

Application for Federal Assistance SF-424

Version 02

* 1. Type of Submission:

- ☐ Preapplication
☒ Application
☐ Changed/Corrected Application

* 2. Type of Application:

- ☒ New
☐ Continuation
☐ Revision

* If Revision, select appropriate letter(s):

* Other (Specify)

* 3. Date Received:

06/03/2009

4. Applicant Identifier:

5a. Federal Entity Identifier:

* 5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name:

Michigan State University

* b. Employer/Taxpayer Identification Number (EIN/TIN):

38-6005984

* c. Organizational DUNS:

193247145

d. Address:

* Street1:

301 Administration Building

Street2:

* City:

East Lansing

County:

Ingham

* State:

MI: Michigan

Province:

* Country:

USA: UNITED STATES

* Zip / Postal Code:

48824-1046

e. Organizational Unit:

Department Name:

Division Name:

f. Name and contact information of person to be contacted on matters involving this application:

Prefix:

Ms.

* First Name:

Stacy

Middle Name:

* Last Name:

Salisbury

Suffix:

Title:

Contract and Grant Administrator

Organizational Affiliation:

* Telephone Number:

517-355-5040

Fax Number:

517-353-9812

* Email:

salisbury@cga.msu.edu

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9. Type of Applicant 1: Select Applicant Type:

H: Public/State Controlled Institution of Higher Education

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

* 10. Name of Federal Agency:

National Archives and Records Administration

11. Catalog of Federal Domestic Assistance Number:

89.003

CFDA Title:

National Historical Publications and Records Grants

* 12. Funding Opportunity Number:

ELECTRONICRECORDS-10

* Title:

Electronic Records Projects

13. Competition Identification Number:

ELECTRONICRECORDS-10

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

United States

* 15. Descriptive Title of Applicant's Project:

Spartan Archive: An Electronic Records Archive at Michigan State University

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

Application for Federal Assistance SF-424

Version 02

16. Congressional Districts Of:

* a. Applicant

MI-008

* b. Program/Project

MI-008

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment

Delete Attachment

View Attachment

17. Proposed Project:

* a. Start Date:

01/01/2010

* b. End Date:

12/31/2012

18. Estimated Funding (\$):

* a. Federal	298,450.00
* b. Applicant	353,070.00
* c. State	0.00
* d. Local	0.00
* e. Other	0.00
* f. Program Income	0.00
* g. TOTAL	651,520.00

* 19. Is Application Subject to Review By State Under Executive Order 12372 Process?

☒ a. This application was made available to the State under the Executive Order 12372 Process for review on

06/03/2009

☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.☐ c. Program is not covered by E.O. 12372.

* 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes", provide explanation.)

☐ Yes☒ No

Explanation

21. *By signing this application, I certify (1) to the statements contained in the list of certifications** and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)

☒ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix:

Ms.

* First Name:

Suzanne

Middle Name:

I

* Last Name:

Morgan

Suffix:

* Title:

Senior Contracts and Grant Administrator

* Telephone Number:

517-355-5040 ext. 257

Fax Number:

517-353-9812

* Email:

morgan@cga.msu.edu

* Signature of Authorized Representative:

Stacy Salisbury

* Date Signed:

06/03/2009

Project Summary

A. Purpose and Goals

The University Archives and Historical Collections (UAHC) of Michigan State University is seeking \$298,450 to develop an electronic records archive, *Spartan Archive*, for the university's born-digital records and publications. During the three year project, MSU will use a proof-of-concept approach to test the sustainability of an archival solution for the long-term access and preservation of database records. *Spartan Archive* will be based on traditional archival principles and the Open Archival Information System (OAIS) model; utilize Integrated Rule Oriented Data Systems (iRODS); collaborate with multiple units within Michigan State University; and share results with the members of the Committee on Institutional Cooperation (CIC) and other interested universities.

B. Methods

UAHC is proposing 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. This project will include all components of the archival process –the *appraisal* of born-digital records, the *accession and ingest* of electronic records, the long-term *preservation and management* of database records, and the *online access* and research use of the record series. UAHC plans to capture the three records series directly from the records creator and will work with the Registrar's Office to appraise their SQL databases and determine the data fields that hold historical information. Those data fields that are identified as having historical value and subject to permanent retention will be extracted from the RO's databases and transferred to UAHC's custody for long-term preservation and research use. UAHC will select and implement archival management software to enforce

administrative control of the transferred records; utilize iRODS as a means for long term preservation and storage; and, develop web access to the archival records to enable access by the user community.

C. Plan of Work

Phase 1: Analysis and Appraisal	<i>January 1, 2010 to June 30, 2010</i>
Phase 2: Accession and Ingestion of Records	<i>July 1, 2010 to December 31, 2010</i>
Phase 3: Public Access and iRODS Installation	<i>January 2, 2011 to June 30, 2011</i>
Phase 4: iRODS Testing and Refinement	<i>July 1, 2011 to December 31, 2011</i>
Phase 5: Documentation and Work Flows	<i>January 2, 2012 to June 30, 2012</i>
Phase 6: Reports and Dissemination	<i>July 1, 2012 to December 31, 2012</i>

D. Products and Publications

The *Spartan Archive* project will result in UAHC creating policies, procedures, and a technical infrastructure to accession, provide access, and preserve database-born records in the university environment. Project funding will allow a representative from the Data Intensive Cyber Environments group (DICE) to travel to East Lansing and train select IT and archives staff from MSU and CIC member institutions in iRODS programming. A manual will be created to guide the user in each phase of establishing a program based on this model. The manual will define how Submission Information Packages (SIPs) are created and stored; instruct how to create Archival Information Packages (AIPs) and Dissemination Information Packages (DIPs); and document how iRODS is used to manage and preserve records. The team will also create a project website for monthly progress reports and dissemination of all project products. The archivists will present at no fewer than three professional conferences and publish in a minimum of one professional journal regarding the results of the project.

E. Names and Contact Information of Project Director and Key Personnel

Cynthia Ghering, Project Director Director, University Archives Michigan State University ghering@msu.edu (517) 432-4434	Deborah Gouin Electronic Records Archivist University Archives, Michigan State University gouind@msu.edu (517) 884-6439
Richard Adler Electronic Records Archivist University Archives, Michigan State University adlerrc@msu.edu (517) 884-6441	Whitney Miller University Records Archivist University Archives, Michigan State University millerwh@msu.edu (517) 884-6437
Ajay Patel Information Technologist III, EBS Michigan State University patela@ais.msu.edu (517) 353-3121	Matthew Cribley Systems Analyst I, Registrar's Office Michigan State University cribley@msu.edu (517) 432-6651

F. Performance Objectives

The *Spartan Archive* project has six core objectives with measureable outcomes and evaluation criteria. The first objective is the *appraisal* of the database records to determine which fields constitute the university's historical record. In the second objective, *accession and ingest*, Submission Information Packages (SIPs) and Archival Information Packages (AIPs) will be developed for the three record series. The project's third objective, *archival administration*, will be demonstrated by the ability to schedule the upload of SIPs, review and approve AIPs, manage security and access, and enforce rules and policy. The fourth objective, *preservation*, will be evaluated on the ability to produce micro-services used to store the data in iRODS for long-term preservation. The Dark Archive will also be evaluated by a self-audit conducted by Ghering and Gouin using the TRAC criteria and checklist. The development of *online access* using Dissemination Information Packages (DIPs) and a public interface is the fifth objective. Finally, the sixth objective will be the *dissemination* of the results of this project. All objectives have measurable outcomes and can be evaluated in the final report of the project.

I. Introduction

The University Archives and Historical Collections (UAHC) of Michigan State University is seeking \$298,450 to develop an electronic records archive, *Spartan Archive*, for the university's born-digital records and publications. During the three year project, MSU will use a proof-of-concept approach to test the sustainability of an archival solution for the long-term access and preservation of database records. *Spartan Archive* will be based on traditional archival principles and the Open Archival Information System (OAIS) model; utilize Integrated Rule Oriented Data Systems (iRODS); collaborate with multiple units within Michigan State University; and share results with the members of the Committee on Institutional Cooperation (CIC) and other interested universities.

UAHC is proposing 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. Michigan State University has produced the Academic Programs, Course Descriptions and Student Directory since the university's founding in 1855. The three record series were originally published in bound book volumes and distributed to MSU faculty and students annually or bi-annually. All three record series are used heavily by MSU students, alumni, faculty and the general public due to their evidentiary value as proof of attendance, degree and coursework as well as their family history and genealogy documentation. As the official “depository for university records which are no longer administratively useful...”¹ the UAHC has been responsible for maintaining and providing access to these university publications since 1969. However, in the past decade, the

¹ University Archives & Historical Collections, Michigan State University, “Collection Policy,” May 29, 2009.

UAHC has struggled to preserve these vital records. Michigan State University's Student Directory is no longer printed, and there are limited numbers of paper-based Academic Programs and Course Descriptions produced each year. These records are now born-digital, existing only in a transactional database system maintained by the Registrar's Office, and accessible online in real-time on the MSU web site.

This project will include all components of the archival process – from the *appraisal* of born-digital records, to the *accession and ingest* of electronic records, along with the long-term *preservation and management* of database records and finally, the *online access* and research use of the record series. UAHC plans to capture the three records series directly from the records creator and will work with the Registrar's Office (RO) to appraise their SQL databases and determine which data fields hold historical information. Those data fields that are identified as having historical value and subject to permanent retention will be extracted from the RO's databases and transferred to UAHC's custody for long-term preservation and research use. UAHC will select and implement archival management software to enforce administrative control of the transferred records; utilize iRODS as a means for long term preservation and storage; and develop web access to the archival records to enable real-time access by the user community. The *Spartan Archive* project will result in UAHC creating policies, procedures, and a technical infrastructure to accession, provide access, and preserve database-born records in the university environment.

University Archives & Historical Collections

Michigan State University (MSU) was established in 1855 by an act of the Michigan Legislature to create an agricultural college. MSU received the land grant for the state of Michigan in 1862 becoming the nation's pioneer land grant college. In its one hundred fifty-four years, MSU has

grown to a tier one research university with significant national and global impact. As the nation's first agricultural college, MSU established itself as a leader in innovation and technology. MSU's tradition of leadership and innovation has carried through in UAHC's approach to automating archival functions and preserving the university's records, regardless of format.

In 1969, MSU's Board of Trustees established the University Archives and Historical Collections. UAHC was mandated to collect and preserve the historical records of MSU and to provide the university community, scholars and the general public access to these records. In addition, the director of the UAHC was given the responsibility of approving the final disposition and destruction of university records. The UAHC actively assists university units in the efficient administration and management of official university records. Now in the twenty-first century, the focus of UAHC includes the management, collection and preservation of electronic records.

Current State

Several enterprise-wide business initiatives are currently making records management a major focus at MSU; one such initiative is the Enterprise Business Systems Projects, (EBSP). In 2006 MSU began a multi-year series of projects to replace the current business systems on campus. Executive leadership desired improved systems to provide more flexibility, transparency, standardization and delegation in facilitating the work of the university. To achieve these objectives, the new systems will support an approach to data and information that is more open, apparent and intentional. These new systems will also facilitate improved documentation and consistency in the way common tasks are accomplished across campus. This large project is laying the foundation for major changes in thought and application at UAHC.

University administration recognized the contribution UAHC staff could make in achieving the EBS projects' goal to manage data and information. In response, the previous UAHC director contracted with Rick Barry, the principal of Barry Associates, to analyze UAHC's current state, and to draft an electronic records policy. His work was based on standards drafted by the Big Ten Committee for Institutional Cooperation's University Archivist Group in 2002. Barry's work was circulated internally and seriously considered within UAHC and the larger administrative unit of Libraries, Computing and Technology (LCT). As a result, staff positions within UAHC were revised and the position of Electronic Records Archivist was created to meet the added demands of the university's electronic records and the EBS projects.

Two electronic records archivists were hired by UAHC early in 2007; Deborah I. Gouin, CA, an archivist and records manager; and Richard C. Adler, a recent graduate of the University of Michigan with a specialization in archives and records management. In January 2008 the director of UAHC retired, allowing the university to re-assess the position and its impact across the university. The UAHC directorship was changed from a tenured position to executive management status in order to align with other administrative positions responsible for the development of university policies and procedures. The responsibilities of the position were expanded to include an active focus on the management and preservation of electronic records and participation in the Enterprise Business Systems Projects.

Cynthia A. Ghering, an information professional with ten years of archives, library and museum experience, was hired as director in January 2008. Ghering and her team are working to ensure that the university's new information systems and related business processes provide appropriate records management and archival functionality. UAHC is leading the effort at MSU to build an infrastructure to support the accession and preservation of born-digital university records.

Institutional Support

UAHC reports directly to the Vice Provost of Libraries, Computing and Technology (VPLCT) along with the MSU Libraries, the EBSP initiative and both the academic and administrative information technology units – Administrative Information Services (AIS) and Academic Technology Services (ATS). UAHC has received direct financial and technical assistance from the Office of the VPLCT including support for the new Electronic Records Archivist positions. In 2008 UAHC received funding for Ghering, Gouin, Adler and an Information Technologist, Ajay Patel, to attend the SAA Electronic Records Summer Camp at the San Diego Supercomputer Center to explore the use of Integrated Rule Oriented Data Systems (iRODS) in the management and preservation of electronic records. Additionally, Patel, a member of the EBSP team, is assigned to work with the UAHC staff to define the systems requirements for the effective management of electronic records, both within the EBSP environment and the university as a whole.

In September 2008, the Vice Provost of LCT, David Gift, funded a collaborative electronic records forum to open a discussion among the Committee on Institutional Cooperation (CIC) members. Archivists, technologists, registrars, legal counsel and librarians from the Big Ten Universities attended the two-day forum. Legal, records management and technical issues were discussed in a round-table setting, resulting in an agreement that the CIC archivists and technologists would openly share models and lessons learned for better management of university electronic records and digital assets. With its two electronic records archivists and institutional support, MSU is uniquely positioned to design and test an electronic records archive solution and shares its finding with CIC members and other colleges and universities facing similar issues.

Records Series of the Registrar's Office

The three records series produced by the Registrar's Office (RO) are each created in different systems. The Student Directory is created in the mainframe-based Student Information System (SIS), while the Academic Programs and the Course Descriptions are created in two stand-alone client/server systems: Academic Programs (AP) and Course Descriptions (CD). The Academic Programs and the Course Descriptions are available online for student and faculty to access the public information in real-time. Older records, dating before the creation of AP and CD in 2006, have been scanned and are also accessible through the RO's website. In the case of the Course Descriptions, a small print run is made annually for limited distribution purposes. These convenience copies are printed on poor quality paper and are difficult to maintain, use and preserve. These three systems contain hundreds of thousands of vital records. In terms of bit and bytes, the SIS database totals 83 Gigabytes and the two RO systems, AP and CD, are 800 Megabytes in size.

The Academic Programs and the Course Descriptions catalog, list, and describe the fields of study available at MSU and the class requirements for graduation or certification. These record series provide vital documentary evidence of the majors and minors offered by the university; the degrees MSU awards; and the coursework and preparation required for graduation. This Academic Program database system contains information on more than 1200 programs. The Course Descriptions database contains information on nearly 20,000 courses dating back to 2005. Together these two records series equate to 21,200 database records. These records are vital to the university as evidence of the central business of the institution – the academic coursework completed by MSU students. These records are also significant to researchers and scholars and provide documentation of the educational experience at a major land grant and research university.

The third record series, the Student Directory, once an annual paper publication distributed to students, faculty, and staff, is no longer in print. Students' contact information is available solely through an online search function on the MSU website, and only while they are currently enrolled at the University. Furthermore, the Family Educational Rights and Privacy Act (FERPA) gives any student the right to deny public access to his or her contact information through this MSU "People" search. On average, MSU enrolls over 50,000 students per academic year including full-time, part-time and non-credit students. This equates to 50,000 database records per year.

For nearly a decade, the RO has addressed the archival copy of Student Directory information by printing it annually in the fall and sending it to UAHC for preservation. However, the printed report is generated from the Student Information System and comes to UAHC as one continuous printout from a laser printer. While the listing is in alphabetical order, it is almost impossible for researchers to use and poses a serious challenge to UAHC to preserve for future generations. The information once preserved within the Student Directory is also vital to the business of MSU and provides documentation of all students that have enrolled at MSU for any length of time, including those that may not have received a degree or certificate from the university. Student Directories are heavily used by university administration, current and former faculty and students, historians, researchers and genealogists.

Future State

The design, development and implementation of *Spartan Archive* as a proof-of-concept model will allow UAHC to achieve multiple objectives in the unit's long term goal to preserve and provide access to the university's permanent records, regardless of format. A large number of the university records are now created and maintained in database systems. This initial design of

Spartan Archive will focus specifically on structured records and the workflow and infrastructure necessary to appraise, accession, manage, preserve and access electronic records extracted from large transactional systems in a sustainable manner.

The cross-discipline team approach to *Spartan Archive* will help UAHC build strong partnerships with IT professionals in both the academic and administrative technology units and foster a more proactive approach to electronic records management. Focusing on the records of the Registrar's Office will give UAHC valuable experience in working with records creators to capture electronic records directly from the business system, while generating metadata to preserve the records content, context and structure. *Spartan Archive* will provide an opportunity to design a workflow that is automated, scalable and sustainable for archivists, technologists and records creators.

Finally, this proposal will allow the project team to explore the functionality and capabilities of iRODS and its utility for both the project's Dark Archive and other mass data storage needs. Project funding will allow a representative from the Data Intensive Cyber Environments group (DICE) to travel to East Lansing to train IT and archives staff from MSU and member CIC institutions in iRODS programming. MSU staff will use this knowledge to develop a secure, reliable and trustworthy digital repository for the university's structured electronic records. The development of two web interfaces, one for internal archival administration and one for public access and dissemination, will provide an archival technical infrastructure that can be used to capture, manage and preserve other university records in electronic format. All of the outcomes and products of this project will be shared with, and hopefully replicated by, the CIC members and other colleges and universities.

Collaboration

A major component of UAHC's vision for electronic records management at MSU is increased collaboration within the university - including technology, legal, administrative and academic units - to address the challenges of record, document and content management in the digital environment. This proposal supports that vision and is based on a team approach to developing an electronic records archive for the university. The project team will include staff from the University Archives, Academic Technology Services, Administrative Information Services, the Enterprise Business Systems Projects team and the records creator, the Registrar's Office.

The project team will also share the results of the *Spartan Archive* project on a regular basis with the members of the Committee on Institutional Cooperation: University of Chicago, University of Illinois, Indiana University, University of Iowa, University of Michigan, Michigan State University, University of Minnesota, Northwestern University, Ohio State University, Pennsylvania State University, Purdue University, and University of Wisconsin – Madison. This collaboration will occur at twice yearly meetings of the CIC-University Archives Group during the Midwest Archives Conference and the Society of American Archivists conference. In addition, we will be inviting all members of the CIC-UAG to participate in the iRODS workshop planned for the first year of this project, if funded. The CIC Chief Information Officers (CIO) group is also pursuing distributed mass data storage for the member institutions and is interested in exploring both the use of iRODS for mass data file management and the possibility of building a collaborative CIC electronic records archive in the future.

II. Plan of Work

Phase 1: Analysis and Appraisal

January 1, 2010 to June 30, 2010

The first phase of the project will begin with the search for a full-time Information Technologist I (see attached job description) for the *Spartan Archive* project. Ghering and Gouin will develop appraisal criteria for the Registrar's Office databases containing the Academic Programs, the Course Descriptions and the Student Directory. Gouin will work with Matthew Cribley, an information technologist from the RO, to understand the database structure. All applicable regulations, such as Family Education Rights and Privacy Act (FERPA), will be considered to ensure that no protected information from the Student Directory is accessioned. The completed appraisal will be reviewed by Ghering and Miller.

Simultaneously, the UAHC project team, consisting of Gouin, Ghering, Adler, and Miller, will conduct an assessment of archival management software. They will consider both open source solutions, such as Archivists' Toolkit and Archon, and proprietary software. They will evaluate the systems to determine which solution will best meet the demands of the current workload of UAHC and address the new workflows created for *Spartan Archive*. Adler will be leading this evaluation and reporting back to the project team. The team will also build a website to inform colleagues of the project's progress. The website will contain monthly reports and deliverables from the project. All technical material produced by the project will be reviewed by Ajay Patel, who will continue as the MSU technical advisor to the UAHC. The project team will meet bi-weekly as needed.

Phase 2: Accession and Ingestion of Records

July 1, 2010 to December 31, 2010

The second phase of the project will begin with a visit from Reagan Moore, the director of DICE at the University of North Carolina, Chapel Hill. He will spend three days with the *Spartan Archive* project team to teach iRODS programming. The project team, as part of its collaboration with the Committee on Institutional Cooperation (CIC), will invite the University Archivists

Group to attend this meeting. The workshop will also be open to technologists from within MSU and the other CIC institutions. Moore will explain the principles of iRODS and how it can be used in the preservation phase of the project.

A key part of *Spartan Archive* is the selection and installation of an archival management tool to interface with the electronic record archive. The software that was selected in Phase 1 will be configured and installed. This will be completed by the project information technologist (PT) and Adler. Once the software is installed, the current holdings will be uploaded and the new system will be tested. The PT will then build the web interface which the archival administrators will use to manage the database records. This presentation layer will integrate fully with the archival management software. The project team will continue to accession RO records while the web interface is being built.

Gouin will work with Cribley to complete an XML extraction of the identified data fields for the three records series. Gouin will write the procedures for the extraction and Submission Information Package (SIP) to be approved by Ghering. While this work is being completed, the PT will write the scripts to ingest the records into *Spartan Archive*. Ghering, Gouin and Adler will define the metadata that will be used to describe the records. The PT will build the queries that will be searchable by the end users. Role based access controls will be developed by the PT, Ghering and Gouin. Adler will work with the PT to develop the Archival Information Package (AIP) that utilizes the metadata defined by the project team. The manuals for the SIP and AIP will be drafted by Gouin and approved by Ghering. Ghering, Gouin and Adler will create archival administration reports for *Spartan Archive*.

Phase 3: Public Access and iRODS Installation

January 2, 2011 to June 30, 2011

Phase 3 will begin with the preparation of a formal Dissemination Information Package (DIP) for online delivery of the records. Ghering and Gouin will document the structure of the DIP in the project manual. Gouin and others will beta-test the presentation layer for accurate retrieval and display of the DIPs. Ghering and Adler will test and monitor the performance of the archival management tool focusing on the integration of the archival management software with *Spartan Archive*.

While the performance testing is taking place, the iRODS work will begin. A programmer from DICE will visit MSU and provide intensive iRODS training for the archivists, the PT and other IT staff at MSU. Together they will install and program iRODS for the preservation stage of the project. After the team is trained, they will work with Gouin, Ghering, and Adler to test a set of micro-services developed for the preservation of the database records. Copies of the records that were previously accessioned will be transferred to the Dark Archives using iRODS. During this phase, Adler and Miller will create the archival administration reports; including audit trails and finding aids that will be used to track and describe the newly accessioned electronic records. Ghering will review these for consistency with the current archival practices of UAHC.

Phase 4: iRODS Testing and Refinement

July 1, 2011 to December 31, 2011

Gouin and Cribley will repeat the extraction process from the RO for the previous academic year's records. They will prepare the SIP and the AIP, following the instruction manual created in Phase 2. The PT will continue to work on the iRODS environment, confirming that the preservation copy can be accessed and used to restore the access copy if needed. The PT, Gouin,

Adler and Ghering will do a checksum analysis on the active research copy of the records to verify that no corruption has occurred. Gouin, with assistance from the PT, will draft the procedures to complete a checksum analysis of the database records and Ghering will review the final draft.

Phase 5: Documentation and Work Flows

January 2, 2012 to June 30, 2012

In Phase 5 a DICE programmer will visit MSU and provide the project team with five additional days of consultation on the iRODS programming. At this time the PT will address and resolve any outstanding issues with the iRODS programming. The project team will open this visit up for any MSU or CIC staff that needs additional training in iRODS.

The PT will conclude the programming and testing phase, and assist Gouin in the completion of the documentation. Patel will review the final system and the documentation. Ghering and Gouin will conduct a self-audit of *Spartan Archive* using *Trustworthy Repositories Audit & Certification: Criteria and Checklist*.

Phase 6: Reports and Conclusions

July 1, 2012 to December 31, 2012

In the final phase of the project, the reports to NHPRC will be written by the project team, with Gouin and Ghering taking the lead. Parts will be contributed by Adler, Miller, Patel, and the PT as necessary. In preparation for writing the reports, the project team will monitor the activity of *Spartan Archive* users. The archivists will conduct surveys via the website to determine user satisfaction and areas for improvement. These findings will be included in the final report.

Ghering, Gouin and Adler will propose and write articles for submission in *The American Archivist*, *Archival Issues*, *Information Management Journal*, *EDUCAUSE Quarterly* and other relevant professional publications. Ghering, Gouin and Adler will present on the project at

professional conferences to share results, challenges and successes. All final documentation of the system will be distributed to members of the CIC and other universities interested in the design and implementation of *Spartan Archive*.

III. Products and Deliverables

Spartan Archive Conceptual Model

The proposed *Spartan Archive*, an electronic records archive solution, is based heavily on the Open Archival Information Systems (OAIS) reference model and will support ingestion, storage, management, search/access, and preservation of selected electronic records series at Michigan State University. (See attached “*Spartan Archive: Conceptual Model*.”)

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.

Archival Administration components of the solution will involve use of a web-based interface and background processes to support security and access management, rules/policy management, archival storage management, Archival Information Package (AIP) review and approval, archive reporting, and occasional interactive upload of records series data.

Active records of the candidate records series are located in three different source systems. An automated *Extract/Upload* process will be developed to inspect the databases, extract data and metadata of the selected records series, and prepare *Submission Information Packages (SIPs)* for a given records series.

The *Accession/Ingestion* components of the solution will receive SIPs, verify SIP content, separate actual data from metadata (descriptive information), and prepare *Archive Information*

Packages (AIPs) for review and approval by the Archival Administration components/processes.

When AIPs are ready for accession, metadata transactions will be provided to the Metadata Management and an archive stream of actual data will be provided to the Archival Storage.

Metadata Management components of the solution will receive and process AIP metadata transactions and populate/update the metadata database in the *Current Archive* repository. *Archival Storage* components of the solution will receive AIP stream from the Accession/Ingestion process and populate/update record content in the Current Archive repository.

Records series hosted on *Spartan Archive* will be available for research and inquiry. *Archival Access* will be provided through web-based interfaces and background processes. Archival Access components of the solution will accept report requests, metadata inquiries, and content requests from customers and provide requested reports, metadata inquiry results, and contents. Requests for reports will be directed to the Archival Administration, metadata inquiries will be directed to Metadata Management, and research (content) requests will be sent to Archival Storage. Reports will be received from the Archival Administration and passed to the customer. Metadata inquiry responses will be received from the Metadata Management and provided to the customer. Requested content will be received from the Archival Storage and *Dissemination Information Package (DIP)* prepared and provided to the customer.

Periodically, metadata and content of selected records series will be copied to the *Dark Archive*. Access to the Dark Archive will be limited to only specified data processes and archive administrators. The Dark Archive will not be available for routine search and retrieval of archived records series. However, in the event of loss of the Current Archive, processes will be developed to use content saved in the Dark Archive to restore the data. This will insure that the information in *Spartan Archive* can be fully restored if necessary.

The proposed solution will use *integrated Rule Oriented Data System (iRODS)* to implement the Dark Archive. Consequently, Metadata Management and Archival Storage components of the solution will use iRODS programs/services to provide related features/functions. A separate third-party product will be used to provide some or all features/services in the Archival Administration component of the solution. Remaining processes and components will be developed in-house at Michigan State University.

The *Spartan Archive* will be hosted on the virtual server network at Academic Information Services (AIS). Part of the project's service agreement with AIS will include a daily backup of *Spartan Archive*. This will ensure that the data maintained in the Dark Archive can be restored if needed.

Dissemination

The archivists and the technologists on this project will create documentation about the project that will enable other university archivists to use *Spartan Archive* as a model to capture and preserve their permanent database records. A manual will be created that will guide the user through each phase of establishing a program based on the model. In the manual, the team will define how Submission Information Packages (SIP) are created and stored. The manual will provide instructions on how to create Archival Information Packages (AIP) and Dissemination Information Packages (DIP) and document how iRODS is used to manage and preserve the records.

To disseminate the information on the progress of the project, the team will establish and maintain a website. The lead investigators will post all documentation resulting from the project. The manual will posted online as it is being written. The team will provide monthly updates regarding their progress on the project, with open discussion of successes and challenges as they

arise. When substantial work is completed the project team will develop presentations for their peers to be delivered at archival, records management and/or information technology conferences locally, regionally and nationally. Archivists from the project will also give presentations to interested groups when requested. Finally, articles will be written and submitted to professional publications.

IV. Staff

Cynthia A. Ghering was hired as the director of UAHC in January 2008 and brings over ten years experience in the acquisition, processing, cataloging, digitization and online access to archives, library and museum collections including born-digital objects and electronic records. Ghering has managed several large federal grant-funded projects such as the Institute of Museum and Library Services' Museums for America project *Connecting Ohio's History* and six United States Department of Education's Teaching American History projects with multiple educational partners. Ghering has also led a variety of team projects ranging from large digitization efforts to collection inventory and cataloging; including *Fight for the Colors: The Ohio Battle Flag Collection* and *OhioPix: Picturing Ohio's History*. Ghering will spend fifteen percent of her time on the project in a management capacity and will lead the bi-weekly project team meetings.

Deborah I. Gouin joined the UAHC staff in March 2007 as its first Electronic Records Archivist. Gouin began her archival career on the NHPRC funded Records Management Administration Pilot Project with the State of Michigan in 2000. Gouin went on to work for IBM as the senior records management analyst supporting the DB2 Records Manager product. She was responsible for end user testing and training. Gouin also worked as a consultant in electronic records management for Xerox, Pfizer and other firms. She is a Certified Archivist. Gouin will spend thirty percent of her time on the *Spartan Archive* project.

Richard C. Adler joined the UAHC team in April 2007 as the second Electronic Records Archivist. In his two years at UAHC, he has upgraded the UAHC technical infrastructure and written the collecting policy for UAHC. His skills include MARC cataloging, EAD encoding and records processing. Adler will spend ten percent of his time on the project.

Whitney Miller is the University Records Archivist with over ten years experience at Michigan State University Archives. Her role at MSU is focused on university records management and records retention compliance. She has broad knowledge of the UAHC collections and the history of MSU. She is also a Certified Archivist. She will spend five percent of her time on the project.

The project information technologist (PT) to be hired will provide independent complex professional support in software development, database administration and systems operations. Requirements include a BA in computer science or related field; previous experience is desired. The PT will be wholly dedicated to the design of *Spartan Archive*. The PT will work closely with the project team, especially the archivists, in the design and development of technical infrastructure and workflow. The PT will assist in the documentation of *Spartan Archive* and may be expected to present and publish on the project.

Matthew Cribley is a Systems Analyst I in the Registrar's Office. He has over ten years experience in the field of information technology. He has conceptualized and designed software and hardware systems. Currently, Cribley designs and modifies systems for the R.O. He is also a technical writer. Cribley will spend ten percent of his time on the project during the first year and five percent of his time for the remainder of the project.

Ajay Patel has twenty-three years of experience in information technology at MSU. He is currently assigned to the Enterprise Business Systems Projects. Previously, Patel was part of the Administrative Information Services unit and the team that developed and implemented the

enterprise Student Information System. Patel's skills and areas of interest include information systems analysis, design, and implementation; project management tools and techniques; computer-based statistical analysis, data analysis, and operations research packages; database tools, techniques, and query languages; and Enterprise Content Management and Electronic Records Management. He will provide five percent of his time to the project.

V. Evaluation

The *Spartan Archive* project has six core objectives with measureable outcomes and evaluation criteria. The core objectives cover all phases of the project and all have quantifiable outputs. The first objective will be the *appraisal* of database records to determine which fields constitute the university's historical record. The project archivists will develop appraisal criteria for databases that will be compiled into guidelines and distributed to other universities with similar records.

In the second objective, *accession and ingest*, Submission Information Packages (SIPs) and Archival Information Packages (AIPs) will be developed for the three record series. The archivists will create the metadata standards for the SIPs and AIPs. The team will write both technical procedures and metadata standards. Most importantly, the project team will demonstrate that the SIPs and AIPs are functional by accessing the records via the archival administration web interface.

The project's third objective, *archival administration*, will be demonstrated by the ability to schedule the upload of SIPs, review and approve AIPs, manage security and access, and enforce rules and policy. This objective can be measured by demonstrating the seamless integration of the archival management software and the Metadata Management and Current Archive components of *Spartan Archive*. The third objective can also be evaluated by the documentation of new workflows and procedures.

The fourth objective, *preservation*, will be evaluated on the ability to produce micro-services used to store the data in iRODS for long term preservation. A library of applicable micro-services will be created and shared with other institutions that are doing similar work. Further evaluation will be achieved by the project team demonstrating that iRODS is capable of providing storage for a preservation copy of the data, and that it can be accessed and used to restore the data in the active system. The Dark Archive will also be evaluated by the self-audit conducted by Ghering and Gouin using the TRAC criteria and checklist.

Long-term *access* to these vital electronic records is the fifth objective. The project team will demonstrate that the presentation layer can provide public access to records in *Spartan Archive*. Results of the testing in Phase 3 and user surveys in Phase 6 and will be reported. Evaluators will be able to access the system directly and perform queries on the data to determine if *Spartan Archive* provides intuitive and user friendly access to the RO's records series.

For the sixth objective, the team will *disseminate* the results of this project in a variety of venues. A project website will keep colleagues informed on the team's progress, including monthly reports to NHPRC, drafts of manuals and procedures, and the development of metadata standards and workflow. The archivists will also give no fewer than three presentations at professional conferences and publish a minimum of one article in a professional journal. Finally, the team will offer to speak to archival administrations classes at nearby universities and share the lessons learned at each meeting of the CIC-University Archivists Group.

CLASSIFICATION: INFORMATION TECHNOLOGIST I

Provides independent complex professional support in one or more of the following information technology areas: software development, customer support, computer/systems operations, systems administration, systems software support, hardware support, communications network support, database administration, or a related technical area.

Characteristic Duties and Responsibilities

Software Development

- Independently meets with customers to determine information technology status, desires and needs.
- Develops complex technical specifications for entire systems.
- Performs functional systems design, including business function design, user interface design and database design.
- Develops, tests and implements complex applications software solutions.
- Prepares cost/benefit analyses, and performs other responsibilities related to business systems development.

Customer Support

- Provides independent general (first level) diagnostic support to customers for a broad range of technical areas. Resolves routine problems or questions and refers more complex issues to a more appropriate source.
- Independently works with customers to analyze problems or needs, and develops solutions drawing on a high level of expertise in position's assigned technical area to solve problems requiring novel uses of existing technology.
- Updates, trains and reviews the work of staff members in areas related to their assigned projects, develops new staff procedures in technical areas of expertise, and provides related professional IT support to the team.

Database Administration

- Independently designs, modifies and implements databases and database support software.
- Acts as a consultant to unit staff regarding applications and related support software.
- Monitors database applications for optimal performance.
- Monitors the physical size of databases and estimates size needs.
- Changes designs of databases and/or indexes to accommodate changing application needs or environmental factors which affect database performance.
- Migrates database applications and changes from testing to production.

Computer/Systems Operations

- Develops and implements systems software, production systems, and related operations and project policies, procedures, standards and practices.
- Installs, implements and supports systems software/hardware products.
- Reviews, analyzes, evaluates, recommends and administers new or enhanced operational activities, production methods, hardware and systems software products.
- Maintains unit or departmental operations systems and prepares related documentation.
- Performs related operations analysis and project support duties.

Systems Software Support

- Provides independent professional systems programming support for multiple platform operating systems (e.g. MVS, AIX, UNIX, WinNT) and related system level software packages.
- Plans and installs complex systems software.
- Checks available storage space and runs programs to realign and free up disk space.
- Develops and implements systems software, production systems, and related operations and project policies, procedures, standards and practices.
- Installs, implements and supports systems software/hardware products.

General

- Independently plans or leads projects of moderate size (such as 2-3 team members), complexity, and duration.
- Participates as an independent, fully functioning professional member of large/complex project teams.
- Provides independent specialized (second-level) customer support as an identified expert in a particular technical area.
- Provides training and assistance to customers and internal staff.

Education/Experience

This job requires a bachelors degree in computer science, information systems, business or related information technology field, with coursework in an information technology specialization related to the area of employment; one to three years of related and progressively more responsible or expansive work experience in an information technology area related to the duties to be performed; or an equivalent combination of education and experience.

Date: 11/1996

MSU is an Affirmative Action/Equal Opportunity Employer

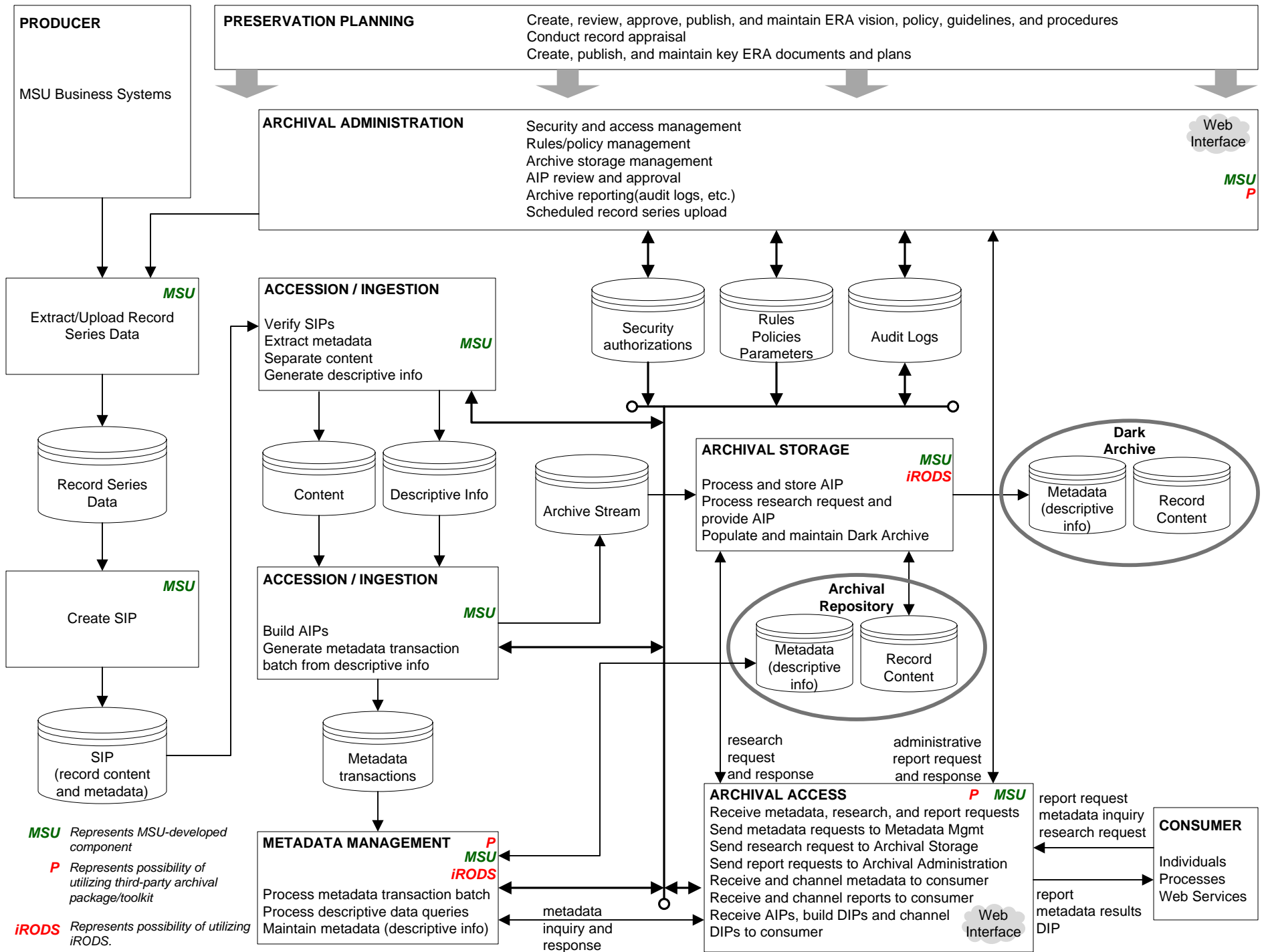
Plan of Work Matrix

Project Phase	Work to be Completed	Staff Assigned
Phase 1. Analysis and Appraisal	Search for full-time Project Technologist (PT)	TBD
<i>January 1, 2010 to June 30, 2010</i>	Establish appraisal criteria	Ghering/Gouin
	Database analysis	Gouin/Cribley
	Review database appraisals	Ghering/Miller
	Archival management software assessment	Ghering/ Gouin /Adler/Miller
	Project website	Project Team
	Technical material review	Patel
	Bi-weekly team meetings	Project team, as needed
Phase 2. Accession and Ingestion of Records	Regean Moore iRODS basic training	Project team/ CIC members/MSU IT staff
<i>July 1, 2010 to December 31, 2010</i>	Installation of archival management software	Adler/ PT
	Build web interface for database records	PT
	XML extraction of database records	Gouin/Cribley
	Write procedures for SIP	Gouin
	Write scripts to ingest records into <i>Spartan Archive</i>	PT
	Develop role based access controls	PT/Ghering/Gouin
	Develop AIP	Adler/ PT
	Document SIPs and AIPs for manual	Gouin
	Create Archival Admin reports for <i>Spartan Archive</i>	Ghering/Gouin/Adler

Plan of Work Matrix

Phase 3. Public Access and iRODS Installation	Develop DIP	Project Team
<i>January 2, 2011 to June 30, 2011</i>	Beta-test <i>Spartan Archive</i>	Ghering/Adler
	Test archival management tool	Gouin/PT
	iRODS installation	DICE programmer and PT/Project Team
	Test micro-services	Ghering /Gouin/Adler
	Transfer records from <i>Spartan Archive</i> to dark archive	PT//Ghering/ Gouin /Adler
	Create archival administration reports	Miller/Adler
	Document DIP for manual	Ghering/Gouin
Phase 4. iRODS Testing and Refinement	Complete second extraction from RO's databases	Gouin/Cribley
<i>July 1, 2011 to December 31, 2011</i>	Second ingestion of records	PT
	Test iRODS environment	PT
	Checksum analysis	PT/ /Ghering/ Gouin /Adler
	Draft procedures for checksums	Gouin/PT
Phase 5. Documentation and Work Flow	iRODS consultation	DICE Programmer/PT/Project Team as needed
<i>January 1, 2012 to June 30, 2012</i>	Conclude programming and testing	PT
	Complete all documentation	PT
	Document final changes to the system	Gouin
	Review documentation	Patel
	Conduct TRAC self-audit of <i>Spartan Archive</i>	Ghering/Gouin
Phase 6. Reports and Conclusions	Write NHPRC report	Ghering/ Gouin
<i>July 1, 2012 to December 31, 2012</i>	Conduct user surveys	Gouin/Adler
	Propose and write and publish articles	Ghering/ Gouin/Adler
	Professional speaking about the project	Ghering/ Gouin/Adler

Spartan Archive - Electronic Record Archive @ Michigan State University



Michigan State University Archives and Historical Collections Collection Policy

Mission

Michigan State University Archives and Historical Collections provides records management services to the university and preserves and provides access to the institution's historical records. The MSU Archives also maintains historical collections that support faculty and student research.

Mandate

The mandate of the Michigan State University Archives and Historical Collections is founded on a resolution of the Board of Trustees, as recorded in the minutes of November 21, 1969:

"At the May 1968 Board meeting the title "Director of Archives" was approved but no archival organization was established. Since that time Dr. William Combs has been acting in the capacity of Director of Archives. In order to accomplish this very important job, it is recommended by Provost [John E.] Cantlon and Executive Vice President [Jack] Breslin that the following resolution on the preservation of University records and the establishment of the University Archives be approved.

RESOLUTION ON THE PRESERVATION OF UNIVERSITY RECORDS AND THE ESTABLISHMENT OF THE UNIVERSITY ARCHIVES:

1. The records of the official activities of the University officers and offices are the property of Michigan State University.
2. Such property is not to be destroyed without the approval of (a) the officer in charge of the department where the papers are produced or accumulated, and (b) the Director of Archives.
3. Restrictions may be placed on the use of confidential records and papers entrusted to the Archives by the Board of Trustees, administrative officials and other donors.
4. A University Archives shall be established under the direction of an archivist who shall be responsible to the Executive Vice President and Secretary to the Board and the Provost of the University.

The Archives shall be the depository for University records which are no longer administratively useful in the several departments, but which have historical or other value. The Archives may also receive personal papers of officials, faculty, staff, students, alumni, and others.

On motion by Mr. [Don] Stevens, seconded by Mr. [Frank] Merriman, it was unanimously voted to approve the above recommendation."

The full name and scope of the Archives was established during a meeting of the Michigan State University Board of Trustees, as recorded in the minutes of September 17, 1970:

"4. Recommendation by Provost [John E.] Cantlon that the name of the University Archives be changed to University Archives and Historical Collections, effective as of September 1, 1970, with the understanding that with this change the Land Grant Research Center will be continued as one historical collection. This action will facilitate having historically significant collections donated to the University from various private sources for serious study.

On motion by Mr. [Stephen S.] Nisbet, seconded by Mr. [Frank] Merriman, it was voted to change the name of the University Archives to University Archives and Historical Collections, effective as of September 1, 1970. Trustee [Frank] Hartman voted, "No."

In 1995, the Archives moved to its present location in Conrad Hall near East Complex on the MSU campus.

Audience

As the official repository of Michigan State University's permanent records, the Archives serves the entire University community including its administration, faculty, staff and students. The Archives supports and encourages new research by scholars from MSU and from other institutions. The Archives also provides guidance and services in records

management to the University's academic and administrative units. The staff welcome inquiries from public and local historians; publishers and producers; K-12 students, teachers, genealogists, and the general public.

University Archives

Michigan State University, the nation's first land-grant college, has been a leader in scholarship and research in fields as diverse as agriculture, medicine, law-enforcement, and nuclear science. The University established an international presence in the course of the twentieth century, and has brought its land-grant heritage and mission to Japan, Rwanda, Vietnam, Dubai, and other locations around the globe. Closer to home, the university has partnered with state and local agencies, farmers, and scholars for the benefit of social, scientific and agricultural concerns throughout the state of Michigan and the Great Lakes region.

The Archives is the foremost repository for records pertaining to the history of Michigan State University. The university collections are particularly strong in regard to the official records of the Board of Trustees; the Presidents and Provosts; the physical campus and grounds; student life (especially the early years of MSU); and publications both by and about students and faculty. Highlights of the collections include the nation-building "Vietnam Project" of 1954-1961; records of MSU's state cooperative extensions; film and video recordings of university sports from the 1950s to the 1970s; and the papers of university president John Hannah; botanist William J. Beal; chemist and politician Robert C. Kedzie; and forensic scientist Ralph Turner.

Records Management

The MSU Archives is responsible for the management of the university's inactive records, including administrative records, publications, and the papers of university faculty, staff, students, and alumni. The MSU Archives assists university units in the efficient administration and management of official paper and electronic records of the university. The Archives staff also provides ongoing support and training to the university community in records management, storage, and retrieval in order to ensure compliance with all relevant state and federal laws and regulations.

Historical Collections

The MSU Archives also houses collections about history, culture, nature, and life in the state of Michigan and the Great Lakes region. Among these historical collections are administrative and photographic records of the 4-H club in Michigan; the papers of Ransom E. Olds and the REO Motor Car Company; over one hundred Civil War collections concerning natives of Michigan; and the records of several prominent Michigan lumber companies. The Archives' materials are particularly strong for the community of East Lansing, including a large photograph collection, scrapbooks, diaries, and records of local organizations such as the East Lansing Planning Commission. The Archives has an active interest in records pertaining to the state of Michigan and the Great Lakes region, with particular emphasis on materials that complement existing collections or have a relation of some kind to the university and its research specialties.

Opportunities

In addition to the topics mentioned above, the MSU Archives is intent on building its collections regarding the research, preservation and use of Michigan's environment and the development of alternative energy sources throughout the state. Areas of interest related to this focus include climate change; environmental stewardship (including operations and packaging on campus); bio-energy and alternative fuels; aquaculture; and water and land resource management. The Archives has a particular interest in research conducted by MSU faculty in fields such as economics, nuclear physics, biotechnologies, food sciences, human medicine, and genome-based studies for health and agriculture.

The MSU Archives also seeks faculty papers and research that would expand the representation of female and minority faculty in the collections and which document significant research and pedagogical achievements. University athletics, both intercollegiate and intramural, is another priority for the Archives, as is the student experience at MSU during the late twentieth and early twenty-first centuries. A valuable component of this focus includes records of student organizations, such as service groups; professional societies; special interest clubs; fraternities and sororities; and cultural and religious groups.

In the future, the Archives will strive to identify and collect material related to areas of interest to Michigan State University and its student and faculty communities.

Last Modified: May 2009

June 2, 2009

Cynthia A. Ghering
Director, University Archives & Historical Collections
Michigan State University
101 Conrad Hall
East Lansing, MI 48823

Dear Cynthia:

I am writing to express the intention of the Data Intensive Cyber Environments (DICE) Center at the University of North Carolina at Chapel Hill to enable use of the open source iRODS data grid technology at Michigan State University. We are highly interested in promoting integration of iRODS within academic digital repositories.

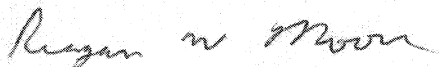
The DICE Center is developing extensions to the iRODS system to support the ISO Mission Operations Information Management System repository assessment criteria (MOIMS-rac). These efforts will lead to standard assessment criteria for preservation environments. We expect an initial version of these policies to be available in June 2010. We are very interested in tracking:

1. Which of the iRODS rules and micro-services are used in common by the MSU implementation,
2. The driving requirements that force development of different rules/micro-services by MSU,
3. Whether the Michigan State University system could be implemented as open source extensions to iRODS.

The support activities will include:

1. Provision of the iRODS open source software for MSU use
2. During the next twelve months, Reagan Moore will be available to travel to MSU for 2-3 days to give an iRODS overview presentation to MSU project staff. The travel costs will be supported by MSU.
3. In the second year, a DICE Center programmer will provide intensive iRODS training for five days. The travel costs will be supported by MSU.
4. In the third year, a DICE Center programmer will provide five days of consultation on iRODS programming. The travel costs will be supported by MSU.

Sincerely,



Reagan W. Moore
Director, DICE Center
Chief Scientist, Data Intensive Computing Environments at RENCi
University of North Carolina at Chapel Hill

MICHIGAN STATE
UNIVERSITY

1 June 2009

National Historical Publications and Records Commission (NHPRC)
National Archives and Records Administration
700 Pennsylvania Avenue, N.W.
Room 106
Washington, D.C. 20408-0001

To Whom It May Concern:

I am writing in support of the grant application by Michigan State University (MSU) Archives and Historical Collections ("the Archives") to NHPRC to develop an electronic records archive at MSU.

The Archives is one of the units in Libraries, Computing and Technology (LCT) at MSU. It is chartered by the MSU Board of Trustees to maintain the historical records of the University, and further serves the MSU community through curation of other historical collections that support scholarship. MSU has embarked recently on a multi-faceted portfolio of projects updating and replacing its enterprise business systems (EBS). As a part of these projects we must develop effective means by which to manage University business records and other digital artifacts in digital formats. We are asking the Archives to play a very central role in helping the institution to fashion its digital objects management efforts so that from the instant of their creation they are managed with sound archival principles in mind. Through this the Archives is becoming actively involved in setting standards for formats and processes for active records, and for digital collections of all sorts across the University. The project for which this funding has been requested is intended to advance our understanding and capabilities for practical, effective and sustainable digital records management, as well as extending the utility and accessibility of those records and artifacts for active use.

This effort is a central element of our EBS projects, and very important to the University. Several other LCT units are working with the Archives in this effort, including Academic Technology Services, Administrative Information Services and Enterprise Information Stewardship. Beyond LCT, this has the active engagement of other key units such as the Registrar, Controller, Human Resources, Physical Plant, University Relations and Intercollegiate Athletics. This project has been and will continue to be featured in discussions with the Information Services and Technologies Coordinating Council, which will provide a University-wide venue for vetting issues related to broad effectiveness of the project outcomes as well as leveraging local and global business processes and practices to best effect.



**Libraries, Computing
and Technology**

OFFICE OF THE
PROVOST

David A. Gift
Vice Provost

Michigan State University
400 Computer Center.
East Lansing, MI
48824-1042

Voice: 517-353-0722
FAX: 517-432-1430
gift@msu.edu

MSU is very active in the Committee for Institutional Cooperation (CIC; a consortium of the Big Ten universities and the University of Chicago), and this project has its basis in ideas shared during a recent CIC forum on "Managing University Digital Assets and Resources" hosted by MSU. The CIC institutions collaborate strongly on IT-related services and the CIC chief information officers are initiating a collaborative project to operate distributed digital storage across our interlinked fiber-optic regional networks. There is interest in the use of iRODS in that project. Useful outcomes of the project proposed here by the Archives will be shared with our CIC partners and likely lead to broader adoption.

We are very excited about the prospects for this Archives project, and sincerely hope that it will receive positive consideration by NHPRC.

Sincerely,

David A. Gift

MICHIGAN STATE
UNIVERSITY

May 26, 2009

National Historical Publications and Records Commission
National Archives and Records Administration
700 Pennsylvania Avenue, N.W.
Room 106
Washington, D.C. 20408-0001

Re: Michigan State University,
Spartan Archive

Dear Reviewer:

I write in strong support of the Michigan State University Spartan Archive proposal, which focuses on a series of records that continue to be vital to the history and the operation of our institution.

At Michigan State University, the Office of the Registrar is responsible for the functions assigned to University Curriculum and Catalog, which include the preparation and maintenance of all-University curricular changes for every college and their manifestation as the University catalog. There are two parts to this catalog: Academic Programs and Course Descriptions. These data are available on the web in their current and archival versions. Academic Programs is the official documentation of the program requirements used to determine a student's eligibility for admission and for graduation. Course Descriptions is the detailed listing of course content and related attributes. The Student Directory is no longer in print, yet it is an important demographic record.



**OFFICE OF THE
PROVOST**

Michigan State University
Administration Building
East Lansing, Michigan
48824-1046

FAX: 517/355-9601

These vital records are used directly and via related applications by students, administrators, and the institution itself to collaborate with other institutions. Current and former students use this information to assure compliance with requirements and to document past performance for professional advancement. Administrators use this information for internal analysis and planning and, increasingly, to share information and collaborate with peer and other institutions. The need for increasingly sophisticated ways to mine data and conduct longitudinal analyses continues.

By looking for ways to share data and improve service, staff in Michigan State University's Office of the Registrar built Transfer MSU, an online course equivalency system that uses Course Descriptions data and that became the basis for the statewide expansion of this equivalency system, known as the Michigan Transfer Network. Today, access to this electronic information is invaluable to students, advisers, and many offices of admissions and registrar. With the existence of these systems, staff have raised archival questions and contacted University Archives and Historical Collections for counsel. When the opportunity

was presented to be a participant in this grant proposal, the staff readily affirmed their interest.

These Office of the Registrar staff are recognized nationally with the acceptance of proposals and invitations to present at annual national AACRAO (American Association of Collegiate Registrars and Admissions Officers) meetings to demonstrate technological innovations in degree audit, electronic advising manual, curricular review, transfer equivalency, etc. They are enthused about upgrading their records management by working with University Archives and Historical Collections to develop an advanced electronic records archive for Michigan State University.

As a former registrar, I know the responsibility of the Office of the Registrar is to be the keeper of secure, accurate, reliable and accessible data. In the Michigan State University Registrar's Office, the office systems are paperless. All student records are imaged and electronic transcript orders are growing. Academic program records, policies and procedures are imaged. The time is right to take these parts and render them compatible in an electronic records archive.

I urge your endorsement.

Sincerely,

A handwritten signature in black ink, appearing to read "Linda O. Stanford".

Linda O. Stanford
Associate Provost for Academic Services



UNIVERSITY OF IOWA LIBRARIES

100 Main Library
Iowa City, Iowa 52242-1420
319-335-5867 Fax 319-335-5900

May 14, 2009

National Historical Publications and Records Commission
National Archives and Records Administration
700 Pennsylvania Avenue, N.W.
Room 106
Washington, D.C. 20408-0001

To whom it may concern:

The effective long-term management of electronic records continues to be an issue of concern to government agencies, educational institutions, and other entities that create, acquire, preserve and provide access to born-digital records. Evolving software and equipment requirements, frequent and sometimes abrupt changes in proprietary formats, and the susceptibility of digital records to any of a number of causes of data corruption or loss all contribute to this uncertainty.

Responding to this challenge, Michigan State University's University Archives and Historical Collections proposes an electronic records archive project designed to sustain a clearly-defined set of long-established record series in the context of institutions of higher education. The project, if implemented, would apply traditional archival principles in a dynamic, digital environment. It would concentrate on record series long recognized by most colleges and universities as vital and with significant historical value.

The benefits of this project's outcome would extend well beyond the Michigan State University campus. Its peer institutions, including other members of the Committee on Institutional Cooperation (CIC), face similar challenges and would certainly profit from the experience of the proposed *Spartan Archive*. In the wake of its role as host for last fall's groundbreaking conference, "Managing University Digital Assets and Resources," Michigan State is particularly well-positioned to share development and outcome-based information with its peer institutions. The conference attracted not only university archivists from across the Big Ten, but other stakeholders as well: registrars, chief information officers, IT specialists, and legal counsel. These stakeholders, and others, have an interest in the durability and accessibility of born-digital institutional records and would benefit from Michigan State's proposed project.

As chair of the CIC University Archivists Group, I am pleased to support Michigan State University's *Spartan Archive* proposal. Thank you for your consideration.

Sincerely,

David McCartney, C.A.
University Archivist
University of Iowa Libraries