OLD TRAILS MUSEUM

Prepared by Gwenlyn Coddington, University of Maryland iSchool

Digital Preservation Consultant

TABLE OF CONTENTS

Executive Summary

SURVEY

The survey provides a high-level overview of the Old Trail Museum's digital collections as of Fall 2018. Aspects reviewed include: state of digital collections, current preservation actions, Museum's immediate goals and attitudes towards digital preservation, and resources at the institution's disposal. This document provided the initial data for the Next Steps Preservation Plan and the Digital Preservation Policy.

Next Steps Plan

Using the survey results as a basis for identifying OTM's most critical needs, the Next Steps Preservation Plan outlines an actionable framework for the Museum to take to improve its digital preservation status. The steps are arranged by timeframe, with most critical actions first, and then by intervention need under five areas: storage and location, fixity and data integrity, information security, metadata, and file formats. Impact and resource estimates are provided for each recommendation.

OTM's most pressing digital preservation need is to create a preliminary inventory of its digital content. Completing this will help the institution gain physical and intellectual control over its holdings. This inventory should function as a starting point for creating more in-depth records when the Museum implements PastPerfect collections management software.

In addition, the Museum should focus on creating documentation of its access and restriction policies, acceptable file formats for storage, and storage system requirements. Adequate documentation functions on two levels. First, it creates consensus across stakeholders by standardizing best practices. Second, it ensures sustainability by recording the mechanisms enabling continued use of the storage system.

Digital Preservation Policy

While the Next Steps Plan provides the details of how OTM can improve its digital preservation, the Digital Preservation Policy functions as a roadmap for the institution. The policy document synthesizes the Museum's current preservation actions and its future goals as part of its larger commitment to collections maintenance and access. As an active document, the Digital Preservation Policy should be reviewed annually to ensure compliance and relevance on the institution's behalf.

Survey Results

Introduction

The results of this overview were generated from a survey given to the Old Trails Museum's director as well as follow-up e-mails clarifying specific points. Its purpose is to help establish the institution's current digital collection practices, concerns, and goals in order to develop a digital preservation plan and set of policies tailored to the Museum's unique needs.

Institutional Overview

Located in northeastern Arizona, the Winslow Historical Society is a nonprofit organization dedicated to collecting, preserving, and exhibiting information and artifacts related to its community history and culture. The Historical Society was established as an independent organization in 1997. It owns and maintains the Old Trails Museum (from here out referred to as OTM), an educational institution meant to foster community engagement with and exploration of local history. Located near a historic transportation hub, the Museum is home to a series of diverse collections. These include histories related to U.S. Route 66, the Hopi, Laguna, and Navajo people, the Mormons' Brigham City, and the Atchison, Topeka and Santa Fe Railway. The Museum also collects items and histories related to former residents, community businesses, and local institutions, making it a significant local source for genealogical research.

The Historical Society is governed by a Board of Directors and operates under the direction of a part-time director and part-time associate. One of the major challenges facing the institution is the lack of arrangement in their holdings. The Museum's current priority is to develop and enact a collections management policy to better maintain intellectual and physical control over their holdings. Within the next year, the director hopes to finish creating and implementing her Collections Management Plan. Working with a digital preservation consultant will provide them an opportunity to build best practice digital preservation policies into their larger collection management plan.

Collection Policy

"The purpose of the OTM Collections is to stimulate interest in and understanding of Winslow's economic, political, and social development, as well as its relationship to the region, state, and nation as a whole. OTM will accept materials from the time period immediately preceding Winslow's founding

through the present day, and from Winslow's municipal boundaries and the surrounding areas. In addition, the OTM Archives include materials on the history of the museum itself and its activities and programs." (From Old Trails Museums Collection Policy)

Institutional Goals for Digital Collections

Creating, managing, and enabling access for digital materials is a high-level priority for OTM. After their Collections Management Plan has been adopted, OTM will then work on creating metadata for upload into PastPerfect and PastPerfect Online. PastPerfect is a collections management software system popular among small and medium-sized cultural institutions. PastPerfect Online is the public facing component to this system that enables catalog sharing and searching.

The Museum has three specific goals for its digital content management practices:

1. Maintain best practices for digital image scanning, preservation, and storage
2. Maintain best practices for digital document scanning, preservation and storage (including converting and grouping multiple JPEGs into one PDF)
3. Maintain best practices for digital audio creation, conversion (if needed), preservation and storage

These goals are largely format driven and reflect the OTM's plan to continue collecting and preserving objects of these types.

Overview of Digital Collections and Management Strategies

Currently, OTM holds a significant amount of digital content in the form of documents, images, audio files, and webpages. The documents number approximately 5,000 and include Word documents (Office Suite 2007)., PDFs, and scanned JPEGs. The Museum also has an estimated 10,000 images scanned as JPEGs or TIFFs and around 300 oral history audio files saved as MP3s. The JPEGs and TIFFs were created using Adobe Photoshop CS2 9.0. OTM is currently archiving WordPress pages from the OTM website as PDFs, which number around 200. These files were recently converted to the latest version. There are two clear branches within the Museum's digital content: items digitized to further accessibility and born-digital objects mostly related to the OTM's history and activities (with the oral histories as a notable exception). Differentiating between the two types of content will help guide preservation decisions by determining the level of adherence needed to file formats to preserve contextual information embedded in the object. It will also be important for determining static files and active files, which may need different preservation policies.

Not all digitized or digital objects are owned by the Museum, which means that attention should be paid to potential conflicts related to intellectual property, copyright, or other ownership questions.

There are currently two copies of each digital object in OTM's collection. One is housed on the Museum's desktop and the other is protected in a cloud-based storage provided by Carbonite. The desktop is an HP running a Windows 7 operating system. The OTM desktop is stored in a locked building with an alarm system. It is password protected and access is limited to the director, associate, and collections volunteers. Once the digital catalog is online, the Museum will continue to limit access to the original copies on the desktop. Carbonite is a cybersecurity company specializing in data protection. It provides automated back-up services to a cloud storage system. Carbonite users have the option of allowing the software to automatically save which files it deems important or to manually input those settings. The platform seems well-suited to OTM's needs as it will automatically save user-created files such as word documents, PDFs, music files, PowerPoints, and more. However, the software defined saving system only backs-up files in the C:\ drive and won't save files over 4GBs in size. Thus, the Museum will need to ensure that all the files they want saved are located in the proper place if they use automatic back-up. Access to the Carbonite files are also password protected and encrypted using a 128 bit encryption.

OTM's desktop is monitored by AVG antivirus but there is currently no system for documenting and checking file fixity for possible corruption. Similarly, because the Museum is in the process of arranging and creating metadata for its collections, there is no overarching inventory for its digital content, though some portions have been completed and are stored on the desktop and through Carbonite.

The Museum has a distinct advantage in that it generates most of its own digital content through digitization efforts and its own administrative records. This means that the staff can be proactive in the type of file formats they employ including limiting it to a select few.

Analysis

Mapping the OTM's current digital preservation strategies to the NDSA's Levels of Digital Preservation helps to structure the survey results against standardized and certified best practices for digital preservation and provides a roadmap for future actions. This exercise revealed that OTM is currently

meeting one of the five platforms for sound digital preservation at the first level. Having two copies, non-collocated and getting digital materials off of mixed media is an essential first step to good preservation which the institution has already met. In addition, while the Museum doesn't meet the exact definition for basic levels of information security and file formats, they do have basic security practices in place and have some flexibility as to determining what types of file formats will be used. Creating policies and documentation will be two of the most important next steps in these areas.

File fixity and metadata are the weakest categories for the Museum. Part of this will hopefully be strengthened as the institution creates PastPerfect records for its content. Checking fixity will most likely require the implementation of new tools as well as the creation of policies and processes for documentation.

Resources

OTM has a number of resources that can be brought to bear on their digital preservation efforts. As mentioned in the institutional overview, they have two paid staff members, a director (who works twenty-eight hours a week) and an associate (who works eight). Though their current digital work is aimed at the digitization of analog records and the creation of metadata, some of their time may be redirected towards digital preservation needs. In addition, the Museum has a volunteer network, some of whom have expressed interest in working with the oral histories collection.

The Museum has a dedicated budget of $500 for computer maintenance and $1,000 for archival equipment and supplies. There is also room in the budget for use of some discretionary funds.

Finally, OTM has access to the software platforms Carbonite and PastPerfect. Carbonite is already providing a layer of additional storage and security, but it could also be useful for maintaining data integrity. The software regularly runs data integrity checks and compares the files in cloud storage with the original files on the adjoining computer. In addition, the software's restore file function provides basic information about file count and size that could prove useful as checks for restored files. While PastPerfect records are still in progress for the Museum, the software could aid in producing inventories of digital content as well as be a management platform for collecting descriptive metadata. Though the Museum is planning on creating one file for analog materials with digitized content, these records could

provide a base-level inventory of digitized content that could be added to with more specific information such as storage location.

Conclusion

This survey has provided a basic overview of the Old Trail Museum's current digital holdings, their preservation strategies, and their goals for the future. The Museum is off to a good start in their current storage strategies and in the level of information security they provide. Their major challenge moving forward will be to create better documentation of their content and preservation policies. Using the data generated by this report, the next step will be to identify immediate preservation actions the Museum can take to bolster their digital collections.

Next Steps Preservation Plan

Introduction

This document outlines next step digital preservation practices for the Old Trails Museum (OTM). The results are based on the survey completed in October 2018 on OTM's digital content, preservation goals, and resources. The document moves through three levels: immediate actions, midterm actions, and long term actions with suggestions related to each of the five preservation categories in NDSA's <u>Levels of Digital Preservation</u>. Each action includes a summary statement, an estimated resources expenditure in time, skills, and cost, an estimated impact value (low, medium, and high), and a list of steps and suggestions for completing each action. There is also a list of additional resources for further information on digital preservation.

Immediate Steps

Metadata: Creating some form of an inventory for OTM's digital content is the most pressing preservation need for the institution. Having a working inventory will help maintain physical and intellectual control over the collection and it will aid in the collection of administrative and descriptive metadata. At this stage, I would focus on creating a preliminary inventory which would give you the bare necessities to manage your collection with the idea of leveraging it as a starting point as you work on your PastPerfect records.

Resources: High staff time, low technical skills, no cost

Impact: High value

1. Create a basic inventory of digital content
    a. OTM has a lot of digital objects so determine a reasonable level to work at to collect information that will yield a useful inventory without being too time-consuming (i.e. consider working at the folder-level rather than file)
    b. Consider how you might separate active and static files in your inventory. Since OTM has a significant amount of digital content related to its own history and activities, presumably some of these files are still in regular use.
    c. Think about any differences in access systems you intend for your digital content. Will all material be in PastPerfect or used as a corollary to that system? Will some material be

presented online through the museum's website? Keep these questions in mind as you do an initial sort through your digital records.

      i. Points B & C will be further developed in OTM's Digital Preservation Policy Statement

    d. Leverage metadata in current file systems to make an initial inventory in Excel covering the following points: title (subject matter), amount of material, formats of objects (JPEG, MP3, etc.), storage location, access restrictions (copyright, privacy issues)

      i. Tip: Using the properties feature (right-click on PCs) to pull quick information on storage location and amount of materials

      ii. Obtaining a file count can also work as a low-level tracker of file fixity

2. Store in two, non-collocated places (on the desktop and in Carbonite would work)

3. Maintaining your own inventory will help if, for whatever reason, you decide not to use PastPerfect or if you migrate away from their services in the future

Information Security: OTM has good basic measures in place for ensuring their collections' security. A useful next step would be to create written documentation determining authorization and access to files. Doing so will help prevent accidental erasure or overwriting.

Resources: Low staff time, low technical skills, no cost

Impact: Medium Value

1. Determine and document who has authorization to access and edit files

    a. Since OTM's computer is password protected some level of restriction already exists. Think about who has passwords and how they are given out to help develop your access document.

    b. Think about the level of access you want to provide to onsite researchers and visitors as well as who will be working with the records within the institution

    c. Circulate the memo among staff and volunteers. Make sure researchers and visitors are aware of access limitations.

2. You can leverage this document when you begin work on PastPerfect records. PastPerfect has a security feature that you can set up to limit access across ten user groups.

    a. Here is a link to a webinar describing how security features work in the software

    b. Here is a link to a worksheet outlining PastPerfect's ten user groups. This may be helpful to work from when designing your own access document.

File Formats: Maintaining a set list of acceptable file formats for created and accessioned digital content aids in digital preservation by limiting the introduction of unusual or unstable file types that will require migration or the maintenance of certain types of hardware or software environments. While there are a <u>number of factors</u> to consider when determining what file formats to choose, a good rule of thumb is to consider how widely the format has been adopted before including it as an acceptable type. Currently, OTM is using Word Docx, PDFs, MP3s, JPEGs, and TIFFs. Decisions made in this step can also be folded into OTM's preservation policy statement.

Resources: Medium staff time, medium technical skills (for evaluating file types), no cost

Impact: High value

1. Explore and compile a set list of acceptable file formats for OTM to employ in their digital content
    a. Factors to consider:
        i. Disclosure: how available are the technical specifications and tools for understanding how the file operates?
        ii. Adoption: how widely used is the file format?
        iii. Transparency: how easy is it to find the structure of information inside a file?
        iv. Self-Documenting: how easy is it to locate and pull metadata from the file format?
        v. External Dependencies: does the file format need a specific type of hardware or software to run?
        vi. Patents: will licensing for the file format impact OTM's ability to use it?
        vii. Technical Protection Mechanisms: will things like encryption limit OTM's ability to access the file?
    b. Resources:
        i. The Library of Congress has a great review of the sustainability of digital file formats: https://www.loc.gov/preservation/digital/formats/index.html. You can get more information about the sustainability factors here as well as an evaluation of different types of file formats by content (i.e. sound, textual, images, etc.)
2. Review OTM's current file formats against your list of acceptable file formats
    a. In my opinion, OTM is secure in sticking with PDFs, JPEGs, and TIFFs as their core file formats. These formats are widely adopted, which means that support structures for

accessing them are likely to remain available. Deciding between JPEGs and TIFFs for image formats is really dependent on what OTM would like to do with them. From what I understand, TIFF produces better quality digital images, but JPEG uses a smaller file size and is more widely supported than TIFF (This article has a useful comparison chart on the two types). OTM should weigh these factors when deciding which type of file format to employ.

b. MP3s are a gray area for the Museum. Since they are compressed files, there is some loss of data and quality as compared to WAV files which are the recommended standard. WAV files, however, do take more space to store so OTM should decide if storage issues will be a significant problem for them in the future before adopting WAV as a standard. Regardless, existing MP3 files should not be converted to WAV files as there is no significant gain made in conversion.

c. I would recommend that OTM export Word Docx to PDFs for long-term preservation since PDFs are the more stable file type.

Midterm Steps

Information Security: A second layer step to improve information security at OTM is to document digital content access restrictions. This step has two parts. The first is similar to the inventory creation and can be folded into that process. Basically, it helps identify any issues to access, such as copyright status or privacy concerns, that may impact how freely the content should be displayed. The second part entails altering permissions for files at risk for tampering or with high value content.

Resources: Medium staff time, low technical skills, no cost

Impact: Medium value

1. Review OTM's digital objects inventory for content with access restrictions
2. Compile a list of content with access restrictions (can be folded into inventory creation)
3. Ensure that access-restricted digital content is suitably protected from public use
4. Review digital content to identify files with high value content or that may be unintentionally edited
5. Change file permissions accordingly using the security tab under properties
   a. This article has a good overview of what the different permission mean

Storage Systems: Document your storage system, media and what is needed to use them. What would happen to your digital content if your administrator and main staff members were not around to tend it? Would others be able to access and manage your storage system? This step ensures that basic information about OTM's storage processes are intact for future use.

Resources: Medium staff time, low technical skills, no cost

Impact: Medium value

1. Think about your desktop environment. What is needed to access the files on your desktop? Document anything of import related to:
    a. Passwords needed to access the desktop
    b. Basic location of folders
        i. This information can be pulled from OTM's inventory
    c. Any software needed to execute files
2. Repeat the process for Carbonite. Include information about:
    a. Passwords for accessing Carbonite files
    b. What files are automatically synced for back-up/how often back-ups occur
    c. Any relevant information about Carbonite's terms and conditions for use

<u>Long Term Steps</u>

File Fixity: Generating file fixity information helps to ensure data integrity across transfers and while in storage. Essentially, it is a way of proving that your digital objects are what you think they are. In cultural institutions, this is usually done through generating a checksum for a digital object and then checking the checksum string at fixed intervals to note any changes. This can be done in a number of ways but the easiest for OTM would be to use a third-party service. Through a bit more research, I learned that Carbonite does <u>integrity checks</u> on the objects in its storage. I've reached out to Carbonite to learn more about how the company runs fixity checks and if that information is available for customer review. They told me that Carbonite does generate hash values for files stored on their servers. These are compared to the files on the account's linked computer and files that do not match the original ones are replaced in Carbonite. For privacy and security reasons, they were not able to provide me with any more details about how often these checks are run and if customers could access the results of these tests. However, I am confident that Carbonite's services will serve as a suitable fixity check for OTM for the immediate future, particularly if the Museum can bolster their services through low impact checks of

their own. I've included resources on how to conduct fixity checks if the Museum has the resources down the road to start to generate their own fixity information or if they decided to migrate away from Carbonite's services.

Resources: High staff time (at least until you get used to the process), medium technical skills, no cost

Impact: High value

1. Collect low-level fixity information such as file size and count
   a. This information should be a part of your preliminary inventory so use it as a measure of file fixity. Run a check every six months to a year to compare file counts and sizes to make sure indicators have not changed.
2. Consider generating your own fixity information using a third-party tool. My suggestions for OTM are:
   a. QuickHash
      i. This is an open source fixity tool. It is compatible with a Windows operating system and is regularly updated. I found the user interface to be relatively intuitive and I like that you can generate fixity information at multiple levels (text, single files, multiple files, etc.) The drawback to this tool is that fixity information needs to be saved by the user in a separate text editor. There is a copy/paste feature that allows you to pull fixity information easily, but I don't think the tool itself stores this information for future checks, which could make the comparison process tedious.
      ii. Resources:
         1. Intro tutorial
         2. User Guide
   b. AVP Fixity
      i. Free software program that generates and monitors fixity information. It, too, is Windows compatible and has an intuitive user-interface. What I like about this program is that it has the option to email fixity reports to the user when errors have been detected and there is a lot of flexibility in deciding when and how often the fixity reports will be generated. It also stores the reports from fixity checks and these are readily available through the tool.
      ii. Resources:
         1. Fixity Tool Webinar

      c. Resources:

           i. NDSA: <u>What is Fixity, and When Should I be Checking It?</u> Great high-level overview about what fixity is and how it operates in cultural heritage institutions

3. Create fixity information for digital objects upon accession

    a. Planning to bring digital content into your storage system from an outside source? Ask for fixity information from your donor or generate it yourself upon ingest.

Metadata: Long term, it will be useful to think about how OTM can use PastPerfect records to include information about digital content. PastPerfect has an oral histories category under its Archive database that will be useful for creating and storing information about these digital objects. Based on our previous conversations, I'm assuming that OTM is planning on purchasing the <u>MultiMedia</u> upgrade to support their PastPerfect Online portal. This feature allows for the inclusion of digital assets with catalog records and has multiple fields for collecting metadata on digital objects. As these records are created, OTM can use their initial inventory as a starting point for metadata on these records.

Resources: High staff time, medium technical skills, cost of PastPerfect subscription (already factored into OTM's planned budget)

Impact: High value

1. Plan ways to integrate digital content inventory into PastPerfect records

    a. Use the oral histories category under Archives database to create more robust documentation of the oral histories collection

    b. If using the MultiMedia upgrade, include robust metadata on digital photographs

    c. As you create these records, think about capturing additional metadata in these records such as transformative metadata (anything that was done to the object to change it) and technical metadata (how, when the object was created, what was used to create it). Even if you decide not to include this information in your PastPerfect records, this process is a good time to beef up your initial digital content inventory.

2. Plan how OTM will use the Museum's digital records of its business and activities. Some questions and points to consider are:

    a. Consider what in the initialinventory should be maintained to keep a current log of this digital content.

    b. Consider how these records might be made accessible.

        i. Will these be available through PastPerfect?

        ii.   Will content be uploaded onto OTM's website?

   c.   Consider how active files might differ from static files in preservation needs.

        i.   When will you log active files into your inventory?

Storage Systems: Create a third copy of digital content for storage in a unique geographic area. Two copies are great but three are better. Issues can arise with any seemingly secure storage system so creating another set of copies for storage away from existing copies ensures that the digital content will remain unaffected by natural disasters or freak events.

Resources: High staff time (to plan and consider options), medium technical skills, possible cost depending on option chosen

Impact: Medium value

1. Create a third copy of OTM's digital content and identify a storage location in a unique geographic area. Some storage options to consider are:

   a. Placement with a different cultural institution. Consider a swap with another historical society where you give them a drive with your digital content and they give you one with theirs

   b. Employ another third-party vendor

      i. For OTM's current digital holdings, OneDrive and Google Drive will easily store digital content under their free offerings with room for a bit more. These free services might not remain so as the museum continues to increase their content, but they are both good starting options.

      ii. Once it's running, PastPerfect Online can provide another storage source for OTM.

         1. It appears that PastPerfect Online does not host multimedia audio or video files (for OTM MP3 files) with its basic hosting service. OTM could purchase the PPO Links service for additional server space or PastPerfect Online has the option of embedding audio/visual links into the records from a third-party site like SoundCloud. This second option will be cheaper for OTM but the Museum will want to ensure there are no access issues for these files before publishing them to the site.

<u>Conclusion</u>

Digital preservation is best thought of as an iterative process. Do what you can, when you can, with the resources you have available but always be looking for how you can improve your preservation status, integrate redundancies, and plan for changes in technology. Moving through each of these suggested steps will at least bring OTM to a Level 2 status in NDSA's Levels of Digital Preservation, give it a solid infrastructure to build from, and position it to be a sustainable system in the future.

<u>Additional Resources</u>

Digital Preservation Step by Step

https://orbiscascadeccd.github.io/digprezsteps/index.html

Provides step by step suggestions for moving through the NDSA's Levels of Digital Preservation along with possible resources and tools

Library of Congress Blog

Protect Your Data: Information Security and the Boundaries of your Storage System

https://blogs.loc.gov/thesignal/2014/04/protect-your-data-information-security-and-the-boundaries-of-your-storage-system/

Useful overview on information security for digital preservation and what makes up a storage system

"Exposing Ourselves: A Case Study in Collection Management Software Implementation"

https://digitalcommons.kennesaw.edu/cgi/viewcontent.cgi?article=1352&context=seln

This article may be a little dated, but it details a university special collection's experience with PastPerfect, including some of the issues they ran into and a few useful features of the software they found. It's only seven pages and may be useful to skim.

Policy

Purpose

Digital collections are an increasingly important facet in cultural institutions. Yet, their fast-changing, multi-faceted nature makes preserving digital material a constant challenge. The Old Trails Museum (OTM) recognizes the need for clearly articulated, widely accepted guidelines in managing their digital content. This document outlines the Museum's policies and responsibilities for maintaining an actionable digital preservation framework.

OTM is committed to providing long-term, sustainable access to its digital material. The Museum will strive to maintain digital collections across four key areas: secure, well-documented storage systems, data fixity, accurate metadata, and standardized, working file formats. In addition, OTM will ensure its system's reproducibility by providing appropriate training to staff, volunteers, and visitors.

Access remains the guiding principle for undergoing preservation in any form. OTM will seek to understand how digital preservation impacts access systems and will maintain appropriate restrictions to sensitive digital material.

Scope/Content

OTM's digital collections consist of digitized and born-digital objects related to Winslow, Arizona's economic, social, cultural, and political development and the Winslow Historical Society and Old Trails Museum's business and activities. In accordance with its Collections Management Policy, the Museum will continue to collect and preserve audio, visual, textual, and presentation material that enriches its records and helps to distribute its analog material through digital systems.

Through course of its business, the Museum will separate active working files necessary for the continuance of its activities from static files. Active files will not be subject to all the policies outlined in this document but shall be maintained in secure storage locations and, as appropriate, in duplicate forms. The policies outlined below will apply for all of OTM's digital archival collection except where differences in treatment are noted.

Guidelines & Standards

The Museum's digital preservation strategy and policies were developed using NDSA's <u>Levels of Digital Preservation</u>.

Storage Systems & Information Security

OTM is committed to providing a secure storage system for all digitized and born digital content. In accordance with best practices, the museum will maintain at least two copies in non-collocated systems with the aim of creating and distributing one to two more copies as able to ensure the continued security of its digital objects.

Primary storage for the museum's digital content will be the museum's desktop. Access to digital files on the desktop will be limited to authorized personnel. These access restrictions will be documented and circulated among staff, volunteers, and visitors.

Secondary storage will be maintained through the third-party data protection company, Carbonite. Back-ups of OTM's digital content will be automatically synched with Carbonite servers as content is generated or changed.

Requirements for accessing and using the storage systems will be documented to ensure continued sustainability across staff changes.

File Fixity

OTM recognizes that checking file fixity is critical for maintaining data integrity. File fixity for digital content will be maintained through Carbonite's third-party service. If the Old Trails Museum decides to migrate away from Carbonite's services, fixity options will be reevaluated in accordance with suggestions supplied in the museum's Next Steps Digital Preservation Plan.

Metadata

Complete metadata for digital objects helps maintain discoverability and ensures physical and intellectual control. Accurate metadata will be maintained for all digital content through a preliminary inventory covering at minimum title/subject, file format, amount of material, storage location, and any

access restrictions. Digitized content and oral histories will receive additional metadata creation and storage through PastPerfect software.

File Formats

OTM will strive to standardize file formats across its digital repository to simplify preservation actions and ensure sustainability across formats. As possible, OTM will recommend the following file formats for digital content:

1. Textual/Presentation
    a. PDF-Recommended file format
    b. Microsoft Word-Recommend conversion to PDF before ingest into storage system
    c. Microsoft PowerPoint-Recommend conversion to PDF before ingest into storage system
2. Image
    a. TIFF-Recommended for high quality images
    b. JPEG-Recommended for storage in PastPerfect Online system
3. Audio
    a. WAVE-Recommended file format for high quality audio
    b. MP3-Acceptable format for existing files

The Museum's audio collection currently consists of MP3 files. Existing MP3s will remain unconverted but OTM will implement WAVE files as storage requirements allow.

OTM will monitor file formats for possible obsolescence and migrate files to updated formats as necessary.

Training

OTM will aid in the continued preservation of its digital objects by ensuring that all staff members, volunteers, and researchers are aware of and abide by the museum's practices for interacting with digital content. This includes abiding by access restrictions for sensitive content, following standardized practices for metadata creation, and following procedures for content duplication, storage, and editing.

Access

OTM's motivation for enacting digital preservation policies is to ensure that its digital collections remain accessible for current and future generations. The Museum will aim to provide access to digital content through quality duplications given to researchers, select portions of presentation material published on OTM's website, and, eventually, searchable records of its digitized images and oral histories through PastPerfect Online.

Access to specific collections or items may be denied based on intellectual property claims, privacy issues or legal requirements. OTM will abide by these restrictions.

Publishing and Review

OTM recognizes that digital preservation is best approached as an iterative process. As such, The Next Steps Digital Preservation Strategy document and the Digital Preservation Policy will undergo annual reviews to update system specifications, ensure institutional compliance, and review overarching goals.

This document will be made available through OTM's website to create transparency in the Museum's process, strategies, and goals and to encourage feedback where appropriate.

Resources

Tools

Carbonite Support Knowledge Base: https://support.carbonite.com/

QuickHash Fixity Tool: https://quickhash-gui.org/

AVP Fixity: https://www.weareavp.com/products/fixity/

PastPerfect Online User's Guide:
http://museumsoftware.com/ppohelp/index.htm?rhhlterm=audio&rhsyns=%20#t=Welcome.htm

PastPerfect Security Webinar: https://www.youtube.com/watch?v=H8ZLDU6s4Rw

Digital Preservation Step by Step: https://orbiscascadeccd.github.io/digprezsteps/index.html

Articles

Philips, Megan, et al. "The NDSA Levels of Digital Preservation: An Explanation and Uses."
http://www.digitalpreservation.gov/documents/NDSA_Levels_Archiving_2013.pdf.

Arms, Caroline and Carl Fleischhauer. "Digital Formats: Factors for Sustainability, Functionality, and Quality." https://www.immagic.com/eLibrary/ARCHIVES/GENERAL/US_LOC/L050128A.pdf.

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