or top-down. However, there are important exceptions. For example, one of the first individuals to interact with us online was a former Champaign-Urbana resident researching her family history who came across the site, joined the Facebook group, and posted some of her memories about her father's business on North First Street. The goal to reach for in digital community

engagement, which we have not yet reached or discovered how to reach, is to institutionalize this type of virtual engagement so that communication is not unidirectional but is truly community engagement both in cyberspace and in physical space.

3b-5) Wrapping up community engagement

Finally, in the vast majority of cases of community engagement will have some degree of ebb and flow, and in many cases will terminate completely. This section discusses some things the eBlackCU project has either done, or has thought about doing based on reflection on the project's community engagement, to facilitate wrapping up community engagement in a way that does not lead to any unanticipated and unintended community damage.

The goal in wrapping up community engagement is institutionalization, or finding ways to ensure that either the work you personally are doing or the research results you find are acted on, either by the community itself or by the institution you represent. Achieving institutionalizing requires everything up to the present moment coming together and further requires a socio-historical moment in which communities and institutions are able and willing to come together to mobilize for perceived community benefits.

In any case, institutionalization does not always work, and back-up plans must be made. The best back-up plan is a coherent and easily followable, public and traceable paper trail. This requires the data you collect either be made public, or, if there are any confidentiality issues, that the coded synthesis which removes any personally identifiable information of the data, be made public (see Chapters 4 and 10).

Furthermore, you should try to create some kind of manual or guide that someone coming after you could pick-up and act on -- hence the present volume. In the context of our research in African-American history and culture in Champaign-Urbana we discovered too many cases where community engagement simply ended and almost no trace remained. We were especially troubled to note that four university-based historians at the junior faculty or PhD level in the 1970s, 1980s, 1990s and 2000s did research on the local Black community, but none had left behind anything but the most ephemeral traces of their work in the community. In other words, not having plans in place to leave behind what you have gathered and analyzed will lead to the engagement simply ending, with hurt feelings and missed opportunities all around that will negatively impact anyone coming after you who would like to continue and sustain community engagement. The same may be broadly true not only for university initiatives, but also for projects in museums, libraries, archives, media centers or other entities that may launch a project such as this one.

Finally, it should also be noted that community engagement may not always be at the same level of intensity across time. There may be cases where rather than just ending community engagement you instead need to -- in order to analyze and communicate what you have collected, or to more broadly contextualize your case in larger regional, national and international contexts and theories -- reduce and pare down your direct community engagement to a skeleton level for a period of time as you write up and synthesize findings. Paring down direct community engagement may also be necessary to support community self-determination. In other words, you may find that you are doing all the work *for* the community, rather than allowing the community to determine *for itself* what it wants its digital memory to be like.

Even when these moments of stepping back from a project occur, we *still* recommend that you follow the course we have articulated above since first-hand knowledge and historical research both suggest that in many cases when someone says they are going to temporarily reduce their engagement, what ends up happening is that the engagement just ends with no plan whatsoever. Unless you are prepared, in terms of your own job security and economic situation, to guarantee that you will be able to return to the community it is best to make plans for the worst case, which will in any case serve you well for the best case.

Additional Resources and best practice models:

Alinsky, Saul *Rules for Radicals: A Pragmatic Primer for Realistic Radicals.* Vintage: 1989.

Kerry J. Strand, Nicholas Cutforth, Randy Stoecker, Sam Marullo, Patrick Donohue. *Community-Based Research and Higher Education: Principles and Practices* Wiley: 2003.
http://www.wiley.com/WileyCDA/WileyTitle/productCd-078797126X.html.

University of Victoria Faculty of Human and Social Development. *Protocols* & *Principles For Conducting Research in an Indigenous Context.* February 2003.
http://web.uvic.ca/igov/uploads/pdf/lndigenous%20Research%20Protocols.pdf.

Alkalimat, A. (2004) "Social Cyberpower in the Everyday Life of an African American Community: A Report on Action-Research in Toledo, Ohio" Urban Affairs Center, University of Toledo.
http://uac.utoledo.edu/Publications/cyberorganizing.pdf.

Association of Internet Researchers. Home Page. http://aoir.org/.

Granovetter, M. (1983). "The Strength of Weak Ties: A Network Theory Revisited". *Sociological Theory* 1: 201–233. doi:10.2307/202051. JSTOR 202051.
Also appears in: Marsden, Peter V.; Lin, Nan, eds. (1982), *Social Structure and Network Analysis*, Sage.

4) Information Collection in Communities: Social Procedures

Learning Outcomes of Chapter 4:

- Be able to understand different ways that information can be collected in community-based projects
- Be able to create a plan for how you will be able to collect this information for your digital library

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This section focuses on the empirical task of collecting information as part of community-based digitization work. It both discusses the information collected by eBlackCU and some lessons and limitations of our information collection that could be improved upon by future work. More technical digitization procedures will be discussed in the following chapter. This chapter focuses on the social/community side of information collection and digitization.

4a) Sticky Fingers in the digital age

The principle of sticky fingers is that you should always be gathering up loose documents in whatever setting you are in while doing work in the community -- including organizational brochures, church bulletins, annual reports – so that you may have clues useful for piecing together the social organization and leadership of the community. You should also make sure you have a place to put all this material you gather – just throwing it in your book-bag and expecting it to take care of itself is not sufficient. We recommend putting everything you gather into properly labeled folders in properly labeled boxes in secure locations, regularly digitizing everything you grab, and storing the digitized files on a secure server.

Sticky fingers also translates into the digital realm. Sticky fingers requires knowing how communities use digital technologies and what information you can find online on a community, both created by the community and created about the community. In the course of eBlackCU we found, examined and downloaded community websites, Facebook groups, Facebook photo albums, and a wide variety of annual reports and meeting minutes of governmental agencies that had community participation. The principles of file management discussed above for analog sticky fingers apply as well to digital sticky fingers. Label everything you grab, store it securely and aggregate everything together so you don't have bits-and-pieces on different computers and external hard-drives. Zotero (zotero.org) is a tool that can help with this. Omeka (omeka.org) can also be used. It is probable that new tools will exist by the time you read this – just make sure, regardless of what tool you use, that you don't inadvertently make public what should not be made public.

4b) Elephant Ears and Ethnography

Elephant Ears is the principal that every time you are out in the community you should carry yourself as if that moment is an information-collection opportunity. However, rather than being pushy about trying to get information about the community, the idea of elephant ears implies that listening closely to what gets said in the community, and who says it, can tell you a great deal about how the community works. You should respect all knowledge a community, individual, and institution is willing to share with you – and respecting this knowledge means listening carefully, taking good notes, and adding these notes to the data collected through sticky fingers. In eBlackCU we took minutes and notes at almost every meeting and every community event we attended. However, these minutes and notes were not always collected in a rigorous way. At some points we jotted notes into a notebook or a spare piece of paper; at other times we used a laptop. The important point is to develop procedures that will enable you to go from what gets said in the community, to useable notes, to aggregated notes that will ensure that what you heard doesn't just disappear. We see rigorous note-taking, elephant ears and other research methods as part of respecting the community and what it shares with you -- since this rigor will allow you to maximize their contributions and their time spent with you.

4c) Collecting information on leadership and social organization

While the principles of Sticky Fingers and Elephant Ears are necessary, they are not sufficient. In many cases, to answer the questions you have it is necessary to move from these catch-all information collection methodologies to more focused information collection techniques. This is where principles of survey design and interview protocols become key methodologies in community information collection. Knowing what to ask, who to ask, when to ask, and how to ask are all key tools in collecting information, especially on leadership, social organization and local African-American history. Especially in the context of community-based research in historically marginalized communities, cognizance is required of unequal power relations between the institutions you represent and the communities you work with. In eBlackCU the main moment we used this methodology was in circulating a survey and conducting interviews with the eBlackCU summer interns on their experience in the community with technology and memory, and the networks they represented. But the methodology could be more broadly applied to find out how many families have scrapbooks, family reunions and who collects the family and community histories in the community.

4d) Seeing is believing - visual documentation

When doing community engagement of all types, but especially community-based digitization projects, don't forget to bring along digital cameras and camcorders. These tools can be important for a variety of reasons:

- You may notice the ways in which the past is positioned in community spaces and find it important to document that presentation of the past as a clue to how the digital portal should develop. For example one of the churches we worked with in Champaign-Urbana has a history wall in its fellowship hall. Along this wall are photographs and commemorative programs dating to the church's beginning in 1909, many of which have been annotated over the years. Clearly history is important to this church and documentating that analog historical presentation may be important as you develop the digital portal.
- Remember also that the work of putting together the portal will be a historical moment of its own. We recommend taking pictures and making movies of community meetings (with all participants' permission) to visually document the social processes of the digitization of the community. You especially want to visually document any instances of the community taking control of the technology to share its history -- such as using flat-bed scanners or other digital tools.

4e) Doing is Knowing - get involved and see the activity from the participants point of view (involved observation)

Finally don't neglect the experiential information you will collect from the process of being an involved participant in the community. One way to get involved and see activities from participants' point of view is not only to work on the community based digital portal, but also offer support and training for autonomous community digital projects that may involve community memory. For example, we offered assistance and training to a church in using digital technology as part of its annual Family & Friends Day reunion as well as using technology to create a memory slide-show to commemorate the Pastor's Anniversary. Getting involved in the community requires moving beyond the digital portal to the community's normal memory processes. Of course in the end you would like to drive participation in the digital portal -- but securing that participation, as well as the experiential knowledge of any obstacles the community may face in participating in such a project -- requires going beyond your comfort zone and getting involved in community memory from the community's perspective. This step requires finding autonomous memory projects that you can support, augment, or enhance using your digital technology skills -- the experiential knowledge generated from that engagement will put you in a better position to develop a digital community portal that the community can truly call its own.

4f) Collecting information from traditional repositories

Finally, in collecting information for your project you can't overlook traditional information repositories such as libraries, archives and museums, as well as media outlets and court-houses. In many cases these institutions rely on volunteers to carry out their work, and as such can not be expected to provide information as fluidly as one would hope, or as well as highly-funded institutions. As a result there is an art to getting information out of libraries, archives and museums and other institutions that requires one-on-one reference interviews with repository directors and reference staff. In many cases these individuals can point you not only to information in their local holdings you may have otherwise overlooked, but can also point you to the people in the community who can help you fill in the gaps. Be sure to take advantage of and respect these individuals and their time.

In addition, libraries, archives and museums often have widely divergent technical capacities and policies on digitization by patrons. In some cases you may need to bring in your own scanner or SLR camera -- in other cases the repositories may have state-of-the-art equipment you may use. It is important to always check before-hand on the facilities and policies of repositories you visit to make sure you are able to digitize what you need to digitize. In some cases, improvisation is essential. For example, almost all repositories allow photocopies -- so you may need to make photocopies of items and then digitize photocopies of documents in repositories at a later date.

Additional Resources and best practice models:

Alkalimat, A. and Williams, K. (2001) "Social Capital and Cyberpower in the African American Community: A Case Study of a Community Technology Center in the Dual City" In: *Community Informatics: Shaping Computer Mediated Social Relations* Eds. Leigh Keeble and Brian Loader. London: Routledge. http://uac.utoledo.edu/Publications/2000/alkalimat-catnet-00.pdf.

Stack, Carol B. *All Our Kin.* Harper & Row. 1976. http://eblackcu.net/portal/items/show/426. Study based on "North End" in Champaign-Urbana black community.

Basso, Keith *Wisdom Sits in Places.* University of New Mexico Press: Albuquerque. 1996.

Allen, J. C., & Dillman, D. A. (1994). *Against all odds: Rural community in the information age*. Boulder, CO: Westview.

Dandaneau, Steven P. *A Town Abandoned: Flint, Michigan Confronts Deindustrialization.* Albany, NY: State University of New York Press. 1996 .

Hunter; Floyd. *Community Power Structure: A Study of Decision Makers.* 1953. Chapel Hill, NC: University of North Carolina Press

For a much larger list of community-based ethnography see Douglas Smith's bibliography at: www.wku.edu/~douglas.smith/Ethnog_ List.doc.

University of Alabama and Birmingham. Digital Community Studies Minor description. http://www.uab.edu/history-anthropology/dcs-program-overview.

G. William Domhoff, *Who Rules America?: Power at the Local Level*. University of California: Santa Cruz. http://sociology.ucsc.edu/whorulesamerica/local/.

Johnson, C. A. & Duff, W. M. (2005). "Chatting up the archivist: Social capital and the archival researcher." American Archivist, 68(1), p. 113-29.

5) Information Collection Technicalities: Digitization

Learning Outcomes of Chapter 5:

- Understand different file formats for digitization and their implications for your project
- Understand how to digitize different media using different tools
- Understand how to store files after digitization and how to prepare them to go into a digital library

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This chapter discusses the process of digitizing information -- or moving from analog information in books, documents, flyers, photographs, vhs tapes, or other formats, to digital files. The chapter also covers how to grab and incorporate information already available online into your digital portal, for preservation and enhanced access. Finally, the chapter covers some basics of digitizing community memory or knowledge that may only exist orally or in another intangible format, through methods such as oral history and photographic and video documentation. See section 2d for a discussion about the particular digitization tools utilized in the eBlackCU project. Each of these tools have unique features best learned through reading the manuals that come with the tools, as well as by trying them out (see exercises for Chapter 5). If you find other tools that work for your project, please send us a note that we we can incorporate this knowledge into this manual. Acknowledging these issues, this chapter discusses some of the aspects of digitizing that are largely independent of the particular tools used to digitize information.

5a) Picking file formats

5a-1) Texts and Photographs

Before you start digitizing it is important to become cognizant of some of the different digital file formats available for digitizing and the ramification for access and preservation of picking particular file formats. For digitizing texts and photographs the most common file formats are: TIFF, pdf, and JPEG/JPG. JPEG/JPGs and pdfs are quite common online. TIFFs are rarely found online, but are commonly used in digital library creation. TIFF files are image files that are much, much larger than JPEG/JPGs. The reason TIFFs are so big is that they are uncompressed, meaning that no matter how many times you move your TIFF file from hard-drive to hard-drive the image quality will not degrade. JPEG/JPGs, in contrast, are a lossy file format. This means that as you transfer JPEG/JPGs from hard-drive to hard-drive, they will gradually degrade and lose resolution as they go through cycles of compression and decompression. Finally, pdf files are a convenient file format to combine multiple TIFFs or JPEG/JPGs into a single file, so that you can create one large pdf file that contains every page of an entire yearbook.

For high-resolution photographic images we recommend scanning at at least 600 dpi and creating uncompressed TIFFs. The reason we recommend TIFFs is that TIFFs are loss-less, high-resolution formats, meaning that no matter how many times you move your TIFF format from hard-drive to hard-drive or from server to server over time the image quality will never degrade. JPEGs, in contrast, are lossy formats, meaning that as you transfer your JPEGs/JPG from hard-drive to hard-drive they will gradually degrade and lose resolution as they go through cycles of compression and decompression. For more on the distinction between lossy file formats, lossless file formats, and their implications for long-term preservation visit: http://en.wikipedia.org/wiki/Lossy compression.

Another file format option is PDF, or portable document format. PDF format is especially good for textual documents, as they are much smaller in size than TIFFs. They are also good for multi-page documents. The draw-back of PDFs is that they require a PDF reader to open them. However, the National Archives of the United States has committed itself to maintaining accessibility for PDF documents. If you are concerned about

the long-term preservation of your PDF documents we recommend converting them to PDF/A file format, (http://en.wikipedia.org/wiki/PDF/A). PDF/A files are much larger than standard PDF documents, and the reason they are bigger is that they have incorporated within the file itself all the instructions necessary for the files to be opened at a future date. Standard PDFs do not have such detailed instructions.

In addition to file formats there are also different resolutions at which you can scan. Knowing about these resolutions is essential for digitization projects. You can scan at 72, 300, 600, 1200, or higher dpi, or dots-per-inch, and at 16, 24, 48 or higher bit color, or greyscale for black-and-white files or text. DPI refers to the resolution at which the scan is created -- the higher the dpi the higher the number of "dots" that are scanned for every square-inch of a document. Bits of color refers to the number of bits used to represent the color of a single pixel. Without going into great technical detail, high DPI scans made with high bit color result in high quality, richly detailed, digital images, but also result in quite large digital files.

5a-2) Audio-Visual Digitization

Do-it-yourself audio-visual (a/v) digitization is more complicated than digitizing print materials, but it is possible for even the smallest community digitization project. Audio digitization is easier than video digitization to do. The main tools needed to do simple sound without video digitization are: a computer with a microphone jack, and a player for the a/v material (for example - a cassette player, an 8-track player, a phonograph, etc.) with output jacks that will enable you to connect the player to your laptop through the microphone jack. You may need to purchase a special cord for this step - individuals at local record shops, libraries or stores such as Radioshack may be able to help out.

After you have the right equipment you just need to run Audacity on the computer (see Chapter 2), and make sure that Audacity is recording from the microphone jack. Press play on your audio player (such as a cassette player) and simultaneously press record in Audacity. If you have it set up correctly you should be able to see in real-time Audacity digitally recording the audio from the analog source. If you don't see this happen, the devices are not connected correctly.

When the digital audio recording is complete you will want to save the resultant file in multiple file formats: a) as a raw Audacity project than can be returned to a later date; b) as an uncompressed WAV file for long-term preservation; and c) as an mp3 file for public access. Please note that prior to generating the final digital files you may need to clean up the file using some of Audacity's advanced editing functions. These functions are not covered in this tutorial, but there is ample documentation of how to do advanced audio editing in Audacity on the software's website.

To perform video digitization you *will* have to purchase some advanced equipment. The easiest video format to digitize is VHS. At your local Radioshack, Best Buy or related store you will be able to find a number of VHS to computer or VHS to DVD hardware packages that will enable you to plug a VHS player directly into your computer, and using the bundled software, create digital video files. This hardware may also work for betamax, 8mm, 16mm, laserdisc or other video formats. The preferred file format for video digitization is uncompressed AVI or MOV file formats. Please note that uncompressed AVI files can be extremely large. Make sure you have the storage space for these files -- if you do not you may need to digitize using a compressed file format such as MPG or, for very small files, FLV, or flash. We recommend backing up digitized videos on DVDs using a program such as DVDStyle or other DVD authoring software that may come bundled with your PC or Mac. If you are running Linux, Bombono DVD is an easy tool to use.

After you have digitized your analog video you can also convert it to make it ready to go online. The free tool WinFF is a convenient, if slow, video conversion software for Windows that will allow you to convert files to WMV (for Windows Movie Editors), MPG, AVI, FLV and a variety of other formats with advanced options. We recommend you go through all the options WinFF presents to you and look up each one on wikipedia. Video digitization and conversion is a complex process and a full understanding requires more detail than can be covered in this tutorial.

5a-3) Digitization in the Context of Changing File Formats

The purpose of this brief overview of file formats is to alert you to the fact that the decisions you make about how to digitize information will have concrete implications for both your and others' ability to provide long-term access to the files you create. The problem of how to do long term preservation of digital files has not yet been definitively worked out. In general terms, however, we recommend opting for file formats that are *not* proprietary, meaning that the file format is not owned by a particular company but is a public good, and that a large number of individuals and institutions invested in ensuring the file format will remain accessible for many years to come.

It is also important to draw a distinction between the file formats you use to digitize information and the file formats you make available online. TIFF files are much, much larger than JPEG/JPGs. You may wish to preserve your TIFF files offline (such as on external hard-drives or Archival Gold DVD-Rs) and make available online JPEG copies of those TIFF files. Similarly, for audio-visual material you may wish to preserve offline WAV (for sound) and AVI (for video) files and make available online mp3 (for sound) and flv (for video). By making available online the lower-resolution, lossy formats you will make it easier for users with slower connection speeds to access your library.

In conclusion we recommend making some written policy decisions at the beginning of your project about what file formats will be used for digitization, and what file formats will be used for (public access, how your files will be preserved, and what work-flow this policy will entail. To stay up-to-date with how the United States government is addressing these issues visit: National Archives Electronic Records Archives, http://www.archives.gov/era, and the Library of Congress's Digital Preservation Initiative, http://www.digitalpreservation.gov/.

5b) Ensuring you digitized everything - quality control in community digitization

Regardless of the particular tools used, and regardless of what you are attempting to digitize, an immediate step to take after you complete the digitization is to make sure you have actually digitized everything you set out to digitize. Playing back an a/v file or doing a quick spot-check of a digital image or text to verify that you haven't missed any content should be a key part of your project's digitization workflow.

For example, if you digitize a book or scrapbook, check to make sure you didn't miss any pages, verify that you didn't lose any information on the margins of the scan, and confirm that everything is in focus. If you are doing this digitization in someone's home check, if possible, your work before leaving -- or, at the very least attempt to to secure the possibility to return at a later date if you discover you missed information while scanning. Similarly for audio-visual digitization, try to set aside some time to review the digitization work to ensure that information has not been skipped, and that the audio and video are clear. With audio digitization you may be able to clean up the digital file using a program such as Audacity rather than re-digitize the entire file. Expect that at least in some cases equipment will malfunction, and develop procedures to re-digitize information that was not captured on the first round.

You may want to divide up this work among your project team, or project volunteers. One individual could digitize and a second could check files and re-digitize, if needed. The exact work-flow will depend on unique project constraints you will encounter in the course of your work. It is important to be flexible and think strategically.

5c) Naming and Converting files

As important to the formats chosen in your digitization projects are the names given to those files after the digitization is complete. Good, and systematic, file naming will enable you to seamlessly move the files you

have digitized into your digital library, as well as into a long-term preservation environment. Naming files does not have to be a complex process. We recommend coming up with a simple system that can be adhered to easily, with enough flexibility to accommodate files of different formats and sizes. For example, you could decide to name every file by its author, followed by item title, followed by date, and, if the item has multiple parts, followed by a letter of the alphabet. For example, if you are digitizing the School Yearbook of Urbana High School from 2001, you would name the file UHS_Yearbook_ 2001a.pdf. The most important thing to do is to develop a system, write down that system, and make sure you and everyone involved in the projects sticks to it.

5c-a) Processing files - the eBlackCU methodology

This section is based on the particular steps used to name and convert files practiced by eBlackCU for large yearbooks, for a project carried out in Summer 2011. It is offered as an example of the work-flow you will need to develop for your project. Rather than adopting this work-flow wholesale in your project we instead recommend using this methodology as a guide for developing your own procedures based on local needs and constraints. We would like very much to see any work-flows that you may develop for your community-based digitization project. Please let us know what you develop.

After the items are digitized there is still more work needed to get them ready for access. If you use a multi-function photocopier, each digital file will go directly from the photocopier over the Internet to a designated e-mail account as an attachment. The first step in naming and converting files is to download the raw digital files from the e-mail account.

Here are a couple things to watch out for in this process:

1) Verify that your e-mail account is large enough to hold the large amounts of data that will circulate through the account;

2) Verify that you download all of the raw digital files. You can do a quick check to confirm that the number of files downloaded equals the number of files in your email account.

After you have downloaded the files from your email you next need to name them. Rather than re-name every single file, we recommend placing all raw files from a particular yearbook into a single folder, such as “Yearbook-1963.” You should do this step immediately after downloading the files from your email so that you can easily return to these raw files at any point in the future. In addition, you may want to back up the raw files on digital disc.

Next, you need to combine all the raw files from a particular yearbook together into a single file. To combine all the files together we use software called Adobe Acrobat Pro. Unlike most of the other software referenced in this tutorial, Adobe Acrobat Pro is not free. However, you may be able to secure a free copy as a donation from a local technology company, library, University, or school district.

Regardless of how you attain Adobe Acrobat Pro, you can use the software to:

1. combine multiple TIFF or JPEG files into a single pdf file;
2. insert, delete, and rotate pages;
3. run optical character recognition (or OCR) on a file so that it is full-text searchable;
4. shrink the pdf file and convert each page of the pdf into a JPEG file for easy online access.

To combine multiple TIFF or JPEG files simply hit the "Combine" button at the top of the screen and select "Merge files into a Single PDF.” Next hit “Add Pages" and navigate to the file folder where the raw images you downloaded from your email are located. Select all the digital files from a particular year and and hit "Add Files." Next, sort these files by name. The images should be sorted in the order in which they were scanned. Finally hit "Combine Files" and the software will take all the raw TIFF files and convert them into one large pdf file. This process will take between 5-20 minutes, so plan to do something else while the files are being combined. Make sure to save the combined file with an appropriate name.

After you have combined all the TIFF files into one large pdf, the next step is to confirm that the pdf file actually includes the entire yearbook. With the physical yearbook at your side, go through page-by-page in the

pdf file to verify that no pages are missing, and that the scans are complete without missing information. If there are missing pages, or missing information in the pdf you will have to re-scan those pages. You can then download these new raw images and insert them into the yearbook by using the insert pages functions in Adobe Acrobat Pro. If pages are out-of-order in the yearbook you can also re-arrange pages by first extracting and deleting the pages that are out of order from the yearbook. Save these exacted pages as a new pdf file, and re-insert these pages into the digital yearbook file at the appropriate place. In some cases, pages may also need to be rotated, which you can do using the Rotate Pages function.

After you have verified that the pdf file contains a complete digital copy of the yearbook, you can do a few more things to make it easier to access and share. First, you can run OCR. OCR is a tool that scans a series of digital images to automatically recognize text. From this process the program will create a text file containing all the text in the yearbooks. Although the OCR process is not perfect, it is an easy way to enable searching by name for individuals in the yearbooks.

Finally, using Adobe Acrobat Pro you can create a low-resolution version of the yearbook file so that the file will load quicker online. To create a low-resolution access copy, hit File-Print and select print to "Adobe PDF." This option will create a compressed version of the pdf file. You can save this file with the same name as the large digital yearbook file, simply adding "low-res" to the end of the file name to distinguish it. You may also want to split your pdf into smaller chunks to make it easier for the pdf to load online. In the eBlackCU project, we split the digital yearbook into files no larger than 5 mega-bytes each for fast online loading.

In addition to creating a low-resolution pdf, you can also create low-resolution JPEGs for easy online access and sharing. After you have created a low-resolution pdf file, simply hit File-Save As, and select "JPEG." This option will create a separate low-resolution JPEG file for every page in your digital yearbook, which can then be placed online, or onto digital discs for easy access and sharing.

5d) Storing files

After you have digitized and named a file, you next need to store it. We recommend adding the digitized file to your digital library as soon after you scan it as possible. See Chapter 6 for more information on this process, using the Omeka digital library Content Management System. Even before you take this step, however, it is good to have a system in place that will prepare the files for public, online access, so that they don't get filed away or forgotten, as well as a place to preserve the file offline for long term preservation.

First, how to prepare the files for public access. Based on the policies you have created on file formats, see above, you may need to do some post digitization processing of the file. For example if you digitize a photograph as a TIFF you may want to convert it to a JPEG before uploading it to your website. Conversion of image file formats can be accomplished using free tools like GIMP. Since GIMP is open-source software there are a number of plug-ins, created by people just like you, that you can add to the software to allow batch conversion of the files.

Remember that if you do convert a TIFF to a JPEG you still want to preserve the raw TIFF files for long term preservation. Furthermore you may also want to combine multiple files together before uploading it online. For example, if you have digitized a book into five different pdf files you may want to combine these five pdf files into one single pdf file, using Adobe Acrobat Pro, or other free services online such as mergepdf.net, and then run Optical Character Recognition, or OCR, on the file to make it full text searchable. See the wikipedia article on OCR for more information: http://en.wikipedia.org/wiki/OCR.

We recommend uploading the processed file as soon as you can onto your server. This step will help ensure the file doesn't get lost. Thankfully, the Omeka user community has developed a tool to help facilitate this. It is called Dropbox, http://omeka.org/codexiPlugins/Dropbox. With Dropbox you can upload your file, through FTP, into a special folder on the website's server that will feature all files that are ready to be added to the public library after proper metadata has been added. See Chapter 6 for details.

Finally, in addition to uploading the compressed copy of the file to your server, you also want to take steps to preserve the raw, uncompressed file for long term access. There are many ways to do this, and we

recommend exploring different options based on what exists in your community. You could burn all of the raw files regularly to DVDs and then deposit these DVDs at area libraries and archives, making sure to keep good records on which files you are burning so that if you need to return to these back up discs you can find your files with minimal effort. If you pursue this option make sure that your local library has familiarity with this type of digital object so that it can be a good steward for the project's backup files.

Another option is to look for institutional repositories in your community. An institutional repository is a staffed digital library that exists primarily for long-term preservation and public access of digital files of a particular institution or community. Your community's college or university may have some kind of institutional repository that may accept the responsibility of backing up your raw files. For example here in Urbana Champaign both the University of Illinois and Parkland College have institutional repositories. In the future, institutional repositories may become more common in public or local government, and could then serve as community repositories of digital information. The eBlackCU project will begin depositing large zip files that contain annual back-ups of the entire eBlackCU library into IDEALS, the University of Illinois's institutional repository, in Summer 2011.

A final option to consider is finding secure servers in your community that would accept the responsibility to safe-guard the community digitization project's files. You may be able to convince your local government's IT office, or possibly even a private IT company, to regularly backup all of the project's raw files. We recommend exploring all options and developing relationships, networks and procedures to back up both the content of your digital library and the library's raw, uncompressed source files for long-term preservation.

5e) Grabbing born-digital information

In addition to digitizing analog information there is also a large, and growing, amount of community information (both contemporary and historical) out on the internet, and circulating through Facebook and email, that could, and in many cases, should be added to digital community portals for long-term, stream-lined access. This information can be seamlessly integrated into what you have already digitized using the methods explored above. Some places to look for online information about communities include:

1. Governmental websites
2. Websites of libraries, archives and museums
3. Media Websites (TV, newspaper, etc.)
4. Social Networking libraries and sites (flick.r, youtube, etc.)
5. Community blogs, facebook pages/groups and websites

We recommend making a list, in a spreadsheet, of as many websites in your community as you find, updating the list as you explore your community's representation online. This list of sites can then be "harvested" for community information using a variety of tools, including:

- Web Crawls - Software mediated downloading of entire web-sites that preserve the sites' original hierarchy and design;
- Web-page saving - Using your browser to save particular web-pages, as opposed to entire web-sites;
- Grabbing Files - Using a variety of tools to download files from the web (such as video files from YouTube, mp3s, pdfs of governmental meetings, jpegs, and other files you may find online).

HTTrack is a free program for doing your own web crawl. A web crawl is a procedure in which your computer will comprehensively download entire websites for local back-up. This step is useful and essential especially for volatile websites that change frequently, or even disappear after a short amount of time. The largest web crawls are conducted at an international level by the Internet Archive (http://www.archive.org/), however many universities and governmental entities also do smaller, more focused web crawls around particular topics or themes. You may wish to begin conducting web crawls after you have developed a list of community websites. Be warned, however, that web crawls are time-intensive and often require high amounts

of consistent bandwidth. Web crawls are also notoriously bad at harvesting and preserving social networking sites, or websites based on proprietary codes or content management systems. You may have to play with HTTrack's advanced settings to get the web-crawl working right -- and for some sites you may find the software just doesn't work at all, requiring other methods to back up the sites' content.

In addition to crawling the sub-section of the Internet on your topic of interest, you may also wish to do more focused downloading of web sites. For example, if you wish to capture representations of community life in social networking sites such as Facebook you may need to do a simple CTRL-S, or page save-as, in your Internet browser of choice (Chrome, Firefox, Internet Explorer, etc.), on a page-by-page basis. Although much more time consuming than a batch web crawl, saving webpages, page-by-page, may be the only tool available for downloading community information from sites such as Facebook. This method also gives you more precision in what you capture. After downloading the webpages as html files we recommend converting them to pdf using Adobe Acrobat Pro for long-term preservation and ease of manipulation.

Instead of backing up web sites you can also simply point people to websites by creating a library entry for a link to a particular community website. Even if those websites go down, change dramatically, or disappear for whatever reason the visitor to your website may be able to find an older version of the website from the Internet Archive, http://www.archive.org/, or any number of other programs that regularly crawl and back-up aspects of the open Internet.

In addition to collecting data from the open Internet, you may discover that there are active digital networks for sharing information in your community, such as e-mail listserves, where information including flyers, announcements and other information may circulate. Seeking to join such listserves should be seen as part of community engagement. In the eBlackCU project we were able to acquire a great deal of information that was otherwise not available on the open Internet by joining listserves. In many cases, community members and groups that do not have the technological literacy or comfort to create web sites or other digital representations may be familiar enough with technology to use e-mail as a way to communicate and share information. Joining these private or semi-private networks will greatly benefit both your project's information collection and networking endeavors.

A few examples from the eBlackCU project will illustrate how you can collect information already in digital formtat. The eBlackCU project received a DVD featuring interviews of a civil rights activist that was recorded in 1982. This video footage had already been digitized, but it was not available online. We took this DVD, converted the video footage into .flv format using WinFF, and then added the .flv file to our digital library so that it could be streamed online (the open source software we used to enable video streaming on our website is called JWPlayer -- read their tutorial to find out how). We also took the raw video file and added it to the project back-up archive.

The eBlackCU project has also embarked on a project to back up "snapshots" of African American led institutional web sites in Champaign-Urbana. After having compiled a list of these websites (ca. 300), we used HTTrack to "crawl" and backup these websites. The process of backing up websites takes a large amount of bandwidth, and, depending on the number of sites and their complexity, a large amount of time. We recommend embarking on such a project only if you feel it is essential for your project.

5f) Technicalities of collecting data in communities

This section focuses on the technicalities of doing real-time information capture using digital tools, as part of direct community engagement. This information capture includes:

1. Note-taking
2. Video taping and procedures for making video available online
3. Photographing and procedures for making photographs available online
4. Audio-recording and procedures for making audio recordings available online
5. Digitization in the field using scanners and cameras

The specific tools you will use for community information collection will depend on your setting. For large, mass meetings organized by the eBlackCU project we attempted to use all five methods simultaneously and relied on a corps of student volunteers for this division of labor. At more intimate, private settings, you will want to ensure that the community members you are working with are comfortable with whatever tools you are using. Some members may be comfortable having their oral history video recorded, others may prefer only to have their voice recorded. Still others will only allow note-taking. Similarly if you are digitizing print or audio-visual records in community settings you may have to use a variety of tools. In some cases you may be able to bring a flat-bed scanner and laptop to a community member's home. In other cases it may be more practical to bring a camera and tripod to photograph documents.

5f-a) Note-taking

The most common type of information collection, note-taking still involves technical decisions and the development of procedures. For example will you be taking notes in note-books, loose pieces of paper or on a computer? Where will you store your notes so that they are organized and easily accessible? What will you do with your notes?

Regardless of the technical tool used for note-taking, notes for every community meeting should include, at minimum, the following information: a) date, b) location, c) attendees. Beyond this base-line data the other information you record will depend on your purposes for the notes. If you are seeking to interview an individual or a group on their memories about a given community topic, you may wish to record only remarks that relate to that topic. In other cases you may want to record all remarks at particularly important meetings, or in cases where the purpose of the notes is undetermined. In any case, all your notes should be organized into an easily accessible, centralized location. In the eBlackCU project we have digitized all notes and centralized them into a "Meeting Notes" folder. Print notes were also retained, if they were created. Files are named and sorted by date.

5f-b) Video taping and procedures for making video available online

In many cases you will wish to video record community information. Be sure to achieve community consent before filming, and if you wish to make the video record public you should also secure written consent -- a good, generic consent form is in the The Smithsonian Folklife and Oral History Interviewing Guide, http://www.folklife.si.edu/education_exhibits/resources/guide/introduction.aspx, which also contains other valuable tips for interviewing and documenting community events and individuals.

Some tools that can be used for video recording community memories include: a) a digital camcorder, b) a web cam built into a laptop, c) a smart phone or cell phone with a digital camera built in. If at all possible, try to use a tripod in community video recording to secure a stable video. Regardless of the device chosen you, or the individual making the video, ***must*** know how to extract the video file from the device and convert it into different video formats. Video file formats change rapidly, and it is important to know how to convert different video file formats to make sure you will be able to preserve and make accessible online your video. We use the program WinFF to convert between different video file formats (see section 5a-2, above) . WinFF is a free video file converter that allows conversion between most video file formats, including conversion out of a number of proprietary formats.

No matter what format the video file is originally created in by the device you are using, we recommend converting that file into both: a) flv (or flash video) for streaming online and b) avi (or Audio/Video Interleaved), for long-term preservation. You may also wish to burn video files to DVDs shortly after creation as another safe-guard for long-term preservation. JWPlayer, another free software, can be installed on your server and allows you to easily stream video files on your website without having to use a service like YouTube or Vimeo. JWPlayer also allows greater local control over presentation than YouTube. You can, of course, also post video files on YouTube, Vimeo and other cloud-computing programs for enhanced access if you choose.

A note of caution: video files are **BIG.** Be prepared to have a large amount of space on external hard drives, DVDs or other storage devices to store all the video files you create if you start making videos in the

community.

5f-c) Photographs and procedures for making photographs available online

At special events, and throughout community engagement, you may wish or need to take photographs to document community spaces, people, and the interactions among community members. A good digital SLR camera can be a handy device to have available for such occasions. If you can't afford, or can't find in the community, an SLR camera that you can use, a simple digital camera or cell phone will suffice.

The procedures for photographing community events are analogous to video recording -- except that it is somewhat easier to do file conversion. Free programs like GIMP allow easy conversion between file formats, as well as editing of photographs. The uncompressed TIFF file format is the most common format for long-term preservation of photographs -- however, TIFFs are also very large files so be prepared with large amounts of storage space. Digital cameras rarely produce TIFF files by default because of their size -- as such you may wish to convert images taken in the community to TIFF. JPEGs are the most common format used to provide access to photographs online.

Additionally, if you have a large number of photographs you may wish to combine them into a single pdf document using Adobe Acrobat Pro's Combine function. This step allows you to group all your photographs together into a single document, which may make them easier to manage (see 5c-a).

5f-d) Audio-recording and procedures for making photographs available online

Most modern laptops come with built in audio recording devices. Audacity is a free program that allows easy audio recording with built-in microphones, or, for better audio quality, low-cost USB microphones. As such, it is very easy to audio record meetings or oral histories if so desired or needed. Even if you video record an oral history or meeting it is advisable to also audio record the event in case some error occurs with the video file. Audacity also allows easy editing of audio files if needed, and you can easily export audio files from audacity into both wav files (for long-term preservation) and mp3 files (for online access). Naming conventions should be adhered to in order to ensure that your audio files are easily retrievable.

5f-e) Digitization in the field using scanners and cameras

In addition to using the above technologies to record and collect information in communities, you may also need to do conventional digitization of textual documents or other artifacts as part of community field work. Although flat-bed scanners and analog a/v-to-digital converters can be brought to field sites, in many cases these are unwieldy options. A simpler solution is to bring a small SLR camera with a mini-tripod with you. The camera can be set up to produce high-quality, readable digital images of print documents that can be combined and processed using Adobe Acrobat Pro and GIMP to produce a document similar to digitized documents produced by conventional flatbed scanners. In actual operation, you may have to use a variety of tools for field digitization. Regardless of the tools used, it is important to combine everything and to develop robust systems to integrate what has been collected for access and preservation.

Additional Resources and best practice models:

Lossy Compression. Wikipedia. http://en.wikipedia.org/wiki/Lossy compression.

United States National Archives. Electronic Records Archives, hrtp://www.archives.gov/era/.

Library of Congress. Digital Preservation Initiative, hrtp://www.digitalpreservation.gov/.

Internet Archive. hrtp://www.archive.org/.

Digital Archiving and Preservation. Prairienet.org. http://www.prairienet.org/op/digarch/

6) Overview of Omeka Content Management System

Learning Outcomes of Chapter 6:

- Understand some of the different hosting options for web-based digital libraries
- Understand the basics of Omeka and how to find detailed how-to instructions for the software
- Understand how to update Omeka with open source tools

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6a) Servers

The first thing needed to build a digital portal on community history is secure server space on which the project can live and grow. There are different options to explore. In the eBlackCU project we decided to purchase both server space and register a URL with a web-hosting company called Dreamhost. Although Dreamhost does not offer robust technical support or high-speed downloading/uploading at the lowest pricing rate, it does offer large amounts of web hosting at very little cost (our web hosting space is unlimited). The cost for maintaining the eBlackCU server is approximately $170 per year, including the cost of renewing the URL registration.

However, there are drawbacks for web-hosting, most importantly:
a) The content resides on servers that you are renting rather than servers that you physically own -- you could draw the parallel between owning a house and renting a house;
b) International web-hosting companies like Dreamhost will put your content on whatever servers they have available -- meaning that in almost all cases the content will not be hosted in your local community -- which could cause access speeds to slow in your community; and
c) Webhosting does require knowledge of File Transfer Protocol (FTP), file structure and html that goes beyond simple web literacy (see below for more on FTP).

Other options that partially address these concerns include:
a) cloud-computing,
b) renting, or borrowing, local server space, and
c) securing complete ownership over servers.

If you feel like you do not have the technical skills to start your own website one option is to launch a cloud-computing based digital library. In Spring 2010, the George Mason University Center for History and New Media (CHNM) launched a cloud-computing version of its Omeka software -- at Omeka.net. Using Omeka.net you don't have to buy servers or learn about FTP. You simply make a plan and get started building your digital library. Drawbacks of Omeka.net are that you have minimal control over your digital library, including its design. Since you can not “get under the hood" using FTP you have to rely entirely on CHNM to create the environment for your digital library. Furthermore, since your digital library is "in the cloud" it may be difficult to back-up the digital library locally. Finally, although Omeka.net is free for very small amounts of content, any large community-based digital project will no doubt require purchasing space on CHNM's servers, which is considerably more expensive than other web-hosting options. Although the cloud-computing option is a good one to start out with if you are worried about your technical abilities, we recommend quickly moving beyond it to the more complex, but much more rewarding, options explored below.

The second alternative to webhosting is to rent or borrow local server space. This step requires looking in your community for a local information technology company with local servers that you could use for the digital library. In your community there could also be community area networks or other non-profits, such as libraries, that may be willing to allocate some of their server space for the digital library. This option is similar to the Dreamhost option -- in that you would be building the digital portal on someone else's servers -- but it has

the advantage of having the content hosted locally, which could increase local access speeds and could also contribute to the construction and maintenance of social capital between your project and local technology experts who could be useful at other stages in project development.

The third alternative to webhosting is to secure ownership over your own, independent, server. This option is by far the best in terms of total control and total ownership over all aspects of the digital project. However, this option also requires a much higher degree of technical knowledge. In most cases pursuing this option will require detailed, expert knowledge of MySQL, networking, server maintenance, Apache HTTP, a stand-alone computer housed in a secure environment, multiple back-up external hard-drives, and a stable, high-speed internet connection that won't have to compete with other uses of the Internet.

In Chapter 2 we mentioned the ultimate goal of moving community-based digitization projects to the point that the community can sustain the projects beyond any initial project development. In building community-based digital libraries, the technical goal involves finding, and or building, local technology capacity to the point that the digital library can be locally owned, controlled and maintained on local servers. This long-range goal will take considerable time, energy and education, but it is not impossible.

6b) Omeka and Graphical User Interfaces (GUI)

This chapter provides a quick overview of the Omeka software used to create the eBlackCU digital library. For more detailed information on the software consult the online documentation, at http://omeka.org/codex/Documentation, which includes both print and video instructions on to how to install, use and upgrade the software. If you are interested in using other free software for your project please consult the list at the end of this chapter. If you know of other software used in community-based digital projects, please send the name of the project and the software to us so that we can update this manual.

Omeka has a graphical user interface, or GUI. This means that you can update and maintain your digital library without having to know anything about the underlying code. However, more complicated changes to the website will require some knowledge of html, mySQL, and php. We recommend starting your project by using the graphical interface and as the project grows you can develop your technical skills and seek to incorporate into the project volunteers with additional skills that may enhance the layout and accessibility of your project.

Omeka also has a large number of themes from which you can choose. These themes allow you to change the way your digital library displays online (http://omeka.org/add-ons/themes/). The themes can be switched without having to edit code directly -- however in most cases you will want to edit the themes slightly for your unique project. We recommend spending some time at the beginning of your project discussing and brainstorming on how you want your site to look and function, and what are some of the different ways you want people to be able to access its content -- for example, do you want people to be able to access content by time period, theme, geography, collection. These decisions will inform the type of website design you want for your site. We also recommend reviewing some of the different projects that use Omeka, so that you can see some of the possibilities of the tool for your project -- http://omeka.org/showcase/. You may need to either hire an outside consultant or recruit a volunteer to implement all your desires for website design. However, it may be worth the cost early on in the project to develop an infrastructure that does what you want it to do. After this early developmental stage, you may be able to build and sustain the library with minimal computer web development or programming skills by simply using the GUI administrative interface.

6c) File transfer protocol

If you have chosen to install Omeka on either rented or locally-owned server space you will have to understand some of the basics of file transfer protocol, or FTP, to install the software and maintain the library. As we noted in Chapter 1, we use Filezilla, an open-source FTP editor, to maintain the eBlackCU portal. FTP is a way to transfer files from one host to another, for example to transfer files from your laptop to a server accessible over the Internet. Using FTP does not require knowledge of code, although it does require some basic familiarity with the file structure of computers. The Omeka Documentation,

(http://omeka.org/codex/Documentation), and Filezilla Documentation, (http://wiki.filezilla-project.org/Documentation), contain detailed information on how to install and upgrade software using FTP. If you are new to FTP we recommend working with a partner so that the two of you can learn together how to make this software work for your project.

After you have installed Omeka on your server using FTP, you will only rarely have to use FTP again. Examples of times when you will want to use FTP include:

a) Making changes to the default theme of your library, which requires knowledge of php and html,
b) Uploading very large files to your digital library (this requires the Dropbox plug-in for Omeka - http://omeka.org/codex/Plugins/Dropbox),
c) Upgrading the Omeka software to the software's latest version
d) Adding plugins for enhanced accessibility (http://omeka.org/add-ons/plugins/), and
d) Backing up the entire library for offline preservation of your library.

6d) Plug-ins and Open Source software

Omeka is open source software. This means that the underlying code of the software can be directly edited by someone with the requisite knowledge. Knowledgeable users from around the world regularly submit updates to the Omeka plug-in library. These plug-ins, or add-ons, are tools that you can download from Omeka's website, http://omeka.org/add-ons/, and embed in your library to enhance its functionality. These plug-ins are regularly updated and we recommend frequently visiting the site to check out what new plug-ins and software upgrades may have been created by Omeka's user community. If you want to truly do some complicated work with digital technology, you may be able to write your own plug-in for Omeka. Plug-ins add benefit both to your own community project and to all the other projects around the world using Omeka to make history come alive through digital technology.

A second benefit of open source software is that the user community of the software is also the development community of the software. This means that if someone notices something not working correctly, or inefficiently, they can fix it directly themselves (if they have the tech skills) without relying on a distant individual. Finally, the Omeka user community actively supports open, online discussion forums, http://omeka.org/forums/, that are supportive environments for individuals having trouble with the software. You can both find answers to your particular problems here, and, we hope, also help others with their difficulties.

Additional Resources and best practice models:

Omeka Home Page. http://www.omeka.org

Omeka Cloud Computing version. http://www.omeka.net

George Mason Roy Rosenzweig Center for History and New Media. http://chnm.gmu.edu/

Lawrence Lessig Website. http://www.lessig.org/.

Chen, et.al. (2010) "Digitizing Civil Rights: An Omeka-based Pilot Digital Presence for the Queens College Civil Rights Archive" *Digitization in the Real World: Lessons Learned from Small to Medium-Sized Digitization Projects* Eds. Kwong Bor Ng and Jason Kucsma. New York: Metro Publications.

Other content management systems to consider in addition to Omeka:

CollectiveAccess: CollectiveAccess is a digital library tool that does not require custom programming to get up and running.

CONTENTdm: CONTENTdm is a proprietary digital collection management software from OCLC. It is commonly used by public and university libraries since it is very easy to set up and run, but since it is not free to use may not be the best option for a community project.

Collection Space: Collection Space is a collections management system used by many museums, historical societies and other collection-holding organizations. The Collection Space software requires some advanced knowledge of code to install and run.

DSpace: DSpace is open-source software for setting up institutional repositories. Although a strong piece of software, it is not for the novice digital library user.

Greenstone: Greenstone is open source software developed in New Zealand. It is one of the oldest free-to-use digital library softwares out there, so there are many examples of projects using Greenstone. However it is not as easy to set up as something like CollectiveAccess or Omeka.

MediaWiki: Although not a true digital library software, the open-source wiki code has been used by a number of community digital history projects. For example the towns of Dubuque, Iowa, and Kankakee, Illinois, converted its local history encyclopedia into an online portal using the MediaWiki software: http://www.encyclopediadubuque.org/ and http://kanwiki.org/.

7) Overview of adding to your digital library using Omeka

Learning outcomes for Chapter 7

- Understand how to use Omeka's Graphical User Interface (GUI) to add items to your digital library
- Understand how to develop a manual that articulates the naming standards for your digital library
- Understand how to enable either the general public or a specific, bounded community to upload items and comments to your digital library

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This section focuses solely on the steps necessary to move from digital files ready to be shared online to digital files accessible through your digital library.

7a) Using the graphical interface

One of the key advantages of Omeka is that its graphical interface makes it easy to add files to your digital library. After you have logged in as a site administrator to the Omeka software using an internet browser of your choice, you will see a button to "add an item to your archive." Click this and you will see a screen asking for information about the file you want to add. At this screen, you can supply add information on the file's title, subject, description, creator, source, publisher, date, contributor, rights, relation, format, language, type, and more. Detailed information about what type of information to put in each of these fields is located beneath the data entry boxes.

We also recommend that you and your group develop a "metadata book" containing detailed instructions about how to add information, or metadata, about the files for each item in the digital library. This "metadata book" could include such information as what fields (such as title and date) are required, which optional (such as rights), and what are the different terms that can be used as subjects. You could also include instructions for how to structure different fields. For example, you could decide that each date should be structured Day, Month, Year, or alternatively Month, Day, Year. Making these decisions early in the project will help make it easier for volunteers to contribute to the project at a later date.

If you have a working knowledge of html you could also click the "use html" box for any metadata field and add html code into the box. This step can be especially useful if you want one of the fields to display things more complicated than plain text -- such as tables, hyperlinks, images, or other structured information. As always, if you get stuck in your use of Omeka the first place to turn is the highly supportive user forums on the Omeka website: http://omeka.org/forums/.

In addition to the main metadata screen, there are also tabs on the left side of the screen that allow you to create more detailed description for items in the digital library. For example you can specify the item type: Is it a document? An oral history? A yearbook? The number and names of item types will depend on your project and can be edited in the "Settings" section of the administrative interface.

You can also specify if this particular item is part of a larger collection. The number of collections, and their descriptions, are also edited in the "Settings" section of the administrative interface. For example, you may want to create a collection for all the items from a particular, physical collection. Or you may want to create collections for all the issues of a particular newspaper. These decisions will depend on your particular project, and community needs.

Finally, you need to attach a file, or files, to the description you have created. You do this by clicking the "Files" tab on the left side of the page. One item in your digital library may have multiple files. In any case, there are two ways to add files to your library. You can either upload the files directly by using the upload tool in the "Files" tab, or you can download and install the Dropbox plugin (http://omeka.org/codex/Plugins/Dropbox/). If you use the Dropbox all the files in the Dropbox will automatically display as items available to be added to the library. Just click the box next to the file you want to

add and it will become associated with the metadata you have just created.

At any point during this process you can click "Add item" to save your changes. However, simply adding an item does not make that item instantly accessible online. To make the item public you need to click the “public” box at the top of the page and then save your changes at the bottom of the page. At this point the item will be part of the public digital library, and we recommend previewing the item in the public interface to make sure it is displaying the way you wanted it to.

It is also highly advisable to spend some time learning about how Omeka takes the information you enter and presents it online to the general public before diving into your digital project. The more you know about the software and its structure, the better you will be able to use it to maximize the accessibility of the information you collect.

In addition to these steps, you can take additional steps to make the items in your digital library accessible through the use of plugins. These options will be explored in Section 7e.

7b) Metadata standards

The metadata standards you wish your project to adhere to will depend on the types of file formats your library holds, the types and amounts of information you plan to make available online, and other factors. For example if your project will host a large amount of video, with only a small number of texts, you may wish to tailor your metadata standards to video, such as by requiring that one of the metadata fields lists the length of the videos featured on the site and the individuals featured in the video. In contrast, if you are primarily hosting digital books you may want to list the number of pages in each book.

There are ideal metadata standards and then there are real world metadata practices in communities. As you develop the project in the community you will have to juggle tradeoffs between strict metadata standards and just enough information to keep the project moving, dynamic and easily updated by community individuals. There may be more you would like to do than you have time to do -- but even if you are only able to provide minimal descriptive information about the files in your digital library you can at least develop protocols and procedures in your metadata guidelines for the ideal case. It is possible that energetic volunteers may at a later date fill in the missing gaps in the project's metadata. You may want to structure your metadata guidelines to differentiate between recommended and required fields to emphasize this distinction. Remember that either you or other members of the community can always go back and add additional information on an item at a later date.

7c) Allowing the general public, or specific individuals, to add to the library

You may also wish to allow the general public, or specific individuals in the community who have been trained, to add to the library. To allow the general public to add to the digital library you can enable the Contribution plugin (http://omeka.org/codexiPlugins/Contribution), which allows anyone who visits the site to add to the site. After downloading the plugin you will want to customize it for your project. Anyone can then use this plugin to add to the digital library. User contributions will initially only be accessible to website administrators, who can chose to make the submissions publicly accessible, or not (for the cases of spam submissions). You may also wish to enable the IntenseDebates plugin, http://omeka.org/codex/Plugins/IntenseDebateComments, which allows visitors to the site to comment on any item in the digital library, which can also enhance accessibility.

Instead of allowing everyone to add to the library you may instead want to only allow particular individuals to add to the library. After logging in as an administrator you can create user accounts that allow specific, trusted individuals to also log-in to the administrative mode of the site to make changes to the digital library. By creating user accounts for specific individuals you can recruit, train and monitor volunteers who sign up to help make the community-based digitization project a success.

7d) Adding files to Omeka - the eBlackCU methodology

This section describes the particular steps used to add complete, digital yearbooks to the eBlackCU digital library. It is offered as an an example of one work-flow to add digital content to community portals. We recommend reading this methodology and then adapting it to local needs. The steps outlined in this section of the manual can be visually seen at: http://www.youtube.com/watch?v=qU2NWs4J6BQ.

After you have installed Omeka on a server, you can upload all the files you want to go on your website using a free FTP editor such as Filezilla. Using the Omeka Dropbox plugin, you can place all the files you want to go into your digital library into a single online directory.

After you have uploaded all the files to your server, log-in to the administrative mode of Omeka and add a new item to your digital library for each yearbook. Then add basic information about the yearbook, such as date and title. Next, click the "Files" tab on the left-side of the screen and you will see a long-list of all the files you uploaded to the server in the previous step. Check the boxes for the files you want to associate with this item. Be aware that after you have added files to an item in Omeka there is no easy way to re-sort these files without advanced editing at the level of code. When you add yearbook JPEGs to a yearbook item make sure to upload the pages sequentially. In other words, upload pages in numerical order so that the pages are not all jumbled together on the website.

In addition to uploading the yearbook pages, you can also upload the complete yearbook pdf file. In the eBlackCU project we uploaded both the large, uncompressed pdf file, which we made full-text searchable, as well as a low-resolution, compressed pdf file, split into sections no larger than 5 megabytes each. Having these low-resolution pdf files online enables community members to browse a yearbook page-by-page using the DocsViewer Omeka plugin.

If you are hosting yearbooks you will have to decide if you want to make a single item for an entire yearbook, or if you would rather make individual items for every page of the yearbook to enhance access to the yearbook. The first option would be quicker and easier. The latter option would be more time-intensive. One of the benefits of digital technology is the ability to disaggregate large files into smaller units to enhance access to the constituent parts of a larger work.

Many of the plugins that have been developed by Omeka's user community have been created to enhance access to items in Omeka digital libraries. This section focuses on three plugins, Tags, Geolocation and Timeline, that can be used to enhance access. Many more tools may be developed in the future. We recommend regularly consulting Omeka's plugins to see what is available.

7e) Making the library more accessible through plugins

Many of the plugins that have been developed by Omeka's user community have been created to enhance access to items in Omeka digital libraries. This section focuses on three plugins, Tags, Geolocation and Timeline, that can be used to enhance access. Many more tools may be developed in the future. We recommend regularly consulting Omeka's plugins to see what is available.

7e-1) Tags

According to wikipedia, a tag is a keyword or term assigned to a piece of information. In other words, a tag is any word that an individual thinks could help facilitate finding and accessing some piece of information. Tags are used extensively for things like Flick.r, twitter and other social network based digital libraries. For your community-based digital library you can allow users to browse items in the library by tags. Tags can either be attached to files by administrators or by authorized users. To provide some structure to tagging eBlackCU we have developed a tag library that facilitates structured access and browsing of the eBlackCU digital library. Involving your community in tagging the digital library project would be a great way to make the digital library a participatory endeavor. Unfortunately, the Omeka software currently allows tagging by users who have been granted password-protected access to the digital library. Hopefully in the future Omeka will develop the capacity to allow tagging of items in libraries by the general public without requiring any log-in.

7e-2) Geolocation

More and more people access information through geography or through geographical information, such as in Google Maps. The Geolocation plugin allows users to associate an item in the library with a particular place, and then allows visitors to search or browse information by geographical location. The Geolocation tool uses Google Maps as the driving engine to make this possible. After the Geolocation plugin has been installed the administrator, or authorized user, can associate one place with any item in the digital library. The administrator can then make a map of all, or some selected sub-section, of the items in the library publicly accessible on a browsable map embedded on the webiste.

7e-3) Timeline

The Timeline plugin allows administrators to create interactive, online timelines out of multiple items in a digital library using the SIMILIE timeline software developed at the Massachusetts Institute of Technology (MIT). After the Timeline plugin has been installed the administrator has to add the chosen items into the timeline. Successfully using this tool does require some degree of familiarity with php and html. Furthermore, this tool will not work correctly if you have not provided consistently structured dates in the "date" metadata field, so you may have to go back and edit your metadata to get the plugin to work correctly.

7e-4) Digital Exhibits

The Exhibit Builder allows you and authorized users to create digital exhibits out of items in the digital library. With this tool you can create stand-alone web sites that contain narratives and images drawn from the digital library. You can think of these digital exhibits as similar to the exhibits museums use to create narratives and stories out of items in their collections. You could also think of these digital exhibits as similar to pamphlets or books on local history you may have encountered in your community. You could even think of digital exhibits as similar to commemorative programs to celebrate church anniversaries or family reunions. The community's imagination will allow you to create digital exhibits that meet community needs.

The digital exhibit tool allows you to create exhibits using a graphical interface and pre-installed themes. However, for more complex digital exhibits you may need to dig into the underlying php and html codes to make the exhibits perform how you wish. Furthermore, you may need to dis aggregate items to create a digital exhibit. For example, say you want your digital exhibit to feature a photograph that is part of a 100-page book in the digital library. To feature this photograph you will have to separate the digital photograph out from the digital book by using Adobe Acrobat Pro and GIMP, add the resulting digital image to the digital library as a separate file, and then associate the new item with your exhibit. This example hints at the multiple ways that digital files can be pulled apart, combined and mixed together to create new and interesting forms of information impossible or nearly impossible without using digital technology.

Additional Resources and best practice models:

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Holley, Rose. "Crowdsourcing: How and why should libraries do it?", In *D-Lib Magazine.* Corporation For National Research Initiative (CNRI). 2010. http://eprints.rclis.org/handleIl0760/14360.

Johan Oomen and Lora Aroyo. "Crowdsourcing in the Cultural Heritage Domain: Opportunities and Challenges" http://www.cs.vu.nl/~mariekeIOomenAroyoCT2011.pdf.

Wright, G. "FamilySearch and Personal Archiving" 16 February 2010. http://www.personalarchiving.com/wp-content/uploads/2010/02/FamilySearch-Wright.pdf.

Eschenfelder, K.R., Caswell, M. "Digital Cultural Collections in an Age of Reuse and Remixes." *First Monday,* 15 (11) 2010. www.uic.edu/htbin/cgiwrap/bin/ojs/index.php/fm/rt/printerFriendly/3060/2640.

Mason, R. and Frank Rennie. "Using Web 2.0 for learning in the community" *The Internet and Higher Education*. 10, 3. 2007. http://www.sciencedirect.com/science/article/pii/S1096751607000383.

8) Utilizing the library: In Communities

Learning Outcomes for Chapter 8

- Understand how you can use the community-based digital project in actual community life
- Understand how to network the digital project with existing community memory events and institutions

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This chapter moves from the virtual to the actual, suggesting some ways that the digital project can be used in actual communities for diverse purposes.

As mentioned at the beginning of this manual, communities remember the past in many different ways. Two particular settings that involve people remembering together are memory workshops and historical event celebrations and commemorations. The difference between these two types of settings is that memory workshops imply a more active role for event participants in actively creating memory and representations of the past, while historical event celebrations and commemorations are more focused on receiving and celebrating pre-composed historical narratives in a public, community setting.

In both cases, these public, community forums offer opportunities to make the digital library active in the community's consciousness. The particular forms in which the digital library can play a role in these types of events will depend on your community's interests, desires and needs. An additional benefit of embedding digital technology in community memory events is you have an opportunity to enhance your community's technological capacity and imagination.

8a) Memory workshops and Historical event celebrations/commemorations

Here are a few examples of what types of events may be possible in your community. Please e-mail us with additional suggestions of what has worked for you.

8a-1) Photograph identification and digitization workshops

In this type of event community members are invited to bring in their photographs to be digitized and to provide description and memories both of their own photographs and of other photographs also made available in the digital project. The event could be themed around a particular topic, such as the history of a church, or general family history. The advantages of doing this type of work as a public event is that people can then learn new technologies and share memories together with others in the community. Participants at this type of event can both acquire and share technical skills and acquire and share knowledge of the community's past.

8a-2) Oral History workshop

For older individuals of the community who may have a lot of difficulties manipulating new technologies it may be more desirable to hold an oral history workshop in which participants can verbally share their recollections of the community's past while other community members record their stories, digitize their records, and add them to the digital library. The technical skills to be acquired in this workshop are skills in video editing and video creation among those who are recording the workshop.

Oral history workshops can record one individual at a time or have a more focus group orientation. Group oral history workshops are known as either memory workshops or reminiscence groups, and are becoming increasingly common in both the United States and Europe. Evidence suggests they have therapeutic benefits for older adults, and that people remember differently when in a group than when interviewed individually, providing another take on a community's past.

8a-3) Genealogy workshops

Recent research suggests that more than a quarter of Americans have gone online to research their family history. A genealogy workshop could both focus on helping people find ways to use your digital library to support and contextualize their family history research and assist them make their research available online through the community-based digital library. This type of event could be held in conjunction with a local genealogical society, if one exists in your community.

8b) Supporting community anniversaries and special events

We know that all communities have special events that are focused on community memory, whether they are church anniversaries, family reunions, community reunions, or other types of events. However, we do not yet know how what impacts digital technologies are and will have on these ubiquitous community events. Anecdotal evidence suggests communities are using tools like Facebook and e-mail to share pictures prior to, during and following these events.

We encourage you to experiment with ways of embedding your digital library project into these community events. Some things that could be tried include: a) setting up computers and video camcorders where people can access information from your library selected for the occasion, and also add their own multimedia memories; b) creating power-points or videos that draw on the digital library, focusing on a particular aspect of a community's history; c) using Skype or other tools to bring into community events those individuals who otherwise could not attend, for whatever reasons.

Another option to try is to embed the digital library into the actual landscape of a place. Public access terminals could be set up in highly frequented community places that feature the digital library, as well as other digital community content. Flat, touch-screen monitors of the library could be set up in easily accessible public, community places. Such an endeavor would require the full financial and operational support of whatever community institution in which you would like to set up such a permanent terminal. This embedded interactive digital terminal could be seen as the digital version of the roadside and sidewalk historical markers one sees in many places already aound the world.

We encourage you to try new things, to be creative, and to let us know how your experiments worked so that we can add your experience and wisdom to this manual.

8c) Sharing through social network tools

Finally, another way to make the library more accessible, and more known, is to seek to embed portions of the digital project into social networking tools currently used by the community. For example, if you notice that many groups and individuals are using Facebook to communicate it would be smart to upload portions of the library to Facebook so that people can interact with and share memories about the information in that environment. If you discover that many people in the community are using community listserves or e-mail mailing lists, you could try to embed pictures from the library into that listserve. For example, you could have a daily or weekly e-mail message featuring a "this day in history" event summary, or featuring a new photograph in the library, along with a request that people send you their knowledge of who and what is in the picture.

We also know that many people turn to wikipedia for knowledge of different topics. You could add to wikipedia pages some of the historical knowledge embedded in the digital library. Alternatively, or in addition, you could ask that individuals in the community volunteer to create essays on local historical topics. You could then append to these essays photographs from the library, and add the resulting information as new or updated wikipedia pages. If wikipedia pages already exist about your community, you can enhance, correct, or augment these pages using information from the library.

It is almost certain that new social networking tools will emerge in the upcoming 10, 20 and 100 years. We advocate forward thinking in how you could use your library in these new and to be created virtual environments. It is also important to think about how the project could network with all members of the community, so that they have access to and comfort using these virtual environments for their own purposes.

Additional Resources and best practice models:

Klaebe, H., et.al. (2007) "Digital Storytelling and History Lines: Community Engagement in a Master-Planned Development" In: Proceedings 13th International Conference on Virtual Systems and Multimedia (VSMM'07), Brisbane. http://eprints.qut.edu.au/8985/.

Giaccardi, E. and Palen, L. The Social Production of Heritage Through Cross-Media Interaction: Making Place for Place-Making. International Journal of Heritage Studies. 14:3, May 2008, pp. 282-298.
Giaccardi, E. Cross-Media Interaction for the Virtual Museum: Recolllecting to Natural Heritage in Boulder, Colorado. In Y Kalay, T. Kvan and J. Affleck (eds), *New Heritage: New Media and Cultural Heritage*. London: Routledge, 2007, pp. 112-131 .

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9) Utilizing the library: For Scholarship

Learning Outcomes for Chapter 9

- Understand some of the scholarly concerns in your discipline and how the community-based digital project could network with and address some of these concerns
- Understand how to speak to different audiences with different literary conventions

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The purpose of utilizing community-based digital projects in scholarship is to sum up from your particular case the lessons learned and to generate from this case new knowledge that could be transferred and built upon in other cases in other communities, for a wide variety of purposes. Your project could be utilized for scholarship in three main ways:

1) You could write on the process of building the library itself, analyzing the project for the lessons it holds for people in universities, libraries, museums schools, archives, historical societies, community groups, and in other settings doing similar work;
2) You could analyze the content of the library itself for the lessons it holds on the historical evolution of the community; and
3) You could write on the theoretical ramifications of using digital technology in community remembering.

Regardless of which type of analysis you pursue, this chapter provides some general guidance on how to proceed.

9a) Spreadsheets and coding

The ability to move from a large amount of information in disparate formats, which may include everything from newspaper clippings to oral histories to notes scribbled on napkins, requires abstracting the information out of its original format and into codes that can be subsequently analyzed. For example, in reading through meeting minutes you may want to code for every mention of the words "memory," "technology" or "community" and then analyze how these terms are framed in the community by different audiences.

There are two main ways to analyze information for scholarship: qualitative and quantitative. We recommend seeking to use both methods. In quantitative research the goal is to abstract out of the information codes and numerical data that can be analyzed and summed up using statistics, visualization and other mathematically-based tools. The easiest way to use quantitative tools for your project will be to analyze:

a) The numbers of visitors to the community digital library
b) The numbers of visitors to community forums and memory workshops.

Ideally, you will not simply give a number of who came, but in some way correlate that number to other information you may have available -- for example correlating the number of visitors to the digital website in relation to other events happening in the community. Quantitative analysis can be very rich, and we recommend seeking to use these tools whenever possible.

Some forms of analysis, however, are best accomplished without using quantitative methodologies. The use of narratives without numbers is called qualitative analysis. At this point, especially, theory becomes essential. Without theory it is almost impossible to code what you have collected since theory informs the questions you will be asking and the assumptions you will be making to shape the raw data into meaningful information and knowledge. We recommend sifting through the data and discussing what you have collected with others in your discipline, as well as others in the community, to either use a pre-developed code-sheet or

develop a new coding system for the data. If pre-developed codes do not exist for the data you have amassed you should view this as an opportunity to not just develop codes for your own data but also to develop tools that could be used in other contexts so as to move from one-off case studies to case studies comparable across time and space.

Moving from raw data to coded data and spreadsheets will also enable you to move from data that your community informants may have given you in confidence to information that, because stripped of its personally identifiable context, can be shared with all.

9b) Feeding research products back into the community, into memory institutions and into scholarly communications

If you are undertaking a community-based digitization project as part of a scholarly endeavor, it is important to remind yourself that you are not engaging in the community just for the sake of engagement, rather you have a particular role to play as a community-based researcher and that role requires finding ways to gather what you have learned, and then to use theories and methods that help transform the information you have collected into impactful research findings. These findings should be reported to:

1) The community;
2) The institution you represent; and
3) The scholarly discipline you represent.

For example, if you represent a university you will want to communicate your findings to the community you are working in, to the university, and to the discipline out of which your work emerged. For another example, if you represent a public library you will want to communicate with the community your library serves, with the central leadership of the library, and with the public library profession through journals such as *Public Library Quarterly* or American Library Association newsletters or conferences. In either case the focus should be on communicating with leadership, or finding ways to get your findings in front of people who will be in a position to make change and act on your findings.

In the eBlackCU project we have attempted, with varying degrees of success, to create report-back mechanisms to the community and to the university through regular large, public meetings. We have also made the videos of these meetings available online. The project website's analytics suggests these videos have been seen by hundreds of people both near and far. Our next step is to communicate and contextualize our findings within the disciplines we represent, especially public librarianship, community informatics and public history through journal articles, while continuing to find ways to feed our research back into the local community and into the local university.

An important note on research that makes an impact: Differing contexts may have differing benchmarks for what will be accepted as meaningful. In other words, be alert to the importance of hierarchy and structure in the community you work with (the same is broadly true for mainstream institutions and disciplinary bodies as well) and attempt to respectfully use this hierarchical structures to disseminate research findings. One example of how this could be done: at our March 2011 mass mobilization meeting we asked a community leader who we had worked with for the past year to read a manifesto on community technology that we had created. The theory was that by having the words come out of her mouth they would have more impact than if they came out of our mouths since she had an infinitely more established and respected role in the community hierarchy. Be aware of your position and your voice in the communication of research finding.

9c) Research Data preservation and long-term access

In addition to coding what you have collected you also need to take steps to ensure the preservation of both the raw research data files collected and amassed, as well as any other resultant, mediated information, and the codes used to move from one to the other. The tools to preserve research data on social phenomenon are roughly the same as the tools used to preserve public records on community history and culture. For example, all your research data could be ingested into your digital library using the steps described in Chapter 7.

However, rather than make this information public you could instead maintain the privacy of the information by simply not clicking the "Make Public" button when adding the research data into the library. This way you, and trusted researchers, can access the data using the password-protected interface, but no one else can.

Additional Resources and best practice models:

Skokie Public Library's presentation at the Illinois Library Conference on hyperlocal librarianship. http://www.ila.org/conference2010/WednesdayI12Wl.pdf.

British Qualitative Archiving and Data Sharing Scheme at University of Essex, http://quads.esds.ac.uk/.

University of Michigan's Inter-University Consortium for Political and Social Research (ICPSR), http://www.icpsr.umich.edu/icpsrweb/ICPSR/.

Alkalimat, Abdul 2004. Social Cyberpower in the Everyday Life of an African-American Community: A Report on Action-Reserach in Toledo, Ohio. University of Toledo. http://uac.utoledo.edu/Publications/cyberorganizing.pdf.

10) Conclusions

10a) Institutionalization

We begin this conclusion by reminding you of that the goal of any community-based digitization project should be community-ownership and institutionalization in the community. Institutionalization is not something that can be scripted in advance, but will require multiple false starts based on the stability and interests of the community. Nonetheless, it is critical to remember the importance of taking concrete steps to institutionalize your project in some way into the structure of your community for long-term preservation in the community. If you have found a way to reach this goal, please e-mail us.

10b) Networking

We believe institutionalization is only possible through networking. According to some researchers we are living in a Network Society. As such, institutionalization requires embedding the digitization project into the networks that sustain your local community. This step could involve getting your project networked into technology companies, local libraries, museums, archives, universities, colleges, and/or media outlets. It could also involve networking your project deeply into civil society's organizational structure of religious institutions, schools, and community organizations. Finally, it may require networking your project into the governmental apparatus of your community to guarantee state subsidization in the future. It may require that all these paths be pursued simultaneously. Regardless, the better networked your project is in the community, the better chance the project has of enduring into the future.

10c) Endurance, Perseverance and a Sense of Fun

Finally, remember that a digital community memory project will require a great deal of endurance and perseverance to become successful. Building a digitization portal for your project, and building your project into the community's networks, will take time and energy. However, it should also be fun and fulfilling to see a community's past revitalized and recovered with digital technology. Find small victories and successes and use them to bolster yourself and to bolster your project. Record them and don't be shy about sharing these successes. It is through endurance that community memory is built and sustained.