

## **Upper Peninsula Digital Network (UPLINK) Digital Technology Report**

Due to their expertise in archival methods, access to labor and technology, Northern Michigan University (NMU), Michigan Technological University (MTU), and Lake Superior State University (LSSU) will serve as the Upper Peninsula Digital Network (UPLINK) service hubs. The three principal service hubs are geographically located in the eastern, central, and western Upper Peninsula and are responsible for the evaluation, digitization, preservation, and ingest of the primary source material.

During the fall of 2019, the Project Planning Team conducted a survey of existing equipment at the three service hubs to identify technical capabilities strengths and weaknesses. The equipment survey appears at the end of this report. In general, the Planning Team recommends that each of the three service hubs maintain a workstation capable of digitizing, at a minimum, textual and photographic material. As UPLINK's principal service hub, the Team recommends that NMU provide the capability to digitize analog audio-visual material and 16mm film.

Some specific findings include the following:

- All three service hubs have at least one computer station dedicated to digitizing text and photographic material. Thus, all three operate flatbed scanners capable of producing quality digital images. Each service hub should purchase external hard drives to be used for UPLINK projects;
- Each service hub's computer station should use the newest version of Adobe Creative Cloud for digitization and quality control processing;
- NMU should acquire a Epson 12000XL wide format document scanner and a Plustek OpticFilm 8200i SE dedicated film scanner;
- Each institution will continue to rely on in-house IT support for equipment and software maintenance, including equipment purchased and used by UPLINK;
- It is understood that any *digitization equipment* (such as document scanners, cameras, planetary scanners, etc.) purchased by UPLINK to be kept at a service hub may be used for digitization projects outside the scope of UPLINK, as the institution sees fit;
- NMU has a history of digitizing audio-visual formats, and thus has a wealth of equipment that LSSU and MTU do not have. Rather than replicate all equipment at the other sites, NMU will take the lead on digitizing audio-visual formats, leveraging their equipment and expertise;
- No service hub currently has a planetary scanner. UPLINK should pursue grant funding for the purchase of a planetary scanner.

### **Basic Digitization Workflow**

- Materials considered for inclusion in UPLINK will be inspected at the local service hub. Staff will follow UPLINK's Appraisal and Acquisition Policy and Procedure. The staff inspecting the source material for inclusion in UPLINK may need time to confer with other service hubs, and/or the UPLINK board.

- Member organizations will follow material transfer guidelines described in Section 5 of UPLINK's Appraisal and Acquisition Policy and Procedure.
- Digitization of source materials will occur at one of the service hubs. Digitization could take place at any one of these institutions, depending on their expertise, and availability of time.
- Staff will conduct collection arrangement and description as necessary.
- UPLINK will Federal Agencies Digital Guidelines Initiative (FAGDI) standards for the digitization of textual, film, and analog audio-visual materials. Staff will use Adobe Creative Cloud suite of software for digitization and quality control work.
- UPLINK staff will complete ArchivesSpace collection level description and item metadata (see summary of procedure below).
- Where applicable, UPLINK staff will ingest digital material into Preservica (see summary of procedure below).
- As material is digitized, staff will use external hard drives to back-up digital material. Service hubs will use these drives only for the purpose of UPLINK, in order to keep the work of UPLINK separate from the other normal workflow that the service hubs engage in.
- For digitized materials ingested into the statewide digital preservation initiative, copies of the digitization work carried out at MTU and LSSU will be sent to NMU for inclusion in a master backup.

### **ArchivesSpace Collection Level Finding Aids and Item Metadata**

UPLINK's mission is to make historical manuscript collections that document the history of Michigan's Upper Peninsula discoverable and free available online. Accomplishing this mission will entail the use of multiple metadata standards and formats to ensure easy findability via ArchivesSpace, Preservica, and the Digital Public Libraries of America (DPLA).

UPLINK staff will create Dublin Core-compatible records for individual digital objects using a template created by the NMU Metadata and Cataloging Services Librarian. Staff will export Dublin Core metadata from ArchivesSpace into Preservica, where they will comprise the descriptive portion of the METS metadata wrappers for each file.

When the description of individual files is complete, the metadata librarian will create an ArchivesSpace resource record for the collection, using the DACS content standard for archival metadata. The ArchivesSpace records for the digital objects will be incorporated into this collection. The collection-level record will then be exported as a MARCXML file into OCLC's Connexion database, where it will be edited and uploaded by the metadata librarian.

### **Preservica and Long-term curation of digital objects**

For Network members donating digital material for long-term preservation, UPLINK will use *Preservica* as the OAIS reference model long-term preservation system for digital objects. Specifically, UPLINK will use Preservica to preserve, curate, and make accessible to the public the Network's digital records. The system provides built-in SIP, AIP, and DIP archival protocols; has the ability to monitor the ingestion and migration of digital records; can perform fixity checks and virus scans on files during ingest; has the ability to migrate, emulate, or

normalize file formats.

UPLINK will utilize Preservica's *Universal Access Module* to provide public access to the Network's digital material. Preservica's *Module* is customizable and provides for extensive administrative control over access. The *Module* allows internal and public users to browse, discover, search, view and download open content. The *Module* supports access through multiple devices, such as tablets and smart phones, and users can easily share material via social media networks. Finally, the *Module* supports Google Analytics and AddThis for tracking patron use.

### **Appendix A - Existing Equipment Survey**

(attach here or reference Excel document)