

NATIONAL LIBRARY OF MEDICINE

OMEKA AND THE NLM DIGITAL REPOSITORY:

A NEW WAY OF CREATING HMD-CURATED WEBSITES

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Abstract

Objective: In the midst of an expanding digitization program, the History of Medicine Division (HMD) seeks to find new ways to expose digital content on the web creatively and dynamically. The purpose of this project was to evaluate the viability of the Omeka web publishing platform at NLM, and also to develop a list of use cases or functionalities for any potential web publishing platform. Omeka is an open-source web publishing platform with a Fedora plug-in which should make it possible to use objects in NLM's Digital Collections, built with Fedora Commons Repository software, for Omeka-driven web presentations. Additionally, the project aimed to gather insight from NLM staff on how to improve and enrich digital programs.

Methods: A series of thirteen interviews with HMD staff, who contribute in various ways to digital programs, were conducted. From these interviews, a list of use cases was developed. Omeka's viability and usability was tested through the development of a proof-of-concept website using digital objects and content from the Cholera Online project. The use cases were either tested in Omeka as part of the proof-of-concept, or evaluated based on either instructional documentation or direct questioning of developers. Interviews with two other libraries that have developed websites using Omeka validated our conclusions about Omeka's capabilities and functionality.

Results: Thirty-two use cases, or capabilities, were generated from the interviews and categorized according to three levels of priority, with the most frequently described use cases receiving the highest priority ranking. Narrative descriptions of interviews were also created, and are presented as four major themes: visions and ideas, limitations of current resources, importance of investing in digital programs, and thoughts on adopting Omeka or other new platform. Through the development of the proof-of-concept web site, it was determined that while Omeka is very successful as a standalone tool, and capable of meeting a majority of use cases, it did not reliably draw and display items from the Fedora-based Digital Collections repository.

Conclusions: As NLM's digitization program expands, and users are increasingly turning to the web for library services, it has become exigent for NLM to find new ways to expose digital content. Because it does not successfully interact with NLM's Fedora-based repository, and requires more programming resources than are currently available, the results of this study do not support NLM's adoption of Omeka at this time. This project has also highlighted the institutional need for web design skills, the issue most frequently discussed throughout interviews. Limitations of this study include the evaluation of a single web publishing platform and interviews focused on select staff in HMD. However, this project has outlined a series of use cases, as well as a collective vision, for digital programs that can be used to evaluate other potential products and services, or to develop them in-house.

Introduction

Motivations

The History of Medicine Division (HMD) and Technical Services Division (TSD) together proposed this project as a step toward advancing NLM's ability to engage audiences through online programming. From a 10,000 foot view, the main question being asked by this project is: How does NLM moves its curated websites into the next generation of digital resources? HMD and TSD want to rethink and re-envision how digital content can be exposed on the web creatively and dynamically. A primary motivation was also to develop a way to utilize Digital Collections repository objects in curated websites, as over time the repository will become the primary platform for managing and preserving many of NLM's digital materials. NLM's current infrastructure for HMD digital programs consists of Teamsite, NLM's content management system, and piecemeal outsourced design work that is then mounted by HMD's web team. This structure, while it has been able to support HMD-curated websites and online exhibitions, was not designed for this purpose and therefore has limited capability to support expansion and innovation in this regard. The investigation and selection of a platform for this purpose represents a dedicated commitment to support of online programs, which are increasingly the primary means through which libraries are reaching users.

HMD Ad Hoc Committee for Online Programs

A large impetus for the Omeka evaluation project was the Ad Hoc Committee for Online Programs, which was charged in 2009 with the task of creating 1- and 5-year strategic plans for HMD online programs (see Appendix J: HMD Ad Hoc Committee for Online Programs, Final Report). The adoption of Omeka or similar platform or system has the potential to substantially support several objectives outlined in the Ad Hoc Committee's report. The final report supplied by the committee was developed under the assumptions that recommendations had to be achievable with existing financial resources. One of the objectives outlined in the report is the enhancement of HMD's online presence. The current project was therefore executed with the Ad Hoc Committee report in the forefront of consideration, and Omeka was evaluated with these needs and visions in mind.

The adoption of Omeka or other similar platform could also support the five year objective to recognize and adapt to technical change. During interviews conducted as part of the present project, HMD staff outlined their visions for future programming and functionality. HMD staff, as part and parcel of their work, are following trends and technical innovations among peer libraries and institutions. Therefore, the suggestions they made for advancement and improvement in HMD online programs during the interviews reflect the most current technical innovations and trends, and collectively contain the vision and knowledge to achieve this goal.

R2 Consulting Report

During March-May 2011, R2 Consulting LLC (R2) conducted an analysis of selection-to-access workflows in the Division of Library Operations at NLM.¹ In its evaluation of HMD, the R2 report emphasized the importance of investing in digitization and the exposure of special collections. The report states, “The tremendous potential of digitization for enhancing both discovery and access, along with ever-widening audiences for the nation’s rich special collections, has pushed special collections farther up the list of priorities than at any time in recent history.” The report continues on to recommend the identification of new strategies for exposing hidden collections and the creation of a strategic plan for digitization and digital initiatives. The current project contributes to these undertakings by amassing the insight of contributors to HMD digital programs to inform strategic planning, and providing a framework against which to evaluate systems, including Omeka, that support these efforts.

Curated Websites

Although HMD is involved in the development of a wide variety of web resources including online exhibitions and educational modules, this project focuses specifically on curated websites. A curated website is a site developed intellectually by a curator, usually an NLM staff historian or archivist, which utilizes specific items from NLM special collections.² Although curated websites and online programs are not exclusive to HMD, HMD is responsible for a great many of them due to its stewardship of NLM’s special collections, many of which deserve to be targeted for digitization and exhibitions.

What is Omeka?

Omeka is a free, open source web-publishing platform aiming to hybridize web content management systems, digital repositories, and online exhibition systems.³ Developed by the Roy Rosenzweig Center for History and new Media at George Mason University,⁴ Omeka aims to combine adherence to technical standards and library-quality metadata practices with visually dynamic display functionality equipped for web 2.0 collaboration. Additionally, one of its major selling points is the fact that it is meant to be user-friendly to the extent that programming experience and technical expertise are not necessary to develop engaging online programs using Omeka. Omeka developers assert that there is currently no other system that combines all of these functionalities,⁵ and that until recently with the development of the Web, library, museum and archive communities operated in silos, each utilizing systems that were optimized for their local environments, with separate systems excelling in collecting, describing, and displaying respectively.

Omeka’s basic functionality, which is driven by the Dublin Core metadata scheme, is enhanced by plug-ins. Developed by the larger user community, plug-ins do everything from placing collection items on

¹<https://wiki.nlm.nih.gov/confluence/display/HiringProcResrc/LO+Acquisitions+and+Cataloging+Workflow+Analysis+Project>

² Curated website overview provided by Jeff Reznick, Deputy Chief, HMD

³ <http://omeka.org/about/>

⁴ <http://chnm.gmu.edu/>

⁵ <http://omeka.org/blog/2010/09/21/omeka-and-peers/>

map displays and timelines, connecting with social media sites, allowing users to contribute content, and extending and diversifying the metadata schemes that describe resources. A full list of plug-ins is available from Omeka .⁶

Additionally, Omeka was developed to be in compliance with Section 508 through use of semantic HTML and standards-based web design, accessibility to screen readers, no use of Flash or other proprietary technology that traps content and prevents it from being read by screenreaders or other assistive devices, and provides additional plug-ins that assist with visual impairments.

The look and feel of Omeka-driven displays and exhibits is customizable via themes.⁷ While there are currently approximately ten themes to choose from, it is also possible to develop your own theme and completely individualize your layout and display. Themes are often developed by other users who wish to share their work, and not necessarily by Omeka developers. An analysis of the efficacy of themes in practice can be found later in this report.

Why focus on Omeka?

NLM recently launched Digital Collections,⁸ a digital repository built using Fedora repository software, to establish an infrastructure for “ingesting, managing, preserving and making accessible a variety of digitized and born digital content in numerous formats.”⁹ As digital content and online programs grow in their primacy among HMD programs and services, it has become imperative to invest in finding new ways to enable the creation of more robust and dynamic curated web sites. Because of Omeka’s ability to combine library-quality infrastructure with exhibition-quality online displays, and because it offers a Fedora plug-in (developed by the University of Virginia Scholars Lab and Neatline Project¹⁰) that theoretically will allow objects to be pulled directly from the repository and displayed in Omeka, administration in HMD and TSD identified it as a likely candidate for adoption.

Procedures

The project was completed in two main phases. The first was a series of interviews with thirteen staff members in HMD and Lister Hill, who contribute to online programs, resulting in the development of use cases for a new web publishing platform. The second was to create a proof-of-concept website using Omeka and to evaluate Omeka against the use cases developed in the first phase.

A list of survey questions to be asked in the interviews was developed between Julie Adamo (NLM Associate) and Jeff Reznick, Deputy Chief, HMD. The survey sought to gather the visions and insights

⁶ <http://omeka.org/add-ons/plugins/>

⁷ <http://omeka.org/add-ons/themes/>

⁸ <http://collections.nlm.nih.gov/>

⁹ Quote taken from the original proposal for this project, available in Appendix B.

¹⁰ <http://www2.lib.virginia.edu/scholarslab/>

that HMD staff have for the future of HMD online programs, issues and limitations that they have under the current systems, thoughts about adopting Omeka or other new platform, ideas about the role of online programs in the greater library community and NLM specifically, and relationships of HMD to NLM's mission. The list of staff members to be interviewed was provided by Jeff Reznick. The following people were interviewed:

From HMD:

- Roxanne Beatty
- Laurie Duquette
- Jiwon Kim
- Christie Moffatt
- Elizabeth Mullen
- Manon Parry
- Michael North
- Cindy Rankin
- John Rees
- Michael Sappol
- Cheri Smith
- Paul Theerman

From Lister Hill:

- Marie Gallagher

All interviews were an hour long, and care was taken to not exceed this timeframe. Interviews were not recorded, to protect the privacy of interviewees and to create an environment where they felt comfortable expressing thoughts and opinions without the threat of permanent documentation within the workplace. Notes were taken by the Associate on an NLM laptop.

Notes were compiled from individual interviews into a single document organized by question/topical area. Use cases were mainly developed through the discussions of ideas and visions for online programs and the limitations of current systems and resources. Use cases were modeled after the "Draft Use Cases for Cholera Pilot Collection,"¹¹ and were classified into high, medium, and low priority. This system is not to place a value judgment on the needs of individual staff members, but is rather a realistic reflection of the reality that no system can meet every single need, and therefore needs that are shared amongst the greatest number of people receive the most priority. Use cases that were mentioned by more than two people, or were themes that were common throughout many interviews, were labeled high priority. Use cases mentioned by two people were given medium priority, and use cases mentioned by one person were given low priority.

In order to expand upon the knowledge that could be gained about Omeka during the test period and to corroborate findings, librarians at two other libraries that use it were interviewed about their experiences.

¹¹ <https://wiki.nlm.nih.gov/confluence/display/DP/Draft+Use+Cases+for+Cholera+Pilot+Collection>

For the second phase of the project, a proof-of-concept website was created in Omeka using digital objects and content from the Cholera Online project. Cholera Online objects were used because they reside in Fedora, and a primary objective of the project was to test the ability of Omeka to display Fedora objects. Because it is the primary means through which exhibition-like sites are created in Omeka, the Associate created an exhibit in Omeka using the “ExhibitionBuilder” plug-in and selected the “Colours” theme. Several other themes were tried as well, but none provided improved quality in terms of visual display.

Several plug-ins were included in the proof-of-concept test. While the Associate originally hoped to test out a series of the highest priority use cases, she ended up having to focus on the ones that could be implemented using the time and resources devoted to the project, as different plug-ins require varying levels of additional programming and tweaking. In addition to the ExhibitBuilder plug-in, the SocialBookmarking, Geolocation, Timelines, and Contribution plug-ins were all tried. In order to compare the Fedora plug-in with Omeka-native objects, objects were uploaded either directly from a local hard drive or through the Fedora plug-in. All use cases were either tested in Omeka as part of the proof-of-concept, or evaluated based on either documentation or direct questioning of developers. Developers of both Omeka and the Fedora plug-in were contacted for further insight and troubleshooting assistance throughout the process.

Results

Interviews

The backbone of this project was the interviews with HMD and Lister Hill staff members who contribute to online resources and programs. The group of interviewees includes both staff members who are responsible for the content side of curated websites, and staff members who are responsible for the technical side. The interviewed employees are experts in areas ranging from library and information science, history of medicine, to American studies. They possess a wealth of knowledge and are keenly aware of trends and advances in the field. Interviewees for this project are collectively responsible for all aspects of digital projects, from content development to technical implementation and support. As this project was intended to be a first step in “advancing the curation of NLM holdings, using technology to enhance audience experiences with NLM collections, and continuing to build on the nascent NLM Digital Repository infrastructure,”¹² interview results were organized into four themes to address these needs. The first two themes explore ideas and visions that these contributors have for future online programs, and also the limitations and problems they experience within the current framework. The second two themes relay staff insight into the importance of investing in digital programs and thoughts on the potential introduction of Omeka or other software into NLM programs. In order to gain a sense of the breadth of knowledge, training, and experience that staff brings to their work, the interviews also covered the educational and professional backgrounds of participants. Below is a summary of what was shared in the interviews.

¹² Original Project Proposal, Appendix B

HMD and Lister Hill Staff

These staff members bring a vast wealth of knowledge, education and experience to their work on online programs. Collectively, they have worked in NLM for an average of 11.7 years, with the shortest time in service at 2 years and the longest at 20 years. Their work is informed by an impressive educational background, together contributing 17 master's degrees and 3 PhDs in subjects ranging from history, American studies, computer science, anthropology, and library science. Individually, 5 interviewed staff members had 2 master's degrees, and 4 had one master's degree. Only 2 did not have a master's degree. Five staff members had master's degrees in library or information science.

In terms of where they had learned their technical skills, almost all interviewees reported that most of their training had occurred on-the-job or in professional development courses. With the exception of three staff members who had gained some technical skills through formal education, the majority of technological skills have developed in accordance with the adoption of new technologies at NLM. Many explained that they had attended piecemeal courses or workshops when their jobs demanded learning a specific new skill. The minimum time reported that is spent on work related to online programs was 25%.

Theme 1: Ideas and visions

Overall, interviewees felt that HMD online exhibits and websites were difficult to search and navigate, lacking in visual presentation and design, and severely behind-the-times in comparison to peer institutions. That said, they emphasized that HMD had highly valuable and unique content to offer and were enthused by the prospect of finding creative new ways to deliver it. Certain needs and desires were echoed across many participants with responsibility for varying aspects of digital resource development. The most consistently articulated desires were related to basic functionality and included more advanced browsing and searching capability across exhibits simultaneously, the ability to template displays but also to customize them, compliance with Section 508, consistent availability of a web designer or the inclusion of design principles into software, and accommodation of a variety of file formats including video, podcasts, PDFs, and images. Other characteristics that were discussed included mapping features, the ability to ingest and export metadata, ability for end-users to suggest or contribute content, and the ability to share with social media sites. Ideas from this theme have been incorporated into the use cases, which can be viewed in Appendix A.

Theme 2: Limitations with current system

Many of the limitations that interviewees expressed were counterpart to the related visions. For instance, it was frequently noted that NLM is currently unable to support a variety of file formats on current HMD websites and that the quality of website layout and design is highly variable and frequently low. These are part and parcel with the recommendations that a new platform support a variety of file formats and either support or incorporate solid principles of design. Additional commonly noted limitations were "silo"-ing of content and the lack of a central way to search and explore, poor quality of search results,

and a lack of involvement with social media. Although many of the statements made about the design quality of online programs were general, some specific limitations mentioned included poor translation of in-person experience of exhibitions to online environment, layout of websites having to begin “below the fold” of the NLM header, designs provided by design contractors not being fully implemented, a lack of multimedia files, and sites that are not interactive.

Many limitations and frustrations that were described had more to do with procedural, political, and/or resource issues as opposed to problems with software functionality. A principal concern was a disproportionate ratio of workload to time allotted or available. This was particularly an issue for those involved with the technical implementation aspects. Additionally, for websites that are hosted on TeamSite, HMD staff are unable to manage technical elements without submitting requests to the Reference and Web Services section, and this extends the implementation time and can cause unnecessary stoppages in workflow. Interviewees made statements illustrating that requirements for section 508 have been usurping a lot of their time. Several interviewees highlighted a lack of quality control, peer review, and general proofing and checking of websites. This issue was expressed both on the content side and also on the technical side. However, an additional burden was expressed on the technical side because corrections have to continually be made on past projects, and these employees are simultaneously being expected to produce new ones.

In general, although from different perspectives, the interviewed staff members all agreed on the primary limitations and frustrations related to online programs. Both content and technical personnel agree that there is a lack of skill and an unmet need when it comes to web design. Even though it is not part of their job descriptions or their area of expertise, technical personnel in HMD are by default asked to fill this need. Technical personnel mentioned that sometimes they do not receive any design or layout plans for new websites, and therefore have to develop them on their own even though this is not their area of responsibility or expertise. Content developers are frustrated by the visual display of the final products, even though they acknowledge that web design and development are not in the job descriptions of technical personnel. Several interviewees expressed a concern that work quality and programmatic advances were not the chief priority they should be at this critical time in NLM's history and engagement with digital resources.

Theme 3: Importance of investing in digital programs

One area that all participants were in universal agreement on was the importance of investing in digital programs. There was a sentiment that currently online programs are seen as an “add-on” service, where they should be prioritized, given that a majority of users are visiting us online, not in person. As a point of reference, in the 3rd quarter of 2011, while HMD received 3,838 in person reference requests, they also received 1,857 remote requests. Out of 5,695 reference requests, nearly 1/3 of them were coming from remote users.¹³ Additionally, in the 3rd quarter of 2011, HMD websites received 573,030 visits.¹⁴ While a reference request may often be a much more in-depth encounter than a website visit, the number of website visits is 149 times the number of in-person reference requests. One interviewee simply stated that

¹³ Numbers provided by Steve Greenberg, HMD

¹⁴ Numbers provided by Laurie Duquette, HMD

expecting users to come to us in person is an outdated way of thinking. Many participants elaborated on this point and felt that by not prioritizing online programs, we are missing a major opportunity to engage with users and broaden our audiences.

Participants emphasized that projects such as online and travelling exhibitions and curated websites generate interest both in NLM as an institution, and in NLM's collections. For instance, through their historical and cultural commentary, curated websites can generate interest among members of the general public who may have a non-clinical interest in science, medicine and public health. Additionally, they have the potential to generate interest among youth who may be considering careers in science, medicine or public health.

Several interviewees expressed concern that we are far behind other libraries of our size in terms of digitization programs, curated websites, and online exhibitions. One interviewee put it bluntly and said "we are totally missing the boat."

As a point of inquiry and inspiration to move forward with, one participant offered that NLM needs to be thinking beyond basic digitization, beyond scanning items and putting them online; NLM needs to be strategizing about what the next steps are beyond this in order to move NLM forward. Another participant added to this statement by asking what value can we add beyond just making items accessible?

Theme 4: Thoughts on introducing Omeka or other comparable system

While there was unanimous agreement and excitement about revamping and re-envisioning HMD online programs, many interviewees shared a concern that simply adopting another piece of software would not only be insufficient to meet the current needs but could also create more work for employees who do not have web development as part of their job descriptions. There was concern that administration is hoping for a "magic bullet" in the form of a piece of software such as Omeka to fix problems that would be better fixed by institutional investment of time, resources, and skills that are lacking. While some participants were welcoming or even desiring of the ability to have more direct control and creative license of websites through a user-friendly tool such as Omeka, others are not interested in having additional responsibilities or being expected to master and/or manage yet another piece of software. There was concern that any new tool will have to fit into the current infrastructure and systems and that this demand will lead to problems in implementation. However, in the event that Omeka or other software could effectively improve current systems, participants were welcoming of its introduction. Although they expressed a healthy amount of caution and had realistic expectations, interviewees are welcoming of new tools that would streamline and simplify the creative presentation of digital resources. And, in the event that Omeka could successfully interact with the current framework while supporting the presentation of more visually interesting and interactive resources, staff were very supportive. However, they emphasized that clear delineation of who would be responsible for mastering, maintaining, and training others on the software would be necessary. While many interviewees were simultaneously skeptical and optimistic about adopting a new tool such as Omeka, overall the group was split between those who would welcome it and those who would be hesitant.

Use Cases

Primary	Secondary	Tertiary
<ul style="list-style-type: none"> • Improved searching • More metadata granularity • Inclusion of design principles • Programming skills not required • Accommodates a variety of file formats • Integration with social media • Interactive capability for users • Single item can display in multiple locations • 508 compliant • Incorporates quality control • Provides technical support • “One stop” browsing • Ability to be updated by multiple users • Minimal maintenance • Customizable appearance • Templating of layout 	<ul style="list-style-type: none"> • Content exposed to search engines • Ability to integrate items from outside locations • Metadata can be harvested by other institutions • Ability to present items through GIS mapping functionality • Ability to present items on a timeline 	<ul style="list-style-type: none"> • Captioning for video files • Integration with course management software • Allow users to save personalized information • Ability to apply metadata to Word and PDF files • Ability to rename and move files on the back end • Inclusion of a mobile application builder • Inclusion of rights management procedures • Ability to create usage reports • Inclusion of a recommending system • Ability to upload and manage files remotely • Expression of relationships between items

Figure 1: Use cases

One of the primary objectives of the project was to create a series of use cases for a web publishing platform to support the creation of curated websites at NLM. Use cases serve to identify and define all of the business processes that a system must support. They outline all of the tasks, functionalities, and capabilities that a system should provide.¹⁵ The use cases in this project were structurally modeled after the ones that were created for the Cholera Online project, which were presented in a bullet-pointed style and organized according to three levels of priority.¹⁶ In total there are 32 use cases, with 16 in the primary category, 6 in the secondary category, and 11 in the tertiary category. A list of all use cases is available in Figure 1, and a list with more explanation of individual use cases is available in Appendix A: Use Cases. In terms of need fulfilled or service provided, they fall generally into four distinct areas, many overlapping. These four areas include feature-, access-, technically-, and process-oriented use cases. Feature-type use cases include GIS mapping, timelines, social media integration, and a recommending

¹⁵ Overview of use cases provided by Cindy Rankin, HMD

¹⁶ <https://wiki.nlm.nih.gov/confluence/display/DP/Draft+Use+Cases+for+Cholera+Pilot+Collection>

system. Access-oriented use cases include things like improved search functionality, federated or “one-stop” searching, and increasing both the amount of metadata and the granularity of it. Technically-oriented use cases include the accommodation of a wide variety of file formats, availability of technical support, the ability to integrate items from outside locations, and making metadata harvestable by other institutions. Finally procedure-oriented use cases include having quality control stopgaps and copyright management processes integrated into the system.

Proof-of-Concept Website

Once the use cases were established, the Associate created the proof-of-concept website, with the end goal of evaluating the use cases against Omeka’s performance. Doron Shalvi of OCCS and John Doyle of



Figure 2: Omeka exhibit homepage, proof-of-concept website

TSD were instrumental in all steps throughout the development of the proof-of-concept. A screenshot of the exhibit homepage in Omeka can be seen in Figure 2, and a screenshot of an item page in Omeka can be seen in Figure 3. A chart showing all use cases, whether or not Omeka can meet, and how each one was verified is available in Appendix E: Use Cases and Omeka. Overall, Omeka is capable of meeting a majority of use cases. In total, out of 32 use cases, it can satisfy 19, or 59%. Out of 16 primary use cases, it satisfies 11, or 69%. A list of all use cases highlighting the ones that Omeka can satisfy is available in Figure 4.

City Of Louisville, Kentucky, Showing Sewers Constructed and being Constructed.

All Titles

City Of Louisville, Kentucky, Showing Sewers Constructed and being Constructed.

Dublin Core

Title

City Of Louisville, Kentucky, Showing Sewers Constructed and being Constructed.

Subject

public health - United States

Cholera

Louisville, Kentucky

Description

Map dated Jan. 1873 of Louisville, Kentucky, showing sewers constructed. Cholera outbreaks are marked in manuscript.

Date

1873

Rights

The National Library of Medicine believes this item to be in the public domain.

Format

1 print : engraving, color ; 47 x 62 cm.

Files



Tags:

cholera, Kentucky, Louisville, sewers

Citation

"City Of Louisville, Kentucky, Showing Sewers Constructed and being Constructed." *NLM Digital Projects*, accessed August 19, 2011, <http://omekadev.nlm.nih.gov/omeka/items/show/36>.

[< Previous Item](#)

[Next Item >](#)

Geolocation



Social Bookmarking 

Figure 3: Item page in Omeka

Use Cases that Omeka is Able to Satisfy

- **Improved searching**
- **More metadata granularity**
- Inclusion of design principles
- Programming skills not required
- Accommodates a variety of file formats
- **Integration with social media**
- **Interactive capability for users**
- **Single item can display in multiple locations**
- **508 compliant**
- Incorporates quality control
- Provides technical support
- **“One stop” browsing**
- **Ability to be updated by multiple users**
- **Minimal maintenance**
- **Customizable appearance**
- **Templating of layout**
- **Content exposed to search engines**
- Ability to integrate items from outside locations
- Metadata can be harvested by other institutions
- **Ability to present items through GIS mapping functionality**
- **Ability to present items on a timeline**
- Captioning for video files
- Integration with course management software
- **Allow users to save personalized information**
- Ability to apply metadata to Word and PDF files
- **Ability to rename and move files on the back end**
- **Inclusion of a mobile application builder**
- Inclusion of rights management procedures
- Ability to create usage reports
- Inclusion of a recommending system
- **Ability to upload and manage files remotely**
- **Expression of relationships between items**

Figure 4: Use cases that Omeka is able to satisfy, in bold.

A significant aspect of the test was the Fedora plug-in, called FedoraConnector. Although all of the metadata was coming through from Fedora without any issues, images and thumbnails were not coming through at all. A screenshot showing the issues with the FedoraConnector is available in Appendix F: Plug-ins and Features. There were several rounds of troubleshooting this issue, including extensive conversations between Doron Shalvi and Wayne Graham at the Department of Digital Research and Scholarship, University of Virginia, who developed the plug-in. The new version of FedoraConnector that was released during the project was also installed, but this did not solve the issue. It was ultimately decided that enough time had been invested in troubleshooting the issue, and that at this time the FedoraConnector was not functioning properly with Digital Collections. It is unclear if the problem resides inherently with the plug-in, or if there is an issue relating to how NLM's repository is configured.

More time dedicated to troubleshooting and working with the FedoraConnector could uncover and solve the issue, however due to time and resource limitations it was not possible to go further with it in this particular project. The Associate later found out from Wayne Graham, developer of the FedoraConnector, that currently no one has built a website using the FedoraConnector, and that they still consider it to be in development. It is not currently included on the list of available plug-ins. This process provided an opportunity to evaluate the customer support and documentation available for Omeka. Although it is possible to contact Omeka directly,¹⁷ the user support infrastructure consists primarily of documentation provided on Omeka's website¹⁸ and user forums, which are useful but do not guarantee support in instances such as this one where no other users are familiar with your issues.¹⁹

All of the other tested plug-ins were successful (including the SocialBookmaring, Geolocation, Contribute, and ExhibitBuilder plug-ins) except for the Timeline plug-in, which required additional programming in order to implement. Screenshots of the plug-ins, and other features such as tagging, from the proof-of-concept can be seen in Appendix F: Plug-ins and Features.

Omeka User Interviews

In order to expand on the knowledge that was gained throughout the project, and also to validate or challenge the results of the evaluation, the Associate interviewed librarians at two other institutions who use Omeka.

Smithsonian Libraries

Developed by the Museum on Main project at the Smithsonian Libraries, Journey Stories²⁰ is a traveling exhibition that opened in May 2009 in many locations across the country. A screenshot of the exhibition homepage can be seen in Appendix I: Other Omeka Websites. The exhibition explores the mobile nature of Americans; why we move, how we move, and what that says about us. It contains content both from the participating libraries' collections and from the public. The Associate corresponded with Robbie Davis, who works on the project. They chose Omeka because they needed a tool that allowed many local partners to participate and also did not require a great deal of technical training, in order to enable the continuation of similar projects after the original exhibition has gone.

Overall, they are pleased with Omeka, particularly for how it facilitates such involved collaboration at a minimal cost, and also with the fact that it is constantly growing through the addition of new plug-ins and features. They opted to use one of Omeka's layout themes, but found that even with this it required a significant amount of legwork to display appropriately. Even still, they are not nearly as happy with the appearance of the site as they are with the functionality of it. They reported that they have only had to perform minimal maintenance to keep the site going. They have recently decided to use Omeka again to

¹⁷ <http://omeka.org/about/contact/>

¹⁸ <http://omeka.org/codex/Documentation>

¹⁹ <http://omeka.org/forums/>

²⁰ <http://journeystories.org/>

build a much bigger and more ambitious project. The bulk of the email correspondence that I shared with Robbie Davis is available in Appendix H: Pertinent Correspondence.

University of Minnesota

The University of Minnesota used Omeka to create their “Memorial Stadium: 1924-1992”²¹ digital archive and website, which focuses on their old football stadium. A screenshot of the website can be seen in Appendix I: Other Omeka Websites. They were interested in seeing how archival resources and digital technology could capture and share institutional history. Photos, game footage, programs, correspondence, reports, and blueprints from the University Archives’ collections were scanned and uploaded into Omeka. There is also a section where users can add their own stories.

The Associate spoke with Erin George, Shane Nackerud, and Jason Roy of the University Archives. They chose Omeka because they wanted to create a community space for people to share stories, while demonstrating the uniqueness of the archives. They were not aware of another tool besides Omeka that is capable of this. They have also been quite pleased with it, and echoed the experience of having to do lots of legwork in the beginning, but after that, only minimal maintenance. They took a layout theme and did lots of editing of the code to create their own appearance. They reported that the search functions work very well, and that it has been very easy for lots of people to collaborate using it. In terms of difficulties, they had hoped to use the OAI-PMH (Open Archives Initiative-Protocol for Metadata Harvesting) Harvester plug-in to share metadata, but were unable to get it to work. They also had hoped to stream video through Omeka and found that they had to write their own code in order to accomplish this. Similar to NLM, they had originally hoped to use Omeka in tandem with another Content Management System such as Fedora but found that this was not yet a viable option. The Memorial Stadium site has drawn a great deal of traffic to the library’s collections, and they’ve had a lot more people come to the library in person to see material since the site has been up.

Discussion

While Omeka is clearly capable of presenting and interpreting content in ways that NLM has not done thus far, and meeting a majority of use cases, unfortunately the FedoraConnector, which was one of NLM’s main interests in Omeka, is not fully functional at this point. Additionally, the layout themes that Omeka provides offer only a very simple display with additional alignment and spacing issues that require additional programming and editing of code to fix. Although it was hoped by some interview participants that Omeka might have some principles of design built into its infrastructure, it unfortunately does not, and therefore cannot satisfy the much-discussed need for improved web design. For these reasons, this project does not support NLM’s adoption of Omeka at this time. This conclusion is not meant to undermine or depreciate the value of Omeka; it is a tool with immense value and a great amount of potential that, for NLM’s purposes, should be re-evaluated in concordance with the development of the FedoraConnector. It could also be considered as a tool to use on a piecemeal basis with items that are

²¹ <http://brickhouse.lib.umn.edu/>

uploaded directly into Omeka, however, this could end up exacerbating issues with information silos and disjointedness among HMD sites.

The interviews and use cases provide a knowledge base to support the development or adoption of new tools to use in HMD online programs. They are completely independent of Omeka, and can be used to evaluate other software, to enhance existing software, or to develop new software for use in HMD.

Although there is fear among HMD staff to express many of these concerns publicly, they should feel confident that their colleagues share in their concerns, and while individuals may be coming from different perspectives, everyone together has a shared vision to improve the quality and creativity of HMD digital programs, while improving workflows and reducing unnecessary burdens. There is really a great deal of enthusiasm among the staff to increase the exposure of NLM collections online and reach new audiences through newly imagined methods. NLM has a great opportunity at hand to realize digitization programs that are comparable to those of our peers, and there is much fascinating work to be done as a part of this process. It's an exciting opportunity to bring new ideas to fruition and reach out to NLM's users. Hopefully the work completed in this project can begin to answer some of the foundational questions brought up in the interviews, including how to move beyond the initial steps of digitizing items and making them accessible online and how to move into the next generation of digital resources.

Future Directions

Although the FedoraConnector was unsuccessful and this project does not support the adoption of Omeka at this time, the procedures, use cases and collective vision that were developed as part of the process can be used to evaluate other options. Other software could be evaluated in a similar manner, and NLM's current systems, including TeamSite and Fedora, could be evaluated against the use cases to see how well they could support these needs. Existing resources could be modified to accommodate the needs outlined in this project, or new ones could be developed. Because Omeka was quite successful independent of the FedoraConnector, it makes sense to re-evaluate it later and follow the development of the FedoraConnector.

Although it was unintended, the project revealed a near-unanimous description of an institutional need for web design expertise. Further analysis could explore potential ways to meet this need.

The suite of use cases presented here could be enhanced by gathering additional feedback from NLM website visitors and library users. These users may have ideas and desires that staff haven't thought of or expected. As the Ad Hoc Committee for online programs also outlined a plan to conduct user studies to better understand users of HMD web resources and their needs, this process may uncover additional approaches to enhancing and enriching online programs in HMD. This project can serve as a solid piece of the foundation to realize a new generation of HMD online programs.

Acknowledgments

Many thanks to Jeff Reznick and Jennifer Marill for extraordinary guidance and inspiration, and the opportunity to learn so much about HMD and the Digital Repository. Thank you to John Doyle and Doron Shalvi for their assistance in the creation of the proof-of-concept website and technical support. Thank you to Cindy Rankin for providing background information on usability and use cases. Many thanks to Kathel Dunn, Troy Pfister, Jeanette Johnson, Angela Ruffin, and the 2010-2011 Associate Fellows for their support and guidance throughout the year. Thank you to the Omeka outreach team and to the librarians at the University of Minnesota and Smithsonian Libraries who took time out of their days to speak with me about Omeka. Many thanks to Dr. Lindberg, Betsy Humphreys, Sheldon Kotzin, Becky Lyon, and Joyce Backus for their support of the Associate Fellowship Program and for providing me with this incredible opportunity.

Appendix A: Use Cases

Primary

- Improved searching capability including advanced search features, ability to search on specific metadata fields, and improvement of both comprehensiveness and relevancy of results
- More granularity with metadata display: increased amount of metadata, and the ability to control how much of it is shown within each website/page or exhibition
- Inclusion of design principles and focus on visual presentation
- Advanced technical skills not required to build websites or exhibitions
- Accommodating of a wide variety of file formats including Word documents, PDFs, videos, images, etc.
- Integration with social media sites: the ability to share exhibitions, websites, and individual items on social media sites such as Facebook and Twitter
- Interactive capability for users: ability for end users to contribute content, comments, and/or metadata
- Ability for a single item to be displayed in multiple locations
- 508 compliant
- Incorporates quality control measures into workflow
- Availability of reliable and consistent technical support
- Provision of a central, browseable location for all web resources, exhibits, and programs
- Ability to be updated and managed easily by multiple users
- Only requires minimal maintenance
- Flexibility in presentation between pages; layout and design customizable
- Templating of layout and appearance so there is consistency in appearance and navigation between websites and exhibitions

Secondary

- Content exposed to search engines
- Ability to integrate books and other objects from other locations such as NCBI Bookshelf
- Metadata can be harvested by other institutions
- Ability to display as much metadata as possible and/or to customize what metadata is displayed at the item and collection or exhibit level
- Ability to present items through GIS mapping functionality
- Ability to present items on a timeline

Tertiary

- Captioning for video files
- Integration with educational course management software such as SmartBoard and Blackboard
- Allow users to develop new websites/exhibitions/series with content: expand beyond static “pushing” of information

- Allow users to save favorites, preferences, and personalized information
- Ability to apply metadata to Word and PDF files themselves
- Ability to rename and move files on the back end without having to then recreate everything
- Inclusion of a mobile application builder
- Inclusion of rights management processes and procedures
- Reporting capability: ability to create weekly or monthly reports on site visits and usage
- Inclusion of a recommending system: suggesting other items a user might be interested in based on what they have browsed
- Ability to upload and manage files remotely
- Expression of relationships between items

Appendix B: Original Project Proposal

PROJECT TITLE: Evaluation of the Omeka Web-Publishing Platform for Creating HMD-Curated Web Sites Utilizing NLM Digital Repository Objects

SUBMITTED BY: Jeffrey S. Reznick, History of Medicine Division and Jennifer Marill, Technical Services Division

DATE SUBMITTED: January 21, 2011

BRIEF DESCRIPTION:

Background

As the storehouse of the world's medical memory, the National Library of Medicine deserves a broad vision that will enable it to continue to create a dynamic, virtual knowledge environment that will enrich the lives of people around the world. In order to create this environment for the breadth and diversity of NLM's customer base, it is important to think creatively and strategically beyond the work of NLM's burgeoning digitization program. NLM seeks to contextualize digitized material; and envision, develop, and implement products and services to deliver digitized and born digital material to NLM's diverse audiences.

As NLM expands its digitization program, HMD continues its central role in identifying and supplying key content and inspiration gathered from the expertise of its diverse staff, including librarians, historians, curators, archivists, collection managers, and education and exhibition specialists. More specifically, HMD plays a lead role in creating gateways to understanding NLM's collections, opportunities for new audiences to engage with NLM's collections, and using technology to enhance audiences' experiences with NLM's collections.

TSD is responsible for leading the development of the NLM Digital Repository, Digital Collections. Digital Collections, using Fedora Repository software, provides the infrastructure for ingesting, managing, preserving and making accessible a variety of digitized and born digital content in numerous formats.

HMD and TSD jointly propose this Associates Project as a first step toward advancing the curation of NLM holdings, using technology to enhance audience experiences with NLM collections, and continuing to build on the nascent NLM Digital Repository infrastructure.

As a key component of the mission described above, HMD curates a variety of web sites which make publicly available in narrative formats a variety of digital material: books, ephemera, images, journals, and historical audio-visuales. Currently these curated sites are created either in house, using NLM's enterprise content management system, Teamsite, or they are outsourced to a commercial design company and then mounted in cooperation with HMD's web team.

As the NLM Digital Repository grows, becoming the Library's platform and "digital stacks" for managing and preserving source digital materials, tools and applications will be needed to more readily enable the creation of curated web sites. TeamSite is a valuable platform for hosting and serving NLM web pages but offers limited capabilities for serving both source materials and dynamic web presentations of digital objects. Omeka is a relatively new web publishing platform that may enable HMD staff to

curate more efficiently online presentations of the managed objects. HMD staff engaged in curation could do so in a new and dynamic way “on top” of the repository platform.

Project

This project proposes an evaluation of the Omeka web-publishing platform to determine its suitability as a tool for creating curated web sites by HMD staff. Omeka is open-source software from George Mason University’s Center for History and New Media. Creators of Omeka describe this resource as having a simple but flexible templating system which allows users to focus on exposing and interpreting the content. Notably, Omeka also offers a “FedoraConnector” plugin which makes it possible to use objects in a Fedora repository for Omeka-driven web presentations.

The proposed project would have three phases: **Phase I** would have the Associate working with the HMD project leader to determine the criteria for evaluating Omeka. This would involve consulting with multiple units in HMD to gather a comprehensive set of functional requirements and/or use cases. Omeka would be installed on an NLM PC or server.

In **Phase II**, the Associate would evaluate the software by creating sample curated web sites from digital resources and textual description contributed by HMD staff and then comparing its functionality against the requirements compiled in Phase I.

Following this evaluation of Omeka “out-of-the-box”, the Associate in **Phase III** of the project would create a “proof of concept” Omeka web site drawing from Fedora-managed resources. The Associate would be assisted in Phase III by select Digital Repository Working Group members.

DURATION (Months): 3 months FTE

EXTERNAL SCHEDULES / DEADLINES: None

PRIMARY LEARNING OBJECTIVES AND PROJECT EXPERIENCES FOR ASSOCIATE:

- Gain insight into the creation of curated web sites as practiced by NLM’s History of Medicine Division.
- Experience in creating a set of requirements and use cases.
- Develop an understanding of the Omeka web publishing platform.
- Learn about NLM Digital Repository functions and capabilities.
- Knowledge of NLM staff, skills, products, and services

EXPECTED OUTPUTS / PRODUCTS:

- A list of functional requirements or use cases for a curated web site building tool that would serve multiple units within HMD.
- Evaluation of Omeka based on direct experience using the software with a recommendation for or against implementing it for HMD curated web sites.
- At least one, small sample web site created in the course of the evaluation, and at least one, small sample curated web site to demonstrate an Omeka/Fedora interaction (assuming the FedoraConnector investigation is successful).
- If time permits an environmental scan of other similar products that may or may not have a Fedora plugin.
- The Associate would present the results of the evaluation to NLM staff, along with an explanation of the methodology used and the curated web sites created.

SUGGESTED METHODOLOGIES:

- Meet with HMD staff in all of its sections to gain an understanding of the current processes in place for creating curated web sites and to identify what staff would like to be doing but are not currently able to with existing technology and resources (e.g. staff may have examples from other institutions).
- Perform research for developing a functional requirements or use cases document for software evaluation.
- In cooperation with TSD and HMD, review the online documentation for installing, configuring and using Omeka, including research into the plug-ins available which might be relevant for HMD curated web sites.
- Meet with GMU/CNM staff to learn more about Omeka, its user community, and its software roadmap.
- The exact project methodology will be developed by the Associate in consultation with the Project Leaders.

BENEFITS TO NLM:

- The evaluation of Omeka's suitability for HMD's curated web site needs
- The list of requirements and use cases for creation of curated web sites.,In addition to helping evaluate Omeka, the list could be used to evaluate other software in the future.
- The proof of concept for Omeka as an add-on to Fedora could suggest new ways to present the digital assets managed by the repository, extracting more value from the digitization of these resources.

PROJECT LEADERS:

Jeffrey S. Reznick, HMD
Jennifer Marill, TSD

OTHER RESOURCE PEOPLE:

Selected HMD staff
John Doyle, TSD
Jenny Heiland, PSD
Members of the Digital Repository Implementation Group

ADDITIONAL INFORMATION:

<http://omeka.org/>

Appendix C: Interview Questions

Background and Experience

Please share with me a brief description of the work you do in HMD.

How long have you been in your current position?

What are your main responsibilities?

What is your educational background?

How much experience do you have with web development?

Have you had additional training for your web responsibilities outside of any formal training? Where have you learned your web skills?

In terms of your specific profession what do you see as your primary professional role?

Visions and wishes

How do you see the web-development work you are undertaking in HMD fitting with:

- a. your professional goals
- b. the mission of HMD and the vision outlined in the HMD Web Committee Ad Hoc Report
- c. the mission of NLM/NIH

What web resources are currently available to you to achieve these goals?

What functionalities would you look for in a new web-development platform? What would be your highest priorities, and your lowest?

Current tasks and procedures

What specific web projects are you currently pursuing in HMD?

Approximately how many hours each week do you dedicate to developing or maintaining HMD websites? Is it a primary, ongoing part of your job or just occasional?

Above and beyond the workflow outlined in the HMD Web Committee Ad Hoc Report, please share with me procedures you must follow to get a website up and running.

Technical environment and skills

Please share with me details of **the tools** you currently use to develop web sites? How did you learn these tools?

How comfortable are you with the current **steps** you take and the **tools** you use?

Current challenges and difficulties

Are there goals you are currently unable to accomplish due to limitations of the current systems or procedures? Goals you can only accomplish with difficulty? (In what ways does the current technology prevent you from realizing your visions?)

Are there things that make it difficult to accomplish your web responsibilities?

Please share with me a time when you could not accomplish what you wished to accomplish under current processes and using currently-available tools.

Professional Outlook

What motivates you as you undertake your duties in HMD?

What are your thoughts about the possibility of introducing a new resource – based on thoughtful feedback and careful planning – to help you, and thus HMD, develop better web sites?

How do you best learn new skills, particularly as they relate to computers and software?

Appendix D: Contacts

George Mason University, Roy Rosenzweig Center for History and New Media, Developers of Omeka

<http://chnm.gmu.edu/>

outreach@omeka.org

Smithsonian Institution Traveling Exhibition Service, Journey Stories website

<http://journeystories.org/>

Robbie Davis, DAVISPR@si.edu

University of Minnesota Libraries, Digital Library Services, Memorial Stadium 1924-1992 website

<http://brickhouse.lib.umn.edu/>

Erin George, georg038@umn.edu

Shane Nackerud, jasonroy@umn.edu

Jason Roy, jasonroy@umn.edu

University of Virginia, Scholars Lab and Neatline Project, Developers of the FedoraConnector plug-in

<http://www2.lib.virginia.edu/scholarslab/>

<http://neatline.wordpress.com/>

Wayne Graham, wsg4w@eservices.virginia.edu

Appendix E: Use Cases and Omeka

Priority Level	Use Case	Satisfied by Omeka?	Notes on how use case is satisfied, problems, etc. (if applicable)	How verified?
Primary	Improved searching	Yes	Advanced search feature is provided	Tested in proof-of-concept
Primary	More metadata granularity	Somewhat	There are plug-ins to extend the Dublin Core fields, and for EAD	Documentation: “ Plug-ins ” section including Dublin Core Extended and EAD Importer
Primary	Programming skills not required	No	Programming skills not required to get a very basic site up, but to meet many of NLM’s needs, they are required	Tested in proof-of-concept
Primary	Inclusion of design principles	No	Templates are limited and not visually robust	Tested in proof-of-concept and discussed in Omeka user interviews
Primary	Accommodating of a wide variety of file formats	Somewhat	Not able to stream video, but otherwise in theory accommodates most file types	Discussed in Omeka user interviews, Documentation: “ Managing Files ” section
Primary	Integration with social media	Yes	SocialBookmarking plug-in	Tested in proof-of-concept
Primary	Interactive capability for users	Yes	“Contribute” plug-in, “Intense Debates” plug-in for commenting, “MyOmeka” plug-in for customization	Tested in proof-of-concept and conversation with developers
Primary	Single item displayed in multiple locations	Somewhat	Items can only belong to one “collection,” but can display in multiple exhibits and also be tagged	Proof-of-concept test, Documentation: “ Managing items ”
Primary	508 compliant	Yes	Built using standards-based web design, additional plug-ins assist with visual impairment	Email with Omeka developers, various plug-ins from braillesc.org/development

Primary	Quality control	No		Explored in proof-of-concept and conversation with Omeka developers
Primary	Availability of technical support	No	Support is mainly limited to documentation and user forums	Participation in forums, and questioning of other users
Primary	Provision of a central browsing and viewing location	Yes		Tested in proof-of-concept, viewed on other Omeka sites
Primary	Ability to be managed by multiple users	Yes		Tested in proof-of-concept, conversations with other Omeka users
Primary	Only requires minimal maintenance	Yes	But only after significant work is put in to get the site up	Verified through conversations with other Omeka users
Primary	Layout and design are customizable	Yes	It's possible to create your own design and lay it on top of Omeka	Documentation: " Theme Writing Best Practices ," viewing of other Omeka sites
Primary	Templating of layout and appearance	Yes		Tested in proof-of-concept, documentation: " Managing Themes "
Secondary	Content exposed to search engines	Yes		Email with Omeka developers
Secondary	Ability to integrate objects from other locations	Somewhat	Only through hyperlinking	Email with Omeka developers
Secondary	Allow others to harvest metadata	Yes	OAI-PMH Harvester plug-in, but interviewed Omeka user had tried to use it and had many issues	Documentation: " Plug-ins ," interview with Omeka user
Secondary	Ability to present items using GIS mapping	Yes	"Geolocation" plug-in	Tested in proof-of-concept
Secondary	Ability to present items on a timeline	Yes	"Timeline" plug-in, requires additional programming	Attempted to test in proof-of-concept
Tertiary	Captioning for video files	No		Interview with Omeka user
Tertiary	Integration with course management software	No		Email with Omeka developers
Tertiary	Allow users to	Somewhat	"MyOmeka" plug-in	Documentation: " Plug-

	create customized sites, save favorites and preferences		allows some of this	ins/MyOmeka ”
Tertiary	Ability to apply metadata to Word and PDF files	Yes		Documentation: “ Managing files ,” Email with Omeka developers
Tertiary	Ability to rename and move files on the back end	Yes		Email with Omeka developers
Tertiary	Inclusion of a mobile application builder	Yes		Documentation: “ Prototype Omeka plugins for mobiles ”
Tertiary	Inclusion of rights management procedures	No	But there is the Dublin Core field “Rights” where this information can be included	Documentation: “ Working with Dublin Core ”
Tertiary	Reporting capability	No	But you can manipulate code to incorporate Google Analytics	Email with Omeka developers
Tertiary	Inclusion of a recommending system	No		Email with Omeka developers
Tertiary	Ability to upload and manage files remotely	Yes		Email with Omeka developers
Tertiary	Expression of relationships between items	Yes, to some extent	Multiple “files” can be associated with an “item”	Documentation: “ Managing items ”

Appendix F: Plug-ins and Features

SocialBookmarking Plug-in

NLM Digital Projects

Home Browse Items Browse Collections Map Browse Exhibits Contribute an Item

City Of Louisville, Kentucky, Showing Sewers Constructed and being Constructed.

All Titles
City Of Louisville, Kentucky, Showing Sewers Constructed and being Constructed.

Dublin Core

Title
City Of Louisville, Kentucky, Showing Sewers Constructed and being Constructed.

Subject
public health - United States
Cholera
Louisville, Kentucky

Description
Map dated Jan. 1873 of Louisville, Kentucky, showing sewers constructed. Cholera outbreaks are marked in manuscript.

Date
1873

Rights
The National Library of Medicine believes this item to be in the public domain.

Format
1 print : engraving, color ; 47 x 62 cm.

Files



Tags:
cholera, Kentucky, Louisville, sewers

Citation
"City Of Louisville, Kentucky, Showing Sewers Constructed and being Constructed.," *NLM Digital Projects*, accessed August 19, 2011, <http://omeka.dev.nlm.nih.gov/omeka/items/show/36>.

< Previous Item Next Item >

Geolocation



Social Bookmarking

Home Browse Items Browse Collections Browse Exhibits Contribute an Item

Design by Adam C. Smith. Proudly powered by Omeka.

Tagging

The screenshot shows the NLM Digital Projects website. At the top, there is a dark blue header with the title "NLM Digital Projects" in white. To the right of the title is a search bar with a "Search" button and the text "Advanced Search" below it. Below the header is a navigation menu with links: "Home", "Browse Items", "Browse Collections", "Map", "Browse Exhibits", and "Contribute an Item".

The main content area is titled "Browse by Tag". Below this title are two tabs: "Browse All (1)" and "Browse by Tag (10)". The "Browse by Tag (10)" tab is active. Below the tabs, there is a list of tags: "maps", "cholera", "public health", "India", "United States", "Kentucky", "Louisville", "sewers", "Nashville", and "Tennessee". The tags "maps" and "cholera" are underlined. The tag "cholera" is the largest and most prominent.

At the bottom of the page, there is a dark blue footer with the same navigation menu: "Home", "Browse Items", "Browse Collections", "Browse Exhibits", and "Contribute an Item". Below the navigation menu, there is a small line of text: "Design by Adam Cymbala. Proudly powered by Omeka."

NLM Digital Projects

 Search
Advanced Search

Home Browse Items Browse Collections Map Browse Exhibits Contribute

Contribute

What type of item do you want to contribute?

Title

Story Text

Upload a file (Optional)

Find A Geographic Location For The Story:



Name

Email Address

Publish my contribution on the web.
In order to contribute, you must read and agree to the [Terms and Conditions](#).

I agree to the Terms and Conditions.

Home Browse Items Browse Collections Browse Exhibits Contribute an Item

Geolocation Plug-in

The image displays a geolocation plug-in interface. At the top, there are tabs for "Map" and "Satellite". The main content area features a title "Cholera map of Lancaster, Ky., 1873" above a historical map titled "MAP OF LANCASTER, KY. SHOWING THE LOCATION OF EACH CASE OF CHOLERA 1873." This historical map is overlaid on a modern Google Maps view of the same area. The modern map shows several red location pins in the Kentucky region, with a white callout box pointing to one of them. The interface includes a search bar, a person icon, and zoom controls. At the bottom, there is a navigation menu with links: "Home", "Browse Items", "Browse Collections", "Browse Exhibits", and "Contribute an Item". A footer note reads "Design by Adam Crymble. Proudly powered by Omeka."

FedoraConnector Plug-in

The screenshot displays the 'NLM Digital Projects' website interface. At the top, there is a search bar and navigation links: Home, Browse Items, Browse Collections, Map, Browse Exhibits, and Contribute an Item. The main content area is titled 'Browse Items' and includes filters for 'Browse All (1)' and 'Browse by Tag (10)'. Three items are listed:

- An account of...**: A placeholder image with a large 'X' over it. Below it is the text 'NLM Permanence Rating'.
- [Untitled]**: A placeholder image with a large 'X' over it.
- Cholera**: A map showing endemic areas of cholera. Below it is the text 'Map showing endemic areas of'.

Annotations are present:

- A box labeled 'Fedora items' with a red arrow pointing to the 'An account of...' item.
- A box labeled 'Item directly uploaded to Omeka' with a red arrow pointing to the 'Cholera' item.

Appendix G: Initial Introductory Letter to Interviewees

Thank you for your willingness to participate in the Omeka project. Your assistance will help HMD lay the groundwork for creating even more robust and vibrant online programs, and work toward the objectives outlined by the Ad Hoc Committee. As you know through your discussions with Jeff Reznick, I am assisting HMD and TSD with the evaluation of the Omeka web publishing platform to determine its viability for creating HMD curated websites. As part of this process, we also aim to develop a list of functional requirements needed for an NLM web publishing platform and gain a sense of the range of experiences and skills that inform web contributors' work. This project is being undertaken with the intent to afford you a greater deal of efficiency and creative agency in your work.

In order to gain a sense of what HMD needs in a web publishing platform, I'd like to gather some input and information from you. I'm wondering if you might have an hour to spend talking with me at some point between April 4th and April 12th? Please let me know a few times between these dates that you would be available to meet.

To offer a bit of information about myself, I am personally excited to be a part of this project. I was interested to work with HMD because I have a strong interest in medical humanities, and for my master's thesis in library school I conducted research into the collecting patterns of first-person patient narratives in research libraries. Thanks for letting me take part in this project, and for finding time in your busy schedule to meet with me.

Sincerely,

Julie Adamo

Appendix H: Pertinent Correspondence

Robbie Davis, Smithsonian Libraries

Julie,

I'm so sorry that it took me so long to get back to you. I wanted to think about your questions a bit before responding.

To establish where we're coming from and the problem we looked to Omeka to solve, I work with a program at the Smithsonian called Museum on Main Street that develops traveling exhibitions for small and rural cultural organizations. We partner with state humanities councils to not only offer a SI exhibition, but also state-specific content and programmatic expertise to help local hosts develop companion exhibitions and programs to bring out local stories that complement the national exhibition. We often work with fledgling groups with all-volunteer staffs and limited financial resources, but remarkable passion. Because of that, one of the core tenets of our program is to help develop the capacity of our local hosts to do more with what they have in the future, long after the SI exhibition has left town. As we were developing the Journey Stories exhibition, it was clear from the start that there would be no limit to the local stories that complement the exhibition. Our tagline all along has been "Everyone has a journey story. What's yours?" and we were inspired to find ways of helping communities work with that. Using a web to get their stories out there presented a great opportunity. Obviously, we're a traveling exhibition service, not a collecting organization, so our approach to building an online archive was different from the very beginning. For us, the archive wasn't necessarily the central purpose, but rather, the base needed for developing new online exhibitions. We wanted to provide an archive for our hosts and help them tie those stories back to the national exhibition by developing online exhibitions.

We were long familiar with the work that the Center for History and New Media did to develop online archives with public contributions and started hearing more about Omeka as Journey Stories was developing. At the same time, interest in using the web to develop stories sourced from the public was growing within SI. We wanted to give it a try and Omeka offered us several appealing elements: 1) Foremost, the Exhibit Builder plugin offered a chance to build locally-based online exhibitions from items contributed to the archive. This was the most important consideration for us and is the primary reason that we went with Omeka. 2) Omeka offered a public contribution tool that was very much in line with new institutional priorities. We had success in the past with websites that enlisted public involvement and hoped to duplicate that success with Journey Stories. And 3) Omeka was open source and we realized that we could develop a website for minimal cost without paying a fortune to develop a specialized database.

Overall, I'm happy with Omeka as a platform because you can simply do so much with it and its functionality continues to grow with new plugins. And, we're happy to the point that we're undertaking a much more ambitious project with Omeka that we plan to introduce later this summer. But I do think it's important to recognize its limitations at the outset.

A couple of things we do not like: 1) Entering items into the database from the dashboard is not user-friendly, but rather time-consuming and ultimately too complex for our purposes -- i.e. far more information than we need. But, I think this is a special limitation for us and might not be for other organizations simply because the archive is a means to an end for us. When we have local hosts adding items, the sheer number of database fields overwhelms and for many of them Dublin Core is a new concept. And, I suspect that the complexity of the dashboard has had a detrimental impact on local participation in the website. But, it's a core element of Omeka and of the field, so I've not been inclined to back away from it. I just encourage our users to provide the information that they have and not worry about the fact that it looks daunting. I'd rather expose them to an important concept than discourage it. 2) The search functions are very good for archive items, but not at all useful for exhibitions. The only way to locate exhibitions beyond the list of exhibitions is a list of tags. But, the

problem with that is that the list is of all tags, not just tags applied to exhibitions. So, if you click on a tag, you'll often get a "no exhibition exists for this tag" response. This is a detrimental element in Omeka for us, because the exhibition is the thing for us. 3) Customization in earlier versions was not as easy as advertised. (More on that as I look at your individual questions.)

What we do like: 1) Open source: Omeka just keeps growing and improving and we didn't have to pay a fortune to play. 2) Easy public contribution tool: This is extremely important to us and it works very well. 3) Combining the item database with the exhibition builder function: We looked at Pachyderm and, while it's prettier, it just doesn't offer the functionality that Omeka does over the long-term.

In looking at your individual questions:

1) Tweaking: When we first began working on the Journey Stories website back in April of 2009, Omeka was at version .9, so it was still at a beta stage. Because of that, you had to do more tweaking to get what you wanted. We were not prepared for that and we really didn't know how to do the tweaking. A couple of things we changed: If you use the themes to create your main site, you had to do a lot of design tweaking. We had not used Wordpress themes, so PHP language and much of the CSS formatting was new to us. It took me a good six weeks of playing around to make modifications and I've never been 100% happy with the results. First, I had to read the code to figure out what Omeka was doing. And, to their credit, there are lots of comment lines in the program to help you figure out what's going on and what functions you need. But, even with that knowledge, I still believe that our website is pretty unattractive. We did not have the funds to bring in a designer with the requisite knowledge to do further tweaking. We also had to modify the item display pages and header pages to customize them and, at that time, you had to go in and tell Omeka not to show a blank database field. Now, starting our new site with version 1.3.2, our need to tweak is minimal. The Omeka team has made many refinements that you can configure as the owner of the installation: by default, blank fields in the database no longer show on item screens -- huge improvement; you can now select the fields you want to allow on the public contribution tool through the dashboard, rather than tweaking the program. The main area for tweaking remains in getting what you want aesthetically and in navigation and I think this is where Omeka's limitations do come forward. If you know PHP and CSS well, you can get what you want, but it does take time. For our new site, we're actually creating a traditional website so that we're in full control of design. From that site, we'll be linking into the Omeka database, rather than letting Omeka control our design and overall navigation.

Bottom line: if you quickly need a highly functional archive and aren't all that concerned with aesthetics, then Omeka is a great choice today. The underlying code is stronger than it was two years and more refined. The themes help you get up and running very quickly, but they're not terribly attractive. Letting the Omeka templates control the navigation of the site can be frustrating and will require some tweaking to change menu item names and other elements.

2) Plugins: On the Journey Stories website, we use Exhibit Builder, Contribution, Geolocation, Simple Pages, IntenseDebate Comments and Terms of Service. All work well and I'm satisfied with the plugins. Exhibit Builder had some earlier bugs. Sometimes, when you were creating an exhibit, half of the page you were viewing would disappear. But, all of that was corrected. I think the plugins are Omeka's greatest strength. There's always something new. For our new site, we're considering giving MyOmeka a try, in addition

3) Maintenance: Once it's up and running, Omeka doesn't require much maintenance at all except for version updates. Your primary duty is keeping up with public contributions and adding to the database. Running an Omeka site has not been difficult. Now, if our public contribution element was more active and we had more submissions to review, it might be more of an issue. But, that's not been a problem.

4) Major Issues: We've not experienced any major issues that are Omeka's fault. So, I'm completely satisfied there. Depending on server settings, initial installation can be frustrating. Our internal servers do not support LAMP, so we are not able to do an internal Omeka installation at this time. We've had much success with

Dreamhost. We attempted to use hosting through Network Solutions, but their server setups required more tweaking. Dreamhost was just much easier to handle. If you go with Dreamhost, they do allow a "one-quick installation". Be advised, it works, but ended in an installation error because it didn't install the .htaccess files that were needed. Easy to fix, but a little frustrating. Otherwise, the hosting works like a charm and isn't terribly expensive. Omeka.net now offers hosting services, but it's pricey and there are limits on the number of plugins you can use. I think it's better to be in control of your own installation if you can.

I apologize for going on and on. Omeka has been a success for us and you really can't beat its overall value. What's better than free? It does require some patience and some hand-holding for people who are entering information into the database for you.

I hope that this information is helpful! Let us know if we can help you in any way.

Best wishes for the holiday weekend.

Many thanks,
Robbie Davis

From: Adamo, Julie (NIH/NLM) [C] [julie.adamo@nih.gov]
Sent: Thursday, June 23, 2011 12:47 PM
To: Davis, Robbie
Subject: RE: Journey Stories - A User Has Sent a Message from the JS Website

Dear Robbie,

Thanks so much for your willingness to share your experiences with Omeka. I'll write out a few questions here, if you'd rather talk via phone, that's totally fine, but feel free also to respond by email.

In general, how happy or unhappy have you been with Omeka as a web-publishing platform?

How much leg-work and tweaking have you had to do in order to make it work? It is advertised as being very user-friendly and made for people who have little or no programming experience. Have you found this to be true? What kinds of additional work have you had to do to make it display and function properly?

What plug-ins do you use?

How much maintenance do you have to do to keep the sites up and running?

Have you run into any major issues with it?

I really appreciate your time and thoughts on this. I look forward to hearing your thoughts! If you'd rather talk by phone, feel free to call me at (301) 594-7527.

Thanks so much!

Julie

Omeka Outreach Team

Below is the response I received to my initial inquiry to the Omeka outreach team, from 6/24/2011.

From: Omeka Outreach [outreach@omeka.org]

I've done the best I can to answer your lengthy list of question. I hope you find this useful.

Fedora plugin: the version you are working with was posted on the dev list as a plugin in development, and CHNM developers did not create this. It is part of development occurring at UVA's Scholars' Lab through their Neatline Project. I believe they've had to rework this plugin and will be working on it for the coming year. <http://neatline.wordpress.com/> Wayne Graham is the lead developer of this project.

What is the gamut of file or documents accommodated by Omeka?

Please see these sections in the Documentation:

http://omeka.org/codex/Managing_Files

http://omeka.org/codex/Managing_Security_Settings

I saw in the documentation that Omeka produces 508 compliant websites, but I could not find further detail on this. How do Omeka sites comply with Section 508?

Accessible for screenreaders; Use of semantic HTML and standards-based web design; No use of Flash or other proprietary technology that traps content and prevents it from being read by screenreaders or other assistive devices.

There are also some additional plugins that have been developed by outside developers that help individuals specifically with visual impairments:

<http://braillesc.org/development/>

Are there any quality control measures built into Omeka?

What specifically do you mean by "quality control"?

How much maintenance is necessary on an Omeka-driven website?

This depends. Omeka sites live on LAMP servers that may require some maintenance, such as upgrading components at some point just like you would have with another type of server. Once a site is built you may or may not decide to upgrade the Omeka version it is on, that requires some time and attention.

Can Omeka expose content to Google?

If you mean, is the data/content available in an Omeka website searchable to Google? Yes. The semantic HTML, the text-based and readable URLs all make information very discoverable through Google and other search engines.

Can individual files have metadata elements, or just items?

Yes, please see http://omeka.org/codex/Managing_Files

Can users tag and add metadata?

If you mean users with a login and access to the backend, yes. If you mean public users, no. There isn't public tagging, although there is a plugin for public commenting. Very soon there will be a plugin that allows for public users to contribute transcriptions through the Scripto Tool: <http://scripto.org>

If a file is renamed or moved, will it cascade update in all locations?

Files are associated with items, and can be an item. If the item title is renamed, all of the metadata and files associated with it will continue to be associated and found with the renamed item. There is file metadata, and you may re-title files, but the files original name remains the same. It is possible to rename in the Archive folder on the server but I wouldn't recommend that. You could also re-upload the file if it has been edited.

Is there a "favorites" option on the back end?

There is a way to "feature" items, that will rotate on the homepage.

There is a plugin called My Omeka, that is in the process of getting upgraded, that allows for public users/visitors to create their own collection of items and they will be able to tag or favorite things--only accessible to them.

Can users adjust display if they need to (font size and color?)

Yes. Public users/visitors to any website, including Omeka sites, already have the ability to adjust the display of any website on their browser through their own settings. Because Omeka site themes adhere to web design standards, they will adjust well to anyone who needs to increase the font size or who turns off the CSS.

Are any reporting features available in Omeka, i.e. is there a way to download data on views and usage?

There is not a plugin for site analytics, but you can easily sign up for a Google Analytics account or something similar and paste that code into the header or footer of the Omeka site to record site traffic. There is a Bar Code and Reports plugin that will produce a list of items matching specific criteria for reporting progress on what is in the website.

Can Omeka recommend other items or exhibits that a user might be interested in?

If you are talking about an Amazon-like system that analyzes what you have been browsing and then suggests other things, we do not have a feature or plugin to do this.

Can items be uploaded remotely?

Items can be uploaded from any web browser anywhere. Admin users can work from any browser to upload items, edit items, and do any and all work in an Omeka site.

Can Omeka interact with Smartboard or other course management systems?

In what ways?

Below are answers to follow-up questions I had after compiling all of the information during the end phase of the project.

Hi Julie,

The answers to each question follow below.

On Wed, Aug 17, 2011 at 12:16 PM, Adamo, Julie (NIH/NLM) [C] julie.adamo@nih.gov> wrote:

Dear outreach team,

I had emailed a little while ago with some questions about Omeka for a project we were working on here at NLM. I have a few follow-up questions after compiling everything. I really appreciate any answers you can provide to the following questions:

Is it possible to change themes between exhibits?

It is. If you test this by building a couple of very small exhibits you will see how this works.

What plug-in is used to allow users to comment on items?

There is a plugin called Intense Debates, but it is being upgraded now to work with current versions of Omeka.

Is it possible to integrate items from outside locations into Omeka exhibits?

I'm not sure exactly what you mean by "outside locations," can you provide an example? It is possible to embed content from another website, such as a video or multimedia object that contains some type of embedable format for webpages. You may link out to other collection objects but it would just be a link out to that other system. All of that would need to occur by using the HTML editor within the exhibit builder's page. If you wish for users to see thumbnail images of items and then click to access information about that item within the same website, the items will have to reside inside the Omeka system.

Can a single item display in more than one exhibit?

Yes.

Appendix I: Other Omeka Websites

Smithsonian Libraries: Journey Stories

Journey Stories Smithsonian Institution

Search
Advanced Search

[Browse Items](#) [Browse Collections](#) [Browse Exhibits](#) [About](#) [Resources](#) [Privacy Policy](#) [Terms of Use](#)
[Contact Us](#) [Share Your Story](#)

Featured ITEM

PASSENGERS DINING IN A SHIP'S STEERAGE QUARTERS. (date unknown)

Featured Exhibit

Orphan Train Riders: Seeking New Homes in the West

Recently Added

Sailing around the Mountain

Chicago and Northwestern railroad logo



"Old Tiger" - first engine to run on Winona/St. Peter railroad



Winona/St. Peter freight house with group of workers in front



[VIEW ALL ITEMS](#)

[Home](#) [Browse Items](#) [Browse Collections](#) [Browse Exhibits](#) [About](#) [Resources](#)

University of Minnesota: Memorial Stadium, 1924-1992

Campuses : [Twin Cities](#) [Crookston](#) [Duluth](#) [Morris](#) [Rochester](#) [Other Locations](#)

 UNIVERSITY OF MINNESOTA
Driven to Discover™

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Search U of M Web sites

Memorial Stadium

1924 - 1992

[Home](#) [About the website](#) [Partners](#)



- 
the brickhouse
- 
the gridiron
- 
the pageantry
- 
the life inside
- 
your stories

Appendix J: HMD Ad Hoc Committee for Online Programs, Final Report



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

National Institutes of Health
National Library of Medicine
Bethesda, Maryland 20894

TO: Elizabeth Fee, Chief, History of Medicine Division

FROM: Ad Hoc Committee for Online Programs
Patricia Tuohy
Laurie Duquette
Stephen Greenberg
Christie Moffatt
Elizabeth Mullen
Michael Sappol
Cheri Smith
Helen Garton

DATE: January 16 2009
[revised August 18 2009](#)

RE: Final Report [with revisions](#)

The Ad Hoc Committee for Online Programs was charged with the task of developing one- and five-year strategic plans for the History of Medicine Division's web presence. (attachment A)

The Committee recommends adopting the descriptor "History of Medicine Division Online Programs" rather than History of Medicine Division website because it better represents the scope and variety of available resources (eg: digital archives, finding aids, K-12 resources, interpretive programs, etc.) that are produced by different individuals, in different Sections, for different audiences.

In response to extreme fiscal restraints and limited staff, the Committee operated under the assumption that its recommendations for one- and five-year strategic plans would have to be achievable working with existing resources. However, there was an initiative undertaken by Michael Sappol to propose new ideas and directions for the Division's Online Programs; those thoughts are included in a summary "The world out there/The world in here." When additional resources are available, those ideas may inform choices made by content providers, Section Heads, and the Chief. (attachment B)

PROCESS

Over the course of four months, the Committee met on a biweekly basis to discuss key topics related to establishing one- and five-year strategic plans as outlined in the document “Ad Hoc Committee for Strategic Planning for Online Programs.” (attachment C) Individual members formed sub-groups to develop materials in response to different topics. The sub-groups presented their ideas to the larger group for discussions, and finalized recommendations and findings for the Committee’s final report. The first topic the Committee discussed was the goal of the History of Medicine Division’s online presence. The Committee then clarified and defined the processes, resources, and responsibilities for publishing an online project as part of the History of Medicine Division Online Programs. The Committee then outlined first year objectives and then five year objectives for Online Programs.

FINAL REPORT SUMMARY

The Final Report Summary reviews the major points the Committee discussed in relation to each item of the “Ad Hoc Committee for Strategic Planning for Online Programs.” Committee recommendations are called out on page 5 and sub-group reports are identified by attachment throughout the Final Report Summary and listed on page 7.

Goals

Item 1. Absent any guidelines or mission statement for its online programs, the Committee recommends adopting the following goal so as to align with the History of Medicine Division’s mission statement and the National Library of Medicine Long Range Plans.

The History of Medicine Division’s Online Programs promote a greater historical understanding of health, science, medicine, and society through the digital presentation of the Division’s collections, interpretive programs, resources, and learning tools for a diverse, worldwide audience.

Processes and Resources

Item 1. In determining the processes and resources required to publish projects, the Committee attempted to define the audiences that use the History of Medicine Division’s online resources. Without access to formative evaluations or extensive surveys, the Committee relied on Web Trend statistics. The report “HMD Audience Evaluation Using Web Trends” shows interesting data but because of the non-specific manner by which it is gathered, the data has limited relevance. In general, though, 60% of the History of Medicine Division online audience is domestic, 40% are international from primarily English-speaking countries. The domain names that are

most frequently identified as visitors to the Division website include education sources, especially K-12. (attachment D)

Item 2. Regarding the decision making authority for Online Programs, the Committee recommends Section Heads be responsible for approving projects developed by staff in their individual Sections. Section Heads will discuss approved projects with the Chief of the History of Medicine Division during weekly meetings or management meetings to secure final approval. The Chief will approve projects developed by staff in the Office of the Chief.

Items 3., 4., and 5. The Committee prepared a detailed plan for moving projects from development to publication, including the staff involved and individual responsibilities. The Committee recommends the “Procedure for HMD New and Existing Web Implementation” be used by all staff preparing projects for the History of Medicine Division Online Programs. (attachment E)

First year objectives for Online Programs

Item 1. In addition to publishing projects that enhance the History of Medicine Division’s online presence, the Web Team is responsible for ensuring all Division websites comply with the HHS 508 Web Compliance and Remediation Framework by September 30, 2012. Compliance will require significant resources and will affect the Web Team’s ability to promote new sites. In the report “Strategy and Priorities to Comply with HHS Section 508 Requirements,” the Committee recommends an approach to accomplish this mandate that 1) acknowledges the Division’s online audiences and 2) ensures the survivability of information. Specifically:

- The Committee recommends making the most current sites and sites with the highest number of visitors priorities in establishing a schedule.
- The Committee recommends beginning an archiving process of slightly visited sites (less than 1000 unique visits/year) and older sites (8 or more years old) that are slightly visited. (attachment F)

Item 2. Conducting an evaluation of the History of Medicine Division Online Programs would provide more in-depth knowledge about audiences, preferences, and successes in communicating information than is currently available through tracking features of Web Trends. Because the National Institutes of Health Evaluation Office provides grant funding to evaluate programs, the Committee recommends submitting a grant request and undertaking a survey. In the report “Recommendation for Evaluation of HMD Online Programs” the Committee recommends that a project team to oversee this effort including grant preparation, soliciting vendor services, and managing the implementation of the evaluation include representatives from all three Sections and the Office of the Chief. (attachment G) The Chief, Web Coordinator, and the Section Heads may use the evaluation results in making broad program recommendations. Content providers may also use the evaluation results to inform their development of new websites.

Item 3. The report “HMD Web Projects” includes a production/publishing schedule for projects currently identified. The Web Coordinator maintains the schedule and updates it on a rolling basis. (attachment H)

Item 4. The Web Team is committed to publishing new projects identified in the “HMD Web Projects” report within the next twelve months.

Item 5. In its most recent incarnation, the standing Web Committee has served as an informal information sharing group about some web projects produced by some Sections of the History of Medicine Division. To encourage the ongoing informal exchange of ideas within the Division and to better respond to the formal lines of responsibilities inherent in the Division’s management structure, the Ad Hoc Committee recommends the following:

1. Content providers shall be free to consult with colleagues, scholars, experts, and the public as they see fit in the preparation and finalization of their web projects during the development phase, prior to turning their materials over to the Web Coordinator
2. The Web Coordinator shall be free to consult with content providers, colleagues, experts, and the public as she sees fit in the development of web projects
3. The Web Coordinator shall consult with and report to the Division Chief on an ongoing basis and shall participate in a meeting with the Section Heads, Deputy Chief, and Chief once a month to update management on questions, issues, problems, and successes related to the History of Medicine Division Online Programs
4. The adoption of recommendations 1 through 3 eliminates the need for a Web Committee

There was a consensus among all Committee members on the four points made above except for one dissention. Michael Sappol advocated for the redundancy of the contributions of the Web Committee citing the opportunities for individuals to work across the boundaries of individual Sections and the increased review of design and content afforded as being particularly relevant.

Five Year objectives for Online Programs

Item 1. The Web Coordinator maintains a schedule of all History of Medicine Division online projects. Section Heads and content providers are responsible for notifying the Web Coordinator as soon as they know about an upcoming project. (attachment H)

Item 2. The Web Coordinator has prepared a report “HMD Internet Websites—Section 508 Compliancy Status.” The report identifies websites as 508 compliant or not, and the estimated time it will take to make them compliant. This list will serve as the basis for making decisions identified in Item 1 of the First year objectives section. (attachment I)

Item 3. Recognizing and adapting to technical change is crucial to the success of the History of Medicine Division Online Programs. The Committee identified a strategy

and recommends the Web Coordinator, Chief, and Section Heads review the report and assign staff to engage with and be responsible for action items. (attachment J)

Item 4. The History of Medicine Division produces notable and award winning online projects. Thus far, some staff have promoted projects for the purpose of obtaining professional acknowledgement on an ad hoc basis. There is, however, potential for wider recognition if resources could be coordinated and systematized. The Committee has prepared a report of opportunities to achieve recognition through various professional associations, publications, and online sources and recommends the Web Coordinator, Chief, and Section Heads review the report and assign staff to engage with and be responsible for action items. (attachment K)