

Building a New Generation of Online Public History Resources: Promise and Problems Identified in the Development of the Abraham Lincoln Historical Digitization Project.

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The rise of digital technology and the World Wide Web provides historians with a new opportunity to reach a public audience. Edward L. Ayers, a pioneer in developing historically oriented online resources, has argued that the provision of large amounts of primary source materials, combined with the databases and markup schemes that allow users to search and explore them, can create a "democratization of audience" in which historians "create capacious spaces in which users make connections and discoveries for themselves".¹ Despite Ayers' observations, this promise has remained largely unfulfilled. Digital library developers in universities and research libraries remain primarily concerned with reaching scholarly and educational audiences. Many institutions devoting themselves to bringing historical materials to the public have produced Web sites introducing and promoting their facilities, as well as online exhibits presenting and discussing small sets of resources from their collections. But neither group has used digital libraries' scope and tools, including database technologies, sophisticated markup schemes, and multiple media types, to enable members of the general public to make connections and discoveries for themselves in a large corpus of primary source materials.²

The Abraham Lincoln Historical Digitization Project's **Lincoln/Net** Web site (<http://lincoln.lib.niu.edu>) represents an example of a new generation of historically oriented online resources using digital library technology to provide its users with a capacious space in which they may explore a wide range of materials, making connections and discoveries for themselves. Where many digital libraries present large amounts of materials that may not be tied together by a common historical period or theme, **Lincoln/Net** contains a set of resources selected in order to illustrate how Abraham Lincoln's experiences before the presidency illuminate antebellum America more broadly. Based at Northern Illinois University, the site features Lincoln's writings and speeches from this period, as well as materials, drawn from a number of collaborating university libraries, museums, and archives in the state of Illinois, which document aspects of his historical context. In addition to texts, **Lincoln/Net** features large collections of image, sound, and video resources, as well as interactive maps constructed with Geographic Information Systems technology.

The site also provides its users with original interpretive resources, including essays and digital video files in which historians discuss their research and conclusions. These resources, organized as discussions of Lincoln's own experience and eight major themes that scholars have used to analyze his context in antebellum America, help site users initially unfamiliar with the literature of American history to use **Lincoln/Net's** databases and

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other tools to understand, explore, and examine its primary source materials. Placing Abraham Lincoln's celebrated experiences at the fore (and featuring attractive multimedia resources), the project's developers seek to attract a broader, more general audience than that which has used most online digital libraries, or would use online public history matter openly dedicated to the exploration and discussion of major themes in antebellum American experience. **Lincoln/Net** seeks to draw users originally attracted by Lincoln's historical celebrity in to explore both primary sources from, and historians' discussions of, his antebellum milieu. Much like K-12 educators have celebrated the provision of online primary source materials as an opportunity to promote "active learning" among students, **Lincoln/Net's** searchable databases seek to provide a broader public audience with an opportunity to take part in this interactive process. In this regard it can perhaps serve as a model for the development of future online public history resources utilizing digital library technology.

Although **Lincoln/Net** has proved popular, attracting over three thousand unique users every day, individuals and institutions interested in developing this type of online resource must also realize that several important dilemmas and challenges make their wide-spread emergence uncertain. A number of public historians might regard the large-scale presentation of primary source materials on the Web with considerable ambivalence. Might some members of the public mistake readily available online primary source materials for the entire historical record? How are these online resources to be integrated with more traditional public history activities and materials? In addition, the development of online public history resources featuring searchable databases, multiple media types, and original interpretive materials calls for contributions by a wide variety of professionals and very significant amounts of money. Large-scale digital library projects alone require hundreds of thousands of dollars to support the activities of a wide variety of contributing experts, and the provision of additional multimedia and interpretive materials only adds to this cost.

In this regard large universities, with their considerable financial, bureaucratic, and professional resources, emerge as likely platforms for the development of a new generation of online public history resources. But academic historians' and university administrators' prevailing assumptions about the primacy of original research and suspicions about digital materials, especially as reflected in tenure and promotion policies, make this development unlikely. Many public historians employed by museums, historical societies, historic sites, archives, and historically oriented state, local, and federal agencies, who face no such bureaucratic obstacles, instead confront a decided lack of the institutional resources found in large universities. The Abraham Lincoln Historical Digitization Project (hereafter Lincoln Project) suggests two ways to address this difficult situation. First, historians working in traditionally public-oriented institutions like museums can form collaborative relationships with universities in hopes of developing new public history resources. Second, those historians employed in large institutions of higher learning, but outside their research and teaching oriented history departments, including archivists, museum curators, and library staff,

can take leading roles in the development of new types of online public history materials. Working within universities, these individuals can assemble the teams of expert professionals necessary to find financial support and produce online public history materials featuring digital library technology and multimedia resources.

The Lincoln Project can also offer a few potential strategies for adding interpretive materials to digital library projects and integrating the development of online materials with more traditional public history activities. Planning ahead to conceive a set of projects and activities around a common theme, collaborators can envision online digital libraries as archives for a set of complementary programs and experiences, including films, exhibits, and lectures. This approach allows project developers to find multiple uses for digital materials and appeal to multiple audiences. For example, collaborators can film (and make transcripts of) scholars' public lectures to create interpretive resources to be streamed from World Wide Web sites. Project developers can also work with documentary film makers, using the interview footage that they shoot to provide interpretive video for Web use. High-resolution images produced for exhibits or other programs can be re-used in World Wide Web sites, and *vice versa*. Ultimately, the project World Wide Web site grows as it comes to represent an archive of in-person project activities.

The **Lincoln/Net** site suggests that the development of online materials using digital libraries' searchable databases and multimedia technology represents a major opportunity for historians, public and academic, to expand their audience and their approach to it. A Web site, simply by virtue of the fact that it is available to all individuals using Internet-networked computers, anywhere in the world, represents a huge expansion in potential users over in-person exhibits and programs. Where most public history exhibits, in-person and online, enable visitors to examine and consider a number of selected objects and other materials in a prescribed order, digital library technology provides its users with an opportunity to explore and interpret a larger variety of resources in a more proactive, self-directed fashion. Despite the myriad challenges and dilemmas seemingly confronting projects like this, the new generation of online public history materials' great promise obliges historians to devise ways of building such new resources.

The Abraham Lincoln Historical Digitization Project: Origins, Goals, Strategies

The Abraham Lincoln Historical Digitization Project began in 1998 as a partnership in which a number of Illinois institutions, including museums, archives, and research and academic libraries, sought to share their historical materials with the public. With the advent of the Internet and World Wide Web, representatives of these institutions, including the Chicago Historical Society (now the Chicago History Museum), the University of Chicago Library, the Newberry Library, Northern Illinois University Libraries, Illinois State University Libraries, and the University of Illinois Libraries met in the forum provided by a statewide library consortium to discuss potential ways in which they might employ the new technologies to produce an online digital library

bringing together materials from each of their collections in searchable databases. Comparing notes, the project's original planners quickly discovered that each institution held significant materials pertaining to Illinois' favorite son Abraham Lincoln. While the Library of Congress and National Archives contain large amounts of Lincoln's presidential materials, resources from his life before the presidency remain scattered throughout the collections of individual libraries, museums, archives, and private individuals. Among these many collectors, Illinois institutions boasted some of the largest and most coherent sets of pre-presidential Lincoln resources. Presented in a single Web site, these materials could prove valuable to a number of audiences. The project's original planners decided to focus their efforts on Lincoln-oriented resources.

Several unusual events marked the project's early development, and provided the individuals hired to build it with an opportunity to fashion a new type of online digital library. First, the projects' original planners proved remarkably successful in arranging for its financial support, securing considerable funding from federal and state granting agencies before beginning work. Second, a project conceived by librarians hired a historian to manage its work. Third, the project unexpectedly found itself located at a different institutional member of the consortium than many of its planners had imagined. This left the new project director to his own devices, supported by a Library Director trained as a historian and teaching in Northern Illinois University's Department of History. In these circumstances a project originally conceived, and generously funded, as a digital library project took on a new dimension devoted to bringing historical materials to a public audience.

Staff members hired to develop the project soon came to realize that many of the Lincoln materials in question in fact made up small parts of larger collections illuminating major themes in Illinois and American history in the antebellum period.

Drawing on other materials within these collections, they built an example of what the digital historian William G. Thomas, III has described as an "intentional archive... (in which) a scholar or a team of scholars guide the form, presentation, assembly, and editing of the collection, usually to address a major problem in the historiographical literature."³ In this case, Lincoln Project staff members carefully assembled materials not to address an issue in the scholarly literature; rather, they built **Lincoln/Net** to enable a public audience to use Lincoln's experiences before the presidency to illuminate and examine his historical context. This approach reflected a larger strategy of using our sixteenth president's iconic stature in American historical memory to attract a sizeable audience, then using original interpretive materials and multiple media types to entice them in to the process of learning about an historical period in which he lived. During the 1860 presidential campaign, Republican Party managers dubbed Lincoln, as yet largely unknown outside of his native Northwest, a "rail splitter," a "representative man" who had lived a life very similar to many of his countrymen. Likewise, Abraham Lincoln serves as a lens through which today's World Wide Web users may explore

and interpret the past, and thus provides the **Lincoln/Net** site with an interpretive framework.

Lincoln/Net presents its users with a set of resources including over thirty million words of searchable text materials, over three thousand images and over one hundred sound recordings searchable by metadata contained in file headers, and interactive maps. Text materials feature Lincoln's letters, speeches, and other works from his Illinois years (1830-1861). But they also include a wide variety of other primary source materials illuminating his context, such as frontier women's diaries, Native American reminiscences, and song books.

In addition to producing page images and searchable text files of song books' contents, **Lincoln/Net** features sound recordings of a significant number of songs presented in these publications as well. Antebellum Americans clearly did not enjoy the use of sound recording technology, but project staff members, working with student singers and musicians from Northern Illinois University's College of Visual and Performing Arts, have used collected song books and sheet music to record original performances of selected songs. These sound files are available in RealAudio format on the project Web site. They present individuals who find musical materials particularly compelling and instructive with a rich resource. As educational researchers influenced by the cognitive psychologist Howard Gardner have argued, audio materials represent an outstanding opportunity to bring first-hand accounts and descriptions of antebellum life to a broader public audience than might make use of text-only resources.

Lincoln/Net uses sound materials especially to acquaint a general audience with antebellum political life. Political song books first found wide usage in the Whig Party's (in)famous 1840 "Tippecanoe and Tyler Too" campaign on behalf of William Henry Harrison and remained significant resources in subsequent electoral efforts, including Lincoln's 1860 Republican bid for the presidency. Publications like *Log Cabin and Hard Cider Melodies* and *The Wide Awake Vocalist, or Railsplitter's Song Book* set the Harrison and Lincoln campaigns' main themes, or what today political handlers might call "talking points," to music. While Whig, and later Republican, speeches and campaign literature expounded upon these points at great length, political songsmiths found themselves obliged to make their points in a concise manner. They even had to rhyme. If traditional political history resources, like speeches and pamphlets, represent ideal raw materials for scholars intent upon representing complexity and nuance, song books boil antebellum politics down to a more readily accessible form. Their brash, often clever lyrics can serve scholars as well but, most importantly, their format beckons to a general audience.

Lincoln/Net also features dynamic historical maps generated by Geographic Information Systems (GIS) technology. GIS maps provide project users with an opportunity to explore a type of historical resource often overlooked by public audiences: statistical data gathered by censuses and election officials. Most members of the general public blanch at the mention of

historical statistics presented in tabular format. GIS technology provides an opportunity to represent these statistics' meaning in an attractive, more readily accessible manner. At the same time that librarians and humanities scholars developed online digital libraries filled with searchable databases of texts, images, sound files, and video files, geographers and their collaborators among systems analysts and computer programmers developed Geographic Information Systems. GIS manages and displays map information in a database environment that enables its users to submit queries, which in turn instruct the software to create maps depicting only the types, or "layers," of information that the user has requested. For example, a GIS user may request a map of a region representing its railroad network, on a specific date, alone, without the clutter created by other types of information. That user might also ask GIS technology to render a map depicting the railroad network as well as results from the United States Census for a particular year, rendered to represent population density by county, for example. This map might facilitate preliminary research on the relationship between railroad development and economic development. Until the late 1990s the state of GIS technology restricted its use largely to professional geographers, university professors and their students, and employees of well-funded business concerns and government agencies. But by the late 1990s vendors had adapted their technology for ready use on the Web. This development places Geographic Information Systems' considerable analytical power within the reach of a much larger audience, including, potentially, the users of online digital libraries.⁴

Lincoln/Net frames these several types and representations of primary source materials for a public audience with a set of interpretive resources. A set of original, signed essays include an account of Lincoln's activities before the presidency, arranged in eight brief chapters, as well as discussions of eight major themes that historians have developed in their discussions of the antebellum period: Economic Development and Labor; Frontier Settlement; Native American Relations; Law and Society; Political Development; African-Americans and White Americans' Racial Attitudes; Religion and Culture; and Women's Experience and Gender Roles. Project users may also view multimedia slide-show presentations in which period images accompany a reading of each essay. The site provides its users with over one hundred video files, streamed in Real format, of historians discussing their interpretations of Lincoln's life and context as well. Like essay materials, these resources are identified and organized as discussions considering specific aspects of the project's eight themes. **Lincoln/Net's** interpretive materials provide non-specialist users with an account of the major debates and questions that informed antebellum Americans in the creation of resources that today serve as primary source materials.

In addition to providing **Lincoln/Net's** non-specialist users with an intellectual framework for exploring and interpreting the site's collected historical materials, the project's chosen themes also informed staff members' selection and organization of primary source materials. Amidst the large volume of primary resources that might conceivably illuminate Abraham Lincoln's context in antebellum America, the project director especially sought

out materials that most vividly illustrated eight realms of events and interpretation that emerge most clearly in Abraham Lincoln's experience. Upon loading these materials into **Lincoln/Net's** databases, project staff members used fields within each item's header to identify it as belonging to a set of materials pertaining to each of the eight themes. Project users may then search each group individually, providing a more focused set of results. Most materials shed light on a number of themes, and thus belong to several of these groupings. Nevertheless, the site's thematic organization of primary source materials furnishes users seeking materials related to particular themes with a helpful analytical tool.⁵

The **Lincoln/Net** site introduces users to its approach through a brief notice on its front page: "**Lincoln/Net** presents historical materials from Abraham Lincoln's Illinois years (1830-1861), including Lincoln's writings and speeches, as well as other materials illuminating antebellum Illinois." Users clicking through to the next page receive a more comprehensive orientation:

In 1861 Abraham Lincoln (1809-1865) became the United States' sixteenth president. But before Lincoln became the nation's chief executive, he led a fascinating life that sheds considerable light upon significant themes in American history. This World Wide Web site presents materials from Lincoln's Illinois years (1830-1861), supplemented by resources from Illinois' early years of statehood (1818-1829). Thus **Lincoln/Net** provides a record of Lincoln's career, but it also uses his experiences as a lens through which users might explore and analyze his social and political context.

This page also provides a brief discussion of "How to Use **Lincoln/Net**," explaining the variety of materials available on the site and how users may explore them. Beneath this introductory information, project users may find a set of links to sets of most frequently used information, including "Search Lincoln's Writings," "Browse Lincoln's Writings," "Browse Entire Collection," and "Fast Facts About Lincoln."

Lincoln/Net provides its users with access to its primary and interpretive materials with two toolbars, arranged perpendicular to one another, at the top and left sides of each project page, including that discussed immediately above. The top toolbar provides clickable links to databases or menus presenting (from left) text, image, sound, video, and interactive map materials. Project visitors may use the left toolbar to explore (from top) historical themes, narrative/biographical materials, K-12 lesson plans, cultural tourism resources (as yet largely undeveloped), and project information. Site users selecting to use any of the project's primary source materials first encounter a brief page devoted to "Copyright and Fair Use Statement and Citation Information." Immediately below this notice, the page informs users "Please continue in your search using buttons at top or side after reading copyright information."⁶

The project's developers envision several potential user experiences. Academic historians and other researchers may refer directly to the project's searchable databases (and indeed may set their browser bookmarks directly to the appropriate search pages). But **Lincoln/Net's** designers intend this

organizational scheme to appeal primarily to non-specialist project users, presenting them with readily-available layers of introductory materials and enabling them to shift their attention quickly between primary and interpretive resources. Ideally, this design will provide members of the public, perhaps visiting **Lincoln/Net** only to find "Fast Facts about Lincoln," with an attractive invitation to dig deeper into Lincoln's experience and, eventually, the historical record. Materials presented in multiple media types can prove attractive to individuals that Gardner's followers would identify as different types of learners, as well as individuals who have become accustomed to finding multimedia resources on commercial Web sites.

Amidst these materials, **Lincoln/Net's** interpretive resources can help members of the general public to identify their own interests and formulate questions with which they may search the databases.

Educational researchers and historians concerned with classroom education have recently promoted an ideal of "active learning" using primary source materials. One author has summarized this line of thinking by arguing that "As students work with primary sources, they have the opportunity to do more than just absorb information; they can also analyze, evaluate, recognize bias and contradiction, and weigh the significance of evidence presented by the source." Others add that "The analysis of primary sources, and the structured inquiry learning process that is often used in such examinations, are widely recognized as essential steps in building student interest in history and culture and helping them understand the ways that scholars engage in research, study, and interpretation."⁷ Digital libraries currently facilitate active learning in institutional settings like schools, colleges, and universities, where students can bring knowledge gained through classroom instruction and reading lists to bear in the formulation of queries for databases. This intellectual capital, amplified through teachers' workshops and the other professional development events, greatly facilitates students' ability to make connections and discoveries for themselves.

Members of the general public using the World Wide Web for educational purposes usually encounter an online archive in far different circumstances, and with quite different needs, than student groups. Unlike enrolled students, these individuals and groups usually lack any recourse to instruction or other forms of historical expertise that may inform their exploration of a digital library. The more diligent and/or ambitious among them may find a wealth of stimulating materials on a digital library Web site, but they will largely rely upon their own interests, formed from personal experience, to guide their database queries. Some may employ historical training they received in high school or college classrooms. But many others will shy away, intimidated, from its mass of data.

A number of observers have remarked that online digital libraries, including intentional archives illuminating particular themes, periods, or episodes, often provide non-specialist users with little opportunity to enjoy their contents. One reviewer of a leading historically oriented digital library Web site noted that it fails "to outline conceptual frameworks through which a user might approach

the archive." Another remarked that "To get much out of... the Web site... users must have a prior notion of what kind of information they are looking for...."⁸ As the historian Roy Rosenzweig has concluded, "While digital collections may put 'the novice in the archive,' he or she is not so likely to know what to do there."⁹ The Lincoln Project has developed from the belief that active learning can be as enjoyable and beneficial to members of the general public as it has proved for schoolchildren. Its interpretive materials provide them with the conceptual frameworks necessary to pursue it.

Challenges, Dilemmas, and Strategies for Addressing Them

While **Lincoln/Net** stands as an example of a promising new form of online public history resource, substantial challenges face individuals and institutions seeking to develop similar resources. Foremost among these are the issues of cost and access to expertise. This challenge in turn re-opens the familiar question of universities' roles in the dissemination of public history materials to the public. While innovative historians and other academicians have devised new ways to bring digital technology and computer programming to bear on scholarly questions, they have largely ignored the new technologies' impact on public discourse. In addition, the development of online public history materials raises significant questions about their relationship to, and integration with, more familiar forms of public history materials and traditional public history venues. The Lincoln Project provides some provisional approaches to addressing these dilemmas.

Except in the case of institutions enjoying exceptionally large financial resources, the issue of cost obliges developers of online digital libraries to seek financial support from federal agencies and private foundations. This reality in turn reveals how the development of these projects, and public history resources built around them, demand other types of expertise and institutional capacity as well. Most digital library projects have grown in large universities as their developers made use of ready access to their organizations' grant writing and administration apparatus. Beyond the realities of grant getting and administration, digital libraries and online public history projects also require the efforts of a number of highly-trained professionals. Librarians develop markup schemes and contribute to the selection of materials. Attorneys establish legal frameworks for these materials' use. Graphic artists design Web sites, and multimedia developers create sound and video materials in a variety of formats. Computer programmers develop the databases and scripts that make digital library materials searchable. Systems administrators support the servers and networks that make these materials available to the Web. Many museums, historical societies, historic sites, archives, and historically oriented state and local agencies simply lack these institutional resources.¹⁰

This bureaucratic reality seemingly puts the onus for the development of a new generation of online digital history materials on the large universities where such aggregations of expertise can be found. But university historians, should they be so inclined, face significant disincentives to develop online resources like **Lincoln/Net**. Even after more than a decade of the Web's development, many of these prospective project developers' colleagues and

administrators remain unconvinced that, beyond academic databases' provision of full-text journal articles, it represents a useful arena for historical work. Young scholars seeking tenure risk future security by taking part in digital initiatives, much less public-history oriented online work. Mid-career scholars seeking promotion to full rank run a similar risk. Those senior scholars and bold younger colleagues that have explored digital technology's use in history and other humanities have largely focused their efforts on developing new tools for, and forms of, scholarship.

In the emerging field of digital humanities, literary scholars have developed sophisticated new tools enabling them to identify patterns hidden within texts or collections and, in some cases, present these patterns in new graphic representations. Within the historical profession, scholars focusing their efforts on the development of digital materials beyond searchable online collections have explored new forms of scholarship, including the new types of narrative that the Web and digital technologies facilitate. Although leading figures like Ayers are actively working to persuade historians and their administrators to reconsider their prejudice against digital scholarship, the academy's pronounced ambivalence toward the public remains a formidable obstacle. In this regard universities have used the development of digital technologies to recreate their widely acknowledged divorce from public discourse and the civic culture. Despite their command of the considerable institutional resources necessary to develop online public history resources using digital library technology, universities seem unlikely to do so.¹¹

Two alternatives to this state of affairs present themselves. First, public history-oriented institutions like museums and historical societies can develop and/or strengthen their institutional capacity to develop and administer large-scale digital projects. This initiative requires the employment of a variety of well-compensated grant administrators with no guarantee of winning sizeable awards on a regular basis, and also seems unlikely in a situation marked by many institutions' ongoing financial struggles. Second, public historians, by virtue of their skill and experience in the development of public-oriented materials, as well as an established system of professional rewards attached to this type of work, can lead universities toward developing a new generation of digital materials. This scenario remains problematic as well, however. For over a decade commentators have remarked on the Internet and Web's ability to facilitate projects in which individuals, groups, and organizations cooperate as never before, and public historians employed in museums, historic sites, and other non-academic positions can build collaborative relationships with universities. But public historians employed outside of universities, in institutions lacking robust grant support and administration bureaucracies, will be hard-pressed to take leadership roles in collaborations with universities possessing this expertise. Simply put, no university will allow a staff member from another institution to serve as Principal Investigator for a grant project supported by its offices of Sponsored Research and Grants Fiscal Administration. Ultimately, then, public historians employed by universities, including university archivists and museum curators, library faculty and staff holding history degrees, and faculty members (most likely only those with tenure) participating in programs training public historians, enjoy the most

significant opportunity to develop a new generation of online public history resources making use of digital library and multimedia technology.

Prospective developers of online, public-oriented historical materials using digital library technology face other challenges as well. In recent years a number of federal agencies, including the Institute of Museum and Library Services and the National Endowment for the Humanities, have committed large financial resources to the digitization of primary source materials, but their programs have not been designed to support the simultaneous development of interpretive matter as well. Nor can a single grant be expected to provide the nearly one million dollars that **Lincoln/Net's** development has required. In this context, Lincoln Project staff members have chosen to build many of the interpretive resources accompanying their digital library materials through a series of collaborations. Each has resulted in a discrete grant, and has provided materials contributing to the larger project as a whole. In addition to providing incremental funding, this strategy has helped the Lincoln Project to integrate its activities with those of more traditional public historians and public history institutions.

Lincoln/Net's video resources featuring historians' remarks provide a case in point. Developing them alone would have cost tens of thousands of dollars. Seeking to minimize this expense and establish a linkage with a more traditional public history format, Lincoln Project staff members combined video materials' development with the production of a grant-funded documentary film project, conceived to complement the project Web site, examining Abraham Lincoln and his context in antebellum Illinois.

In order to produce a fifty minute film, director Dr. Jeffrey Chown of Northern Illinois University's Department of Communication recorded over twenty hours of videotaped interviews with historians of antebellum America. These interviews, beginning with questions designed to conform in broad outline with the eight major themes emphasized on **Lincoln/Net**, provided project staff members with a large amount of raw video from which to select interpretive video materials.

In this arrangement Web users around the world benefit from the opportunity to watch film footage, featuring leading historians' comments, which ordinarily would have found its final resting place on the cutting room floor. They also benefit from an opportunity to watch Dr. Chown's completed film, which project staff members have presented on **Lincoln/Net** in a chapter format.¹² Those benefiting from this approach may include those unable to attend a screening, or watch a broadcast, of the film. Those who have already attended a screening or watched a broadcast also enjoy the opportunity to revisit a specific point or simply hear the speaker's remarks again in their entirety in an online digital format. Transcribing video materials and placing these texts on the World Wide Web side by side further expands access to these resources by making them available to Web search engines, and thus individuals scouring the web for resources containing specific words or phrases.

If Dr. Chown's documentary film provided **Lincoln/Net** with a wealth of video materials, the Lincoln Project returned the favor by providing the director with a large amount of high-resolution, copyright-cleared image materials from its repositories. Most film and video productions spend large portions of their budgets paying high use fees to large image collections held by universities and private interests, such as Corbis. Working from the start with a digital library project allowed Dr. Chown to complete his film with far lower expenses than a comparable production. This arrangement has also enabled the director to bring his production to the attention of the **Lincoln/Net** site's estimated 90,000 unique users per month.

The Abraham Lincoln Historical Digitization Project has also forged a mutually beneficial relationship with the Lincoln Home National Historic Site in Springfield, Illinois. This historic site preserves and presents to the public the home in which Abraham Lincoln and his family lived in the decades prior to his election as President of the United States. In the summer of 2005 the Lincoln Project and the Lincoln Home National Historic Site co-hosted a weeklong workshop for history teachers with funding provided by the National Endowment for the Humanities' Landmarks of American History program. This event brought a number of leading scholars to Springfield to speak to participating educators on the several themes featured on the **Lincoln/Net** site. It also enabled Lincoln Project staff members to videotape their remarks and present them on the **Lincoln/Net** site. There educators who attended the workshop enjoy the opportunity to revisit speakers' remarks and share them with their students. As importantly, the filming and online presentation of these speakers has made them available to the broader public as well.

The Lincoln Project is at present engaged in the work of expanding this relationship, collaborating with the Lincoln Home National Historic Site and the Lincoln Birthplace National Historic Site (Kentucky), in seeking grant funding to use digital materials as major components of a compelling and diverse experience for site visitors. In most cases visitors to historic sites enjoy the remarks of a tour guide and the brief contents of interpretive placards and pamphlets. By placing more sophisticated interpretive materials on the site's World Wide Web page, including digitized copies of lectures and other public programs, site staff can provide the ambitious among their potential visitors with an opportunity to prepare for their experience. Digital materials can also provide patrons with an enriched experience during their visit. In an era of hand-held MP3 players, the production of sound and even video materials can provide visitors with an extended tour narrative for the site. In the case of the Lincoln Project, collected video files of scholars' discussions, including audio tracks, can provide these MP3 materials with important content components. Finally, an historic site's partnership with a digital library can provide patrons with an opportunity to follow up on their visit by exploring historical research for themselves. The variety of interpretive materials that historic sites provide their patrons can make large collections of digital library materials addressing a shared theme less intimidating and more intelligible. The posting of many of these materials on that site can provide users with an opportunity to toggle back and forth between primary sources and interpretations with great ease.

Digital libraries can also provide traditional exhibits with a wealth of usable materials. Exhibit developers have traditionally begun their work with an idea or collection, and then gone about the work of producing facsimiles of images to be featured on large panels, or perhaps multimedia materials to be delivered by computer workstations integrated into the exhibit. This work requires the services of photographers and other professionals, usually at great expense. Digital libraries' collections of image and other primary source materials furnish an alternative to this process in their ready repositories of resources immediately suitable for reproduction on a large scale.

In addition to image materials, these may include sound recordings and video resources. Exhibit developers may also draw on interpretive texts developed for Web sites like **Lincoln/Net**. While these texts may not be suitable for verbatim use on an exhibit panel, they provide an ideal starting point for the work necessary to produce a short, concise summary of events and interpretations. In addition to providing exhibit curators with a number of benefits, this type of collaboration can prove very fruitful to developers of online materials. Online public history projects integrating their activities with traditional public history venues like museums and historic sites can find many of their most devoted users among these sites' patrons. Many individuals may briefly encounter an online resource like **Lincoln/Net** through a Web search using Google or a similar utility. But visitors to historic sites, museums, and other like venues comprise a group of individuals who have already identified themselves as interested in a particular theme or period in history. Individuals learning about the existence of a related Web site at these venues represent an ideal audience group.¹³

Finally, in addition to finding financial support for their projects and integrating them with existing public history resources and activities, developers of public-oriented online history materials face the matter of the public's perception of the available historical record. Although the world's online digital libraries together contain only a tiny portion of the historical materials available in libraries, archives, and museums' onsite collections, many individuals may mistakenly assume that no other historical materials exist. Perhaps worse yet, others, while aware of the existence of large analog collections, may become so accustomed to the ready availability of online resources that they choose to ignore them. In light of this fact, **Lincoln/Net's** developers have placed a notice in a prominent position accompanying the site's "Copyright and Fair Use Statement and Citation Information." All project users encounter this page before beginning a search of project materials. It reads:

A Word about Historical Sources:

The Abraham Lincoln Historical Digitization Project's **Lincoln/Net** World Wide Web site presents a large, searchable database of primary source materials from Lincoln's Illinois. Nevertheless, these materials make up only a small fraction of the collections available in the libraries, museums and archives taking part in this project.

This project has grown from the original goal of making primary source materials available to individuals who are often unable to travel to these libraries, museums, and archives to take advantage of these resources. While scholars make use of these materials regularly, school children and members of the general public often do not. We hope that the **Lincoln/Net** site will increase public access to historical materials, especially in schools.

We also hope that this project will encourage students and other non-scholars to visit libraries, museums and archives to examine the vast amounts of historical materials that remain there, undigitized.

Similar statements, prominently displayed on other historically oriented digital libraries, can remind users of the wealth of additional materials available in other locations. But they cannot make Web users understand the fact that they are about to explore only a relative handful of carefully selected historical resources, or feel compelled to avail themselves of other materials not found on the Web. Many doubtlessly click through without comprehending, or even reading, them. The Lincoln Project suggests that the careful integration of online digital library resources with more traditional public history venues, from museums to historic sites, can furnish a starting point for addressing this issue. These institutions have never planned to attract a cross section of the general public. Rather, they have sought to bring themselves to the attention of those individuals who already cultivate an active interest in history, while slowly expanding their number. Web sites like **Lincoln/Net** can serve as significant tools for both tasks. Their acknowledgement of collaboration with traditional public history venues, and provision of materials explicitly designed to enhance these venues' use, can serve to attract increasing numbers of the former group, many of whom actively scour the Web for historical resources. These Web sites' strategy of using well-known historical figures and events to frame collections of primary source materials can also serve to draw relatively uninitiated members of the public into the capacious spaces, virtual and in-person, in which they might explore the past.¹⁴

Conclusion

For decades historians concerned with reaching a public audience have argued that they seek to enable their patrons to think historically, to explore the complexity and contingency of change over time. In 1978 Robert Kelley, a leader in establishing the nation's first public history program at the University of California, Santa Barbara, argued that his students brought "the historical method" to the public. Another public historian has argued that he and his colleagues can help laymen "learn to participate in the research process." At the very least, they share "the basic goal of encouraging people to think about the past for themselves."¹⁵ The Web, matched with digital library technologies like databases, markup languages, and multiple media formats, represent a significant opportunity to realize this promise. But nearly fifteen years after their emergence in widespread use, these tools have largely served to benefit research and educational users, while members of the general public lack access to the capacious spaces Edward L. Ayers has

envisioned. This lack is in part a matter of users' different perspectives. In the most basic sense, access to materials stems from what one leading librarian describes as a patron's "freedom or ability to obtain or make use of" them. In these formal terms, online digital libraries make their collections available to specialist and novice alike. But many individuals lacking scholarly training or access to an organized course of instruction will find an online collection of esoteric, largely textual primary source materials obscure, if not intimidating. As the museum professional Kevin Donovan has argued, "Access is not enough." Curators "need to wrap layers of interpretation around the bare fact of an object before the public can begin to grasp its significance. The same holds true for the information we offer on-line to our publics."¹⁶

The **Lincoln/Net** site attempts to realize Ayers' vision of a capacious, inviting space in which members of the general public might enjoy the opportunity to explore and evaluate historical materials more fully by employing a broader definition of accessibility in keeping with Donovan's argument. The *Oxford English Dictionary* provides a definition of "accessible" as "able to be (readily) understood or appreciated." This expanded sense of access has led the Lincoln Project's developers to diverge from traditional digital libraries in two significant respects. First, in order to help members of the general public perhaps unaccustomed to confronting large sets of text materials to understand and appreciate nineteenth century historical materials, **Lincoln/Net** presents selected resources in multimedia formats, including sound files and interactive maps. As followers of Howard Gardner have argued, many individuals find more significance and meaning in sound, video, or spatial/map materials than in text alone. **Lincoln/Net's** multimedia materials, including sound and video files and interactive maps, can appeal to these individuals. Second, the site's interpretive materials, presented in text and video formats, enable its users to perceive and consider the major episodes and themes described by its collected primary source materials. Written for a general readership, these resources summarize and discuss historians' interpretations of eight significant elements of antebellum American experience, in addition to Abraham Lincoln's own activities. These materials find their greatest utility when they address Roy Rosenzweig's caveat about the novice in the archive: by providing the user with an overview of the historical period in question and scholars' discussions of it, they will give her or him some idea of "what to do there."

While it offers a large opportunity, the development of a new generation of online historical materials using interpretive materials and multimedia and digital library technologies presents substantial dilemmas as well. The creation of multimedia and interpretive resources that might help members of the general public to understand and explore primary source materials adds costs and complexity to the already challenging task of developing digital libraries. Many traditional public history institutions, like museums, historic sites, and local, state, and federal agencies, lack the institutional capacity necessary to undertake such a large, multifaceted online project. The ability to plan, write, submit, and administer large grants comprises a substantial part of this capacity. In addition to the professionals responsible for aspects of this process, necessary institutional capacity also

includes the services of librarians, computer programmers, systems administrators, graphic artists, and attorneys. The fact that these aggregations of expertise can most commonly be found in large universities potentially returns the troublesome issue of university intellectuals' relationship with the general public to the spotlight. Because members of academic history departments face considerable disincentives to devote large amounts of time and effort to the development of online and/or public history materials, public-oriented historians employed by universities, including archivists, museum curators, and library staff members, will have to assume responsibility for their creation. As official members of the university community, these individuals enjoy access to the grant writing and administration apparatus so necessary to the funding of a large project. They also enjoy access to the many other types of expertise available on campus.

Even with the support of a large university, historians developing new online public history resources also face other challenges. These include the task of adapting grant programs largely designed to support the development of traditional digital library and public history resources to the purpose of building a multimedia online resource and integrating their work with more traditional public history sites and activities. These issues have become apparent in the work of the Lincoln Project, and its builders have sought to plan its development in order to extract the most value from scarce grant dollars and complement the work of historic sites, museums, and other venues for public history. Filming speakers' pertinent remarks and presenting them on a digital library site can furnish a Web project with interpretive materials in a video format. Interviews filmed for documentary films can also provide a large source of multimedia interpretive materials as well. These techniques have also provided public history partners with a range of benefits. For public history venues like museums and historic sites, as well as documentary film makers, these benefits include the basic ability to reach the larger audience using the Web. In addition, public history institutions can gain additional use and value from one-time, in-person events like lectures and film screenings. Historic sites and museums collaborating with large, online digital library projects can also provide visitors with rich, challenging sets of online materials that they may consult before or after their visit, or both. Ultimately, this approach provides traditional venues for public history with an opportunity to reach a segment of their audience seeking a more detailed and challenging experience than that allowed by the physical confines of an exhibit, museum, or historic site.

Finally, developers of a new generation of online, public-oriented historical resources face the ongoing challenge of informing the public's larger sense of how we learn about the past. Ambitious online projects may have unintended consequences. Where specialist scholars and other users of digital libraries may realize that online collections comprise only a miniscule portion of the available materials, members of the general public lacking historical training may mistakenly come to believe that resources available online comprise the entire historical record. Others may interpret the availability of online materials as a reason to forego personal attendance at public history activities. Close collaboration between digital resource

developers and the libraries, museums, and historic sites that hold the original materials from which we learn about the past presents an opportunity to address these concerns. In addition to notifying them of the existence of large amounts of additional historical materials in non-digital collections, the developers of resources like **Lincoln/Net** can arrange their online materials so as to direct users to resources like the Lincoln Home National Historic Site and enhance their experience there. This approach can help historians to realize more of the Web's large potential, helping members of the general public to learn to participate in the research process and think about the past for themselves.

¹ Ayers, "Pasts and Futures of Digital History"
<http://www.vcdh.virginia.edu/PastsFutures.html>, 1-2.

² Ayers has noted that few projects similar to the Valley of the Shadow (<http://valley.vcdh.virginia.edu/>), which he developed at the University of Virginia, are emerging today. He notes that "Libraries are carrying on remarkable undertakings in digitization and tool building, but it is hard for individual scholars to conceive of large digital projects." See "Doing Scholarship on the Web: Ten Years of Triumphs – and a Disappointment" *Journal of Scholarly Publishing* (April 2004), 146.

³ William G. Thomas, III "Blazing Trails Toward Digital History Scholarship" *Histoire Sociale* v. 34, no 68 (2001), 422.

⁴ Leta Hunt and Philip J. Ethington "The Utility of Spatial and Temporal Organization in Digital Library Construction" *Journal of Academic Librarianship*, 23 (1997), 475-483; Martyn Jessop "The Visualization of Spatial Data in the Humanities" *Literary and Linguistic Computing*, v. 19, no. 3, 2004, pp. 335-350; Brandon Plewe *GIS Online: Information Retrieval, Mapping, and the Internet* Santa Fe, N.M.: OnWord Press, 1997; David Green and Terry Bossomaier *Online GIS and Spatial Metadata* London: Taylor and Francis, 2002; David A. Cobb and Arlene Olivero "Online GIS Service" *Journal of Academic Librarianship*, 23 (1997): 484-497; Allan B. Cox and Fred Gifford "An Overview to Geographic Information Systems" *The Journal of Academic Librarianship*, 23 (1997): 449-461.

⁵ See <http://dublincore.org/> for a discussion of the Dublin Core Metadata Initiative.

⁶ <http://lincoln.lib.niu.edu/rights.html>

⁷ Deanne Shiroma "Using Primary Sources on the Internet to Teach and Learn History" ERIC Digest, ERIC Number 442739, 1; Randy Bass and Roy Rosenzweig "Rewiring the History and Social Studies Classroom: Needs, Frameworks, Dangers, and Proposals," in *Proceedings, Forum on Technology in Education: Envisioning the Future* Washington, D.C. (1999) 29.

⁸ Gary Kornblith "Venturing into the Civil War, Virtually" *Journal of American History*, 88, no. 1, (June, 2001)

(<http://www.historycooperative.org/journals/jah/88.1/kornblith.html>) consulted online March 6, 2006; Thomas J. Brown "The House Divided and Digitized" *Reviews in American History* 29, no. 2, (2001): 210;

⁹ Roy Rosenzweig "Scarcity or Abundance? Preserving the Past in a Digital Environment" *American Historical Review* 108, 3 (June, 2003): 16.

¹⁰ Historic sites operating as parts of federal agencies are ineligible for federal grant support.

¹¹ For a brief discussion of academic historians' impressions of work in a digital format, see Ayers "Ten Years of Triumphs."

¹² See <http://lincoln.lib.niu.edu/aboutbiovideo.html>

¹³ Although the Lincoln Project has no exhibit in the field or development, its staff is actively seeking to use the above economies of scale to develop such a public history resource.

¹⁴ "History, Digitized (and Abridged)" *New York Times*, March 10, 2007; accessed via *New York Times* online March 13, 2007.

¹⁵ Robert Kelley "Public History: Its Origins, Nature, and Prospects" *The Public Historian* 1, no. 1, (Fall, 1978): 17; Charles C. Cole, Jr. "Public History: What Difference Has It Made?" *The Public Historian* 16, no. 4 (Fall, 1994): 11, 17.

¹⁶ Kevin Donovan "The Best Intentions: Public Access, the Web and the Evolution of Museum Automation" *Museum and the Web: An International Conference*, 1997 (<http://www.archimuse.com/mw97/speak/donovan.htm>), 2.