Spartan Archive: An Electronic Records Archive at Michigan State University

NHPRC Project #RE-10025-10
Final Report: April 1, 2010 - March 31, 2014

Summary and Background

This report addresses activities undertaken on "Spartan Archive: An Electronic Records Archive at Michigan State University," a National Historical Publications and Records Commission (NHPRC)-funded project between April 1st, 2010 to March 31, 2013 and later extended to March 31, 2014. This project is subsequently referred to as Spartan Archive in this report. The Michigan State University Archives & Historical Collections (UAHC) proposed to develop an electronic records archive, Spartan Archive, for the university's born-digital records and publications. UAHC used a proof-of-concept approach to build and test the sustainability of an archival solution for the long-term access and preservation of four large electronic records series produced by MSU's Office of the Registrar (RO). The original grant proposal and supporting documents for the project may be found at
http://spartanarchive.wordpress.com/project-documentation/.

During half of 2012 and early 2013, the project experienced several unforeseen situations, including the project programmer retiring, which resulted in a request to NHPRC program officer Nancy Melley for a no cost extension for an additional year. This request was officially submitted in early March 2013 and followed soon after with a report that included both a status update and the revised approach for the final, extended year. The revised approach specifically addressed the sustainability of the Spartan Archive project which had become narrowly focused on capturing the four Office of the Registrar record series. Technology staff from central IT Services at Michigan State University joined the expanded team and project management responsibilities were shifted to a certified IT Project Manager. The project continued by testing and building out the existing program code and further research and development towards a long-term, university-wide Trusted Digital Repository, subsequently referred to as TDR in this report.

Goals

Original Goals

UAHC proposed to NHPRC to develop an electronic records archive, Spartan Archive, for the university's born-digital records and publications.
1. Proof-of-concept: UAHC planned to use a proof-of-concept approach to test the sustainability of an archival solution for the long-term access and preservation of database records.

2. <u>OAIS model:</u> Spartan Archive was to be based on traditional archival principles and the Open Archival Information System (OAIS) model.
   a. Spartan Archive will support ingestion, storage, management, search/access, and preservation of selected electronic records series at Michigan State University.
3. <u>iRODS and DCAPE</u>: Utilize Integrated Rule Oriented Data Systems (iRODS) leveraging the Distributed Custodial Archival Preservation Environments (DCAPE) project. At the time of our proposal, the DCAPE project was underway to build a distributed production preservation environment that meets the needs of archival repositories for trusted archival preservation services. Unfortunately, the DCAPE project ran into its own challenges. The DCAPE site, www.dcape.org, is no longer available. Some iInformation about the project can be found at http://salt.unc.edu/DCAPE/index.html.
4. <u>MSU Collaboration</u>: Collaborate with multiple units within Michigan State University
   a. UAHC is proposed to develop Spartan Archive by focusing on three large record series produced by Michigan State University's Registrar's Office (RO) – the full catalog of Academic Programs, the Description of Courses offered each semester, and the annual Student Directory. These records series have permanent retention periods due to their institutional and historical value and are considered vital to the business of the university.
   b. Build strong partnerships with IT professionals in both the academic and administrative technology units and foster a more proactive approach to electronic records management.
5. <u>External Collaboration</u>: Share quarterly updates with the members of the Committee on Institutional Cooperation (CIC) University Archivists Group and solicit feedback from archivists at the annual face-to-face meeting during the Midwest Archives Conference.

Gap Analysis of Original Goals and Final Deliverables

1. Proof-of-concept: Focusing on building a proof-of-concept system using four sample records series of structured data was an achievable goal for this project. However, it wasn't without hurdles. At times the project focused too narrowly on the four record series, forgetting the larger goal of building a sustainable preservation environment for the university's born digital records and publications. At other times, staff were iteratively trying to apply lessons learned to building sustainable solutions, leading at times to scope creep. However, in the end, it was a successful project.
2. OAIS model: Using the OAIS model and related TRAC checklist was achieved. In fact, the main problem during the first half of the project was not using the OAIS model and ISO standards more in early models. Not all the archival staff understood the OAIS model enough to explain to the technical staff on the project. In early 2013, the Principal Investigator, Cynthia Ghering, gave a lecture to all project staff regarding the OAIS model and ISO standard. This workshop kicked off a renewal of focus on building a trusted digital preservation environment for a variety of digital content, not just the four record series used to test the TDR and processes.

3. iRODS: The project team extensively explored the possible use of iRODS with Spartan Archive and has not found a strong incentive for including it in the infrastructure at this point. Two possible applications include synchronization between the two IX storage servers (the archival storage and dark storage); this could become increasingly useful as UAHC archives larger amounts of data. Another possible use of iRODs may been if/when UAHC finds a partner willing to become a remote off-site storage location. This arrangement could be with another higher education institution, perhaps partnering with another CIC institution to back up each other's digital repository or with a cloud service provider like DuraCloud or Amazon Web Services.
4. MSU Collaboration: Much of the initial focus was on the collaboration with the Registrar's Office (RO). This collaboration, as it will with all contributors, will need to be an ongoing effort for UAHC. The central IT Services unit, Content and Collaboration (CNC), which is also directed by the UAHC director, Cynthia Ghering, has embarked on more standardizations in regards to Service Level Agreements (SLA) between customers and the IT service provider. Archival transfer agreements can also be compared to an SLA with which IT Staff in the RO and elsewhere are familiar. Future work to formalize and standardize collaborative agreements is planned and lessons learned from the Spartan Archive project will be applied.
5. External Collaboration: Project lessons were disseminated to the CIC. Future work is planned with the MSU Technology office regarding copyright and licensing of the program code and related documentation for improved external collaboration.

Proposed Deliverables

1. Develop appraisal criteria for databases. Preservation Planning activities will include analyzing the content, context and structure of each records series; identifying individual data elements to be archived for each records series; determining preservation metadata requirements for each records series and the entire collection; and determining search, navigation, and access requirements for each records series.
2. Technology to accept SIPs and create AIPs and DIPs.
3. Archival administration: Scheduled processes; review and approve AIPs; manage security and access; enforce rules and policy.
4. Preservation: Ability to produce micro-services used to store the data in iRODS for long term preservation. Rules and policy management.
5. Long-term access to these vital electronic record.
6. Dissemination: A project website; monthly reports to NHPRC, drafts of manuals and procedures, and the development of metadata standards and workflow.

Final Deliverables

1. Appraisal: See the Preservation Program section on Appraisal to review appraisal procedures and resulting data dictionaries.
2. Technology to accept SIPs and create AIPs and DIPs:
   a. Spartan Archive Ingest and Administration Software: See the section "Ingesting a Records Collection: Procedures" in the Preservation Program for illustrative

documentation on the processes and software created by the Spartan Archive project to ingest submissions for SIP creation and archival administration steps for output of AIPs and DIPs.

   b. Technical documentation: Available at
   https://spartanarchive.files.wordpress.com/2011/04/spartanarchivedocumentation.pdf.

3. Archival administration:
   a. Preservation Program: Available on the Project Deliverables page
   (http://spartanarchive.wordpress.com/project-deliverables/).
   b. TRAC Checklist: Available on the Project Deliverables page
   (http://spartanarchive.wordpress.com/project-deliverables/).
   c. Also see related material under #2 above. Some administration was built into the design of the software.

4. Preservation: Project team opted not to utilize iRODS microservices. However regular fixity checks are part of the program code developed for the project.

5. Long-term access to these vital electronic record: Spartan Archive Access Software: The access service is available at http://spartanarchive.msu.edu. See the section titled "Access" in the Preservation Program for illustrative documentation on the access procedures.

6. Dissemination the results of this project in a variety of venues.
   a. The project website is at http://spartanarchive.wordpress.com/
   b. Reports to the NHPRC are available at
   http://spartanarchive.wordpress.com/about-spartan-archive/project-documentation/.
   c. Technical documentation, prodedures, and workflow documents are at
   http://spartanarchive.wordpress.com/project-deliverables/

Future Development

The Spartan Archive project, funded through NHPRC, has been instrumental in raising the profile of preserving and making accessible the university's born digital historical record. The four record series from the Registrar's Office continue to be heavily used by alumni, administration, and researchers. More offices are asking UAHC to assist in preserving their born-digital publications, images, and documents. The new TDR was listed in central IT Services planning letter to the Executive Vice President and Provost and was one of the line items on central IT's budget request submitted for the 2014 and 2015 fiscal year. In Fiscal Year 2014 the TDR did not receive any special funding and instead was funded out of current monies. Fiscal Year 2015 allocations are not released until early Fall when the State of Michigan's government's budget is finalized in October. UAHC is continually advocating for "digital space" that is equivalent to the collections storage allocated to preserve and protect the university's historical records in analog form. The Spartan Archive project has provided UAHC with the real costs and benefits of maintaining 1 terabyte of historical records in terms that were not possible four years ago. These tangible numbers allow UAHC and central IT Services to

make a business case for preserving the university's born digital history - a business case that will most likely be funded in the near future.

Access
Accessibility
Due to staffing changes in IT Services and MSU's new accessibility standards that are currently in development, an accessibility review was not yet conducted. An accessibility review will be part of the future sustainable long-term access plan. A usability study was conducted early in the design by UAHC staff interviewing reference librarians at the MSU Libraries..

Access Tools
Islandora is an open-source framework that includes discovery tools to improve access. UAHC with CNC plans to use Islandora for the long-term access system. The Spartan Archive work will need to be ported, modified, or at the minimum linked to, from Islandora. We are currently exploring the possibility of using Islandora to access the DIPs created by Archivematica which will be part of our long term sustainable solution. See the section regarding Other Tools below for more information about Archivematica.

Preservation Program

The preservation program will continue to develop. Information regarding the Spartan Archive project work and the long term solution, which is referred as the Trusted Digital Repository (TDR) are both documented in the Preservation program.

Storage
Off-site and cloud storage solutions are continuing to be explored. The long term storage solutions currently put in place may eventually reach their storage limits within a few years. The current solution can be expanded, but UAHC and the central IT Services are jointly interested in exploring possible cloud storage solutions. See the preservation program for more information regarding the current storage design and future possibilities.

Other Tools
ArchivesSpace
UAHC and MSU Libraries partnered together to become a Founding Institutional Member of the new ArchivesSpace initiative with migration planned now that the Spartan Archive project is complete.

Archivematica
Lisa Schmidt and Ed Busch of UAHC have worked closely with Raman Padmanabhan to install, test, and put into limited production the digital preservation system Archivematica (https://www.archivematica.org). Both a development and quality assurance (QA) systems are available. Archivematica 1.0 is currently on QA and being tested by UAHC staff. A budget request for special funding was submitted to the university's central administration to become an institutional member of Archivematica prior to the last narrative report in December 2013. The request was not funded in Fiscal Year 2014 and was resubmitted in this fiscal year's request.

UAHC and the MSU Libraries are currently using the un-supported "free" version of Archivematica in workflows.

Submission Information Packages (SIPs) are transferred to Archivematica through a centrally-supported shared drive used as a processing work space with access managed by Felicia Berryman. Storage for Archival Information Packages (AIPs) and Dissemination Information Packages (DIPs) produced by Archivematica have been set up to go to the Spartan Archive long term storage service managed by Denyson Figueiredo. Access to this storage was made available to the archivists by Felicia Berryman. Eric Holp created a verification program to routinely check the data integrity of the Archivematica-generated AIPs and DIPs. Reports are sent regularly to UAHC staff.

Born-digital database submissions, such as those that were used to develop and design Spartan Archive, will not be processed by Archivematica. The two systems need to be better integrated.

Implementation and Customization of TAPER

The Tufts Accessioning Program for Electronic Records (TAPER), another NHPRC funded program, has been installed and configured for use in UAHC's long term sustainable solution. TAPER will make it possible to submit submission agreements at the same time as an office transfers their digital files. Two years into the Spartan Archive project it was realized that the narrow focus of the project plan ignored the need for submission agreements as part of the Ingest function of the OAIS framework. Currently the Office of the Registrar submits manual submission agreements each time a transfer is instigated. However this is not a long term, nor scalable solution for a true TDR. With the use of the TAPER software, client offices throughout campus will be able to provide submission agreements electronically at the time of transfer of born-digital records. See the preservation program for a beta version of MSU's implementation of TAPER. More details of TAPER are also in the December 2013 narrative report.

Project History

April 1 - September 30, 2010
Report on project website for April 1 - September 30, 2010
- One of the first steps in developing Spartan Archive is the implementation of a new collection management system. After some deliberation, UAHC chose Archivists' Toolkit as the replacement for the DOS-based MicroMARC software.
- Electronic records workflow developed for accessioning.
- Project phases created and documented by Ajay Patel at http://www.archives.msu.edu/documents/MSUNHPRCProject1.pdf
- Advisory team was abandoned due to staff changes.
- Delayed tasks. Some phase 1 tasks had to be moved to phase 2.
  - Hiring of the project information technologist
  - Implementation of Archivists' Toolkit and migration of collection data

- ○ Development of public interface for Archivists' Toolkit was abandoned after ArchiveSpace was announced as replacement for Archivists' Toolkit.

October 1, 2010-March 31, 2011
Report on project website for October 1, 2010-March 31, 2011

- User needs were researched and defined.
- Analysis of RO data and procedures.
- First programmer and initial project technologist, Richard Burgis was hired.
- Implementation of ArchivistsToolkit (AT)and data conversion of records to the AT format.
- Preparation for the IRODS workshop.
- Research of repository software.
- Review of client records to process through Spartan Archive.
- Delayed tasks:
    - ○ Development of appraisal criteria for the RO database records.
    - ○ Definition of metadata for the RO database record.

April 1-September 30, 2011
Report on project website for April 1-September 30, 2011
- Creation of http://spartanarchive.wordpress.com/
- RO staff changes.
- Problems with AT due to desire to use Oracle DB which delayed programming.
- Fedora chosen as the repository software.
- DIPs to be exported to a database to RO data searchable. A separate database was created for each record series. Lesson learned: It would be nice to have more standardization such that a different structure doesn't have to be built. This lesson learned will be applied going forward. There is fortunately some potential re-use programs and processes created for the DIP database.
- Programmer investigated database preservation tools.
- Initial hardware architecture designed and deployed. Lesson learned: OAIS processes and language should be consulted and used so technology maps to OAIS framework.
- Ingest process was created. Lesson learned: similar to the DIP creation, the ingest processes can benefit from standardization.
- Archivists conducted RO records appraisal.
- Development of database extraction to XML schemas created based on results of records appraisal of RO data.
- First transfers were scheduled.
- Metadata recommendations drafted which include a combination of Dublin core, PREMIS, and possibly MODS as well.
- iRODS workshop given.

October 1, 2011-March 31, 2012
[Report on project website for October 1, 2011-March 31, 2012](#)

- Revised project plan was created and is still currently available at http://spartanarchive.files.wordpress.com/2011/04/appendix-c-projecct-plan.pdf
- Even more RO staff changes.
- AT work continues. Programmer created custom reports for AT.
- Drafted created of system requirements document for Michigan State University's Spartan Archive electronic records preservation environment.
- Requirements document was written. See http://spartanarchive.files.wordpress.com/2011/04/spartan-archive-system-requirements-document_5.pdf.
- Updates to the ingest process.
- Creation of test version of the access interface.
- Test plan created based on requirements.
- Planned to have a web designer develop the access interface. Lesson learned: There was confusion and resulting delays by asking for development work from a web designer. Misconceptions have been addressed and resulted in stronger collaboration between web design and the second software programmer.
- Continued testing and revising of the database models and XML schemas for all four data series. Twenty years worth of data is transferred over to UAHC from RO..
- 2TB of space is obtained from centrally-supported IT. UAHC has secured file space for transfers and storage.
- Metadata recommendations drafted at http://spartanarchive.files.wordpress.com/2011/04/metadata.pdf.
- Dedicated processing workstation set-up.
- PDF/A conversion guide created at http://spartanarchive.files.wordpress.com/2011/04/how-to-create-pdf-a-from-word.pdf
- Another iRODS workshop sponsored at Midwest Archivist Conference. Librarian/Archivist speaks to how UNC-Chapel Hill implemented iRODS in their Curator's Workbench tools.

April 1, 2012 - March 2013
[Report on project website for April 1, 2012 - March 2013](#)

- Improved client submission processes by incorporating storage and access solutions that were already available through central IT.
- Creation of regular maintenance and test processes to coincide more fully with central IT change management processes.
- Storage devices configured and put into production.
- Preparation, documenting, and closing the work of first programmer.
- Difficulty maintaining, developing, and repairing technical work with lack of programming resources for most of this period.
- Incorporation of the central IT documentation system for improved support.

- Principal investigator trained technical staff unfamiliar with archival processes and OAIS.
- Lack of staff resources due to unforeseen issues (documented in the extension letter submitted on March 5, 2013 to Nancy Melley, program officer at NHPRC).

March 31, 2013-November 30, 2013

Report on project website for March 31, 2013-November 30, 2013
- Creation of a larger, more inclusive and collaborative team of UAHC and IT Services.
- Continued training of technical staff unfamiliar with archival processes.
- Formal project management procedures were put in place.
- Increased focus on how the concepts designed so far would apply to a greater Trusted Digital Repository.
- Stronger usage of the OAIS model.

December 1, 2013 - June 2014

- Extensive work on public interface improvements.
- Extensive work on organizing and presenting documentation for both the proof-of-concept Spartan Archive project and the greater Trusted Digital Repository.
- Software tested.
- Closing project phase for grant and preparing for next steps in subsequent phases.

Project Administration and Staff

University Archives and Historical Collections

Cynthia Ghering, Project Director

Cynthia Ghering is the Primary Investigator and Project Director of the Spartan Archive project, NHPRC RE-10025. She is director of the Content and Collaboration Teams in central IT Services and director of the University Archives and Historical Collections at Michigan State University. The IT Services Content and Collaboration Teams coordinate tools and services that support productivity tools including content management and repositories, core office services, institutional messaging (email) and calendaring services, web development and hosting, call-in service centers, and desktop support. Cynthia is an intermittent instructor at the University of Michigan's School of Information and teaches in SAA's Digital Archives Specialist program.

Portia Vescio

Portia Vescio is the assistant director of UAHC and manages the day to day activities of the archives and records management program. Portia has taken a management role in the project, specifically as it relates to the contributions of the electronic records archivists. She continues to educate herself on the OAIS framework and is working towards a Digital Archives Specialist certificate through SAA's new digital archives curriculum.

Lisa Schmidt

Lisa Schmidt is an electronic records archivist for UAHC. She was originally the project manager for this project, RE-10025. Lisa has continued working on the project and has assisted in the implementation and testing of Archivematica and the development and testing of new workflows. She is also conducting our self audit based on the TRAC criteria and developing documentation to address several important components of the checklist. Lisa is also exploring collaborative opportunities with the MSU Libraries and their development of an Electronic Thesis and Dissertation (ETD) repository.

Ed Busch

Ed Busch is an electronic records archivist for UAHC and has taken on additional responsibility in the project than originally envisioned in 2009. Ed is developing and testing new workflows for the ingest, accessioning and processing of born-digital records. Ed is a former IT software developer and is using his past experience to help develop technical requirements for OAIS based functionality still needed in MSU's TDR. Ed is also a leader in the Mid-Michigan Digital Practitioners' Group, based on the Library of Congress and National Digital Stewardship Alliance's (NDSA) call to action.

Richard Burgis

Richard began working at UAHC on January 17, 2011 and was the lead technologist and programmer for the SpartanArchive project until July of 2012. Richard did substantial development and design for the project as well as serve as a technologist for setting up and configuring Archivist Toolkit.

Whitney A. Miller

An archivist with the MSU UAHC who was consulted regarding early concepts in regards to appraisal of the registrar office records series, conducting assessment of archival management software, and archival administration reporting.

Office of the Registrar, Spartan Archive Contributor

Kristin Schuette

Kristin Schuette is the Associate Registrar for Technology. She has been the acting RO systems analyst on the Spartan Archive Project since Fall 2010. Kris initiates the transfer of the digital files from the RO's databases and re-submits as needed until the files have been successfully ingested and validated.

Michael Babcock

An information technologist in the RO. Soon after the project started in 2010, Babcock accepted another position at Michigan State

Rajeev Krishnan

RO technologist who was selected to replace Michael Babcock.

Damion Gadson

RO systems analyst, replaced Rajeev Krishnan on the project in April 2011. Sometime in late 2011 or early 2012, Damion Gadson left the RO. RO technical supervisor Kris Schuette took over for most of the project.

Central IT, IT Services

Trevor Barnes

Trevor Barnes works for IT Services on the Web Development and Hosting team. Trevor Barnes is a web designer with a specialization in design, usability and branding. He has been assisting both with the original Spartan Archive pages and TDR portions of the project with design mock-ups for the public interfaces - both the MSU version of TAPER for university offices to submit transfer agreements and the user access interface to search and browse the four archived record series from the Registrar's Office. Trevor has also provided support with technical research and consulting.

Felicia Berryman

Felicia Berryman works for IT Services on the Collaborative Services and Support team. She has been involved with the project since April 2012 as a system administrator and database administrator. She often served as the sole point of contact for technical questions from UAHC staff until the recent project expansion. She has helped educate IT Staff on archival processes and continues serving in the role of intermediary between UAHC (archivists) and IT Services (technical support.) Felicia Berryman has helped out considerably with documentation, especially in the technical arena. Felicia has also participated in the collaborative digital preservation initiatives with the MSU Libraries.

Anthony Beyers

Anthony Beyers works for IT Services on the Web Development and Hosting team. He is the systems administrator for the majority of centrally-supported web hosting for MSU. Tony has contributed to the project by installing Islandora, a potential web access solution for the TDR, and assisting with infrastructure design of access technology, and exploration of cloud storage as a potential backup storage solution.

Jeffrey Daniels

Jeffrey Daniels works for IT Services on the Web Development and Hosting team. He has worked on many content repositories and content management systems, including the web content management system, Hannon Hill's Cascade Server, powering msu.edu. Jeff is a search and retrieval expert and developed and maintained search.msu.edu, keyword search and several online directories. Jeff researched extensively in the area of Fedora, Islandora, Hydra and other sustainable access interfaces for the TDR. He is also the functional lead of the Islandora software implementation tasks and is working on system requirements and configuration. Jeff is also participating in collaborative initiatives with the MSU Libraries.

Steven Devine

Steven Devine is the Assistant Director of IT Services Content and Collaboration and brings considerable programming, system administration and technical management experience to the project.. Steven Devine manages many of the IT technical staff in the project and reports directly to Cynthia Ghering. Steve is playing a significant role in the design of the technical infrastructure and consulting on system requirements. He put in place several development systems and worked directly with staff in the virtual server team to set up the necessary server environment to support the complexity of the TDR. Steve has also educated himself on the OAIS framework and digital preservation and is applying this knowledge directly in the administration of this project.

Denyson Figueiredo

Denyson Figueiredo works for IT Services on the Collaborative Services and Support team as a storage administrator. He has helped configure storage for both development, test, and long term production storage for the TDR including the "quarantine" area and pre-ingest holding area.

Eric Holp

Eric Holp works for IT Services on the Collaborative Services and Support team. He is a programmer and has been dedicated to the project full time since March 2013. He has done extensive testing on the current code base. In addition, he has been able to fix multiple errors in the original Spartan Archive code, salvaging months of programming work. Eric installed and customized a test version of TAPER which will be used to facilitate submission agreements as university units transfer born-digital records to UAHC. Eric created a preservation verification solution for systematic and consistent checksum validation of the files preserved long-term in the TDR storage. Eric also participates in collaborative initiatives with the MSU Libraries.

Kenneth Jodway

Kenneth Jodway works for IT Services on the Collaborative Services and Support team as a project manager. Ken facilitates bi-weekly project progress meetings in addition to working individually with all project staff helping direct progress and task achievements. Ken's efforts in performing the "red, yellow, green" status updates are vital to the success of the project.

Debbra Malcangi

Debbra Malcangi manages the Web Development and Hosting team. She has helped allocate resources and provide consulting for the project design and technological design. Debbie also brings considerable technical project and resource management experience to the project. She has educated herself on the OAIS framework and is an invaluable resource in breaking the project into small achievable tasks.

Raman Padmanabhan

Raman Padmanabhan works for IT Services on the Collaborative Services and Support team. Raman Padmanabhan has assisted UAHC for the past few years on virtual retention services. Since the last narrative report, Raman has set up numerous development, test, and production

environments of Archivematica for the TDR. He has helped with technical research for UAHC in many ways with a recent example was his investigation of the ACE, Audit Control Environment, software that may one day be incorporated into the TDR. Raman has also been available to be an additional technical contact for UAHC staff

Ajay Patel

Information technologist from Administrative Information Services (later to become IT Services after the 2012 re-organization). He served as project technical advisor from late 2009 to early 2013.

Patrick Pramov

Patrick Pramov was mentioned in the March 2013 narrative report, but shortly after left the university. His duties were taken over by Ken Jodway.

Project Dissemination

See the past narrative reports linked to in the section on project history for full details regarding project dissemination. Notable dissemination activities are on the project website at http://spartanarchive.wordpress.com/presentations-posters/. CIC Quarterly reports are listed at http://spartanarchive.wordpress.com/about-spartan-archive/project-documentation/.

January 2014 to June 2014

- Oral report to [CIC-University Archives Group](#) at Midwest Archives Conference by Portia Vescio on April 24, 2014.
- Conference: Mid Michigan Digital Practitioners, GVSU, Grand Rapids, MI, March 17, 2014 (Ed Busch was organizer). Presentation by Lisa Schmidt and Ed Busch: "Web Archiving @MSU."