Digital Preservation Consultant Project

Greenbelt Museum

Tricia Glaser | December 2, 2018

INST 784 Digital Preservation

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Executive Summary

This consultation project was conducted for the Digital Preservation course at the University of Maryland (UMD) iSchool. The class was tasked with partnering with small cultural heritage organizations to examine the state of their digital content and their digital preservation practices. Students then provided their institutions with a set of recommendations on how to improve their digital preservation strategies, using the Levels of Digital Preservation from the National Digital Stewardship Alliance (NDSA) as a guide. The final product was a Digital Preservation Policy crafted specifically to each organization's needs.

This document was written for the Greenbelt Museum in collaboration with its Director and Curator, Megan Searing Young. Enclosed are results from the institutional survey that was first taken to assess the Museum's digital content and procedures; the next steps based off the survey results; and the Digital Preservation Policy.

This report should be considered a living document, as digital preservation practices will naturally evolve as technology advances and standards change, along with the Museum's priorities and resources for managing their digital content.

<p style="text-align: center;">**Institutional Survey Results**</p>

I. **Scope of digital holdings**

The Greenbelt Museum is a community museum that focuses on the "New Deal history and living legacy of Greenbelt, Maryland" ("Greenbelt," n.d.). Founded in 1937, the town was designed as a "utopian cooperative community" by Franklin D. Roosevelt's administration in hopes that it would become an accepted model of collective living across the country ("Greenbelt," n.d.).

Greenbelt was later designated a National Historic Landmark, and the museum was founded in 1987 as a partnership between the City of Greenbelt and the Friends of the Greenbelt Museum (FOGM). The Museum provides tours of an original Greenbelt home, walking tours of the community, rotating exhibits, and educational programming. Their collection scope includes items that were made and/or used in the town; associated with a resident, location, or event in Greenbelt; and that originated or were used from 1936-1952 ("Collections," n.d.). In total there are approximately 2,000 artifacts in the Museum's collection, with an estimated 50% already digitized. This total does not include the Museum's archives, comprised of textual records, maps, and photos.

Their digital holdings consist primarily of image files in TIFF format, but also include recordings and transcriptions of oral histories. More recent oral histories are in MP3 format; however older recordings are stored on cassette tapes and have not been digitized. The Museum's primary collection of oral histories, taken in 1987, were transcribed and scanned into PDF format. These scans were done a decade ago, and the Museum's Director/Curator, Megan Searing Young, has indicated that they likely need to be rescanned. Finally, there are not corresponding analog copies of every digital object in the Museum's possession.

II. **Managing their digital content**

While the Museum's Collections Policy outlines digital content management and security in detail, it is unclear if actual day-to-day practices adhere to the policy. PastPerfect software is used for the collection database, which Searing Young describes as "searchable, though it's clunky" (personal communication, October 9, 2018). Only the Museum's artifacts are catalogued in PastPerfect, which excludes archival material since they have not been treated as objects.

According to the Collections Policy, records should be backed up on a weekly basis, with Searing Young as the sole responsible party of the repository. One copy of the backup is kept on her computer (which is owned by the city); one copy is kept in the Greenbelt Community Center safe; and one is kept off museum grounds (the policy does not specify where). When interviewing the Director, she said that a backup of their digital content is kept on a dedicated external portable hard drive with Greenbelt's IT department, located at the city's municipal building, but she was unsure of how it is stored.

On her work computer, files are divided into subject folders which are grouped alphabetically with minimal metadata that differs across folders. In general, each image file name consists of a short description of the subject, its photographer, and whether the photo belongs to the Museum or the Library of Congress. Images are treated less as artifacts and more as archival records.

III. Staff perceptions of the state of digital content

The Museum's Director is deeply concerned about their digital content and sees it as critical to the institutional mission that they have a digital preservation strategy in place. She strongly feels that this should be a priority for the whole organization.

IV. Future plans for their digital collection

The original Greenbelt community was racially segregated until the late 1960s, and historically the museum has not been concerned with collecting material from African American residents in the area. Searing Young feels that this lack of diverse voices in the collection needs to be rectified. In 2012, on Greenbelt's 75th anniversary, she created a separate archive for objects and records from the Greenbelt African American community that existed during the New Deal era and beyond.

Additionally, the Museum wants to acquire more video resources; objects that would provide more contextualization around the Resettlement Administration's plans; and documentation of how homeowners were recruited and applied for the original Greenbelt homes.

V. Available resources

Greenbelt Museum is unique in that their collection is owned by the city; however, in the annual city budget there is no line item set aside for collection care. Generally, $2,000 to $4,000 are allocated each year for museum purposes. The rest of their funding is provided through two investment funds: a NEH Challenge grant and the Founders Fund, managed by the FOGM. The FOGM's operating budget for fiscal year 2019 is $45,000 (City of Greenbelt, 2018).

Museum staff consists of one full-time employee, the Director/Curator, and two part-time employees, an Office Manager and an Education/Volunteer Coordinator. Much of their workforce consists of 20 to 25 volunteers.

It is unclear when the Museum can realistically tackle a large-scale digital preservation project, as they recently acquired the duplex next to the historic Greenbelt home and plan to expand the space for an education center, office space, and collection storage. This is expected to take place over an 18-month timeline.

Next Steps for Digital Preservation

The following recommendations were crafted using the National Digital Stewardship Alliance's (NDSA) Levels of Digital Preservation as a guideline. These levels cover five areas crucial to digital preservation practices: storage and geographic location, file fixity and data integrity, information security, metadata, and file formats (Bailey, J. et al., n.d.).

I.   **Storage and geographic location**

As described in the survey report about Greenbelt Museum, there are two copies of the Museum's files in two different locations: one on Searing Young's work computer; the second with Greenbelt city's IT department. Increased communication between IT employees and the Museum is necessary so Searing Young and her staff will know where the second copy is kept and how it is stored. Greenbelt's IT likely already has a data management plan in place that the Museum could benefit from.

Eventually the Museum should transfer their files to a cloud storage service in case something was to happen to the hard storage. Luckily, there are a variety of affordable options available. Cloud services like [Box](#) start at $15 per month for Business accounts, and [G Suite](#) through Google starts at $5 per month for their Basic accounts. For content that is not protected by copyright and that the Museum is willing to share freely, [Wikimedia Commons](#) allows anyone to upload and store files.

As a more secure measure, the Museum could consider swapping a backup copy of their collection with another community museum or historical society in a different geographic region. This would ensure that one copy of their files is kept in a location at risk of different disaster threats than Greenbelt, MD.

While digitization is not a primary focus of digital preservation practices, the Museum would benefit from converting their oral histories stored on cassette tapes to .WAV format. Since they already have a [community page](#) on the StoryCorps Archive website, newly digitized stories could be added to this collection. If the Museum does not have the resources available to digitize the cassettes in-house, there are a myriad of companies that provide this service at [reasonable prices](#).

II.   **File fixity and data integrity**

Fixity is a somewhat jargon-y term for stability. When an organization checks for "file fixity," they are making sure that their files have not changed over time or during a transfer (De Stefano, P. et al., 2014). There are different ways to do this, and the following steps will start small.

The Museum should first make sure that the two already existing copies are exact. This includes not just exact file count but that the types of files (.TIFF, .PDF, etc.) and the number of each file format on both copies are the same (more about this in the Metadata section). This should be checked on a regular basis and, ideally, whenever the Museum acquires new digital content. At a minimum, fixity should be monitored on an annual basis by Searing Young in cooperation with Greenbelt IT staff. The

same would need to be done for cloud storage if the Museum adopted that practice. A spreadsheet could be used to keep track of file counts, with one copy kept on each backup.

There is also Exactly, a free and open source fixity tool produced by AVP, a software development firm. It allows for the secure transfer of digital content from sender to recipient, so organizations can authenticate the integrity of their files. The AVP website also offers user guides for those new to using Exactly. This tool could be quite useful for the Museum, especially when receiving born digital content from donors or volunteers, like oral histories.

III.   Metadata

Since metadata is not consistent across file folders, the Museum should first decide on a metadata standard that will be applied evenly to each file. Inventory will need to be done of both the copy on Searing Young's computer and the copy held by Greenbelt IT. Metadata can either be documented in the file names (which the Museum currently does) or on spreadsheets for each folder.

Greenbelt Museum does not use PastPerfect to manage their digital archival files, but the organization would benefit from a management system for this collection. Not only would it be easier to apply metadata consistently, but it would allow for more secure data storage and workflow. This could be done either by incorporating the archival files into the PastPerfect catalog, or using different software, such as Preservica or Arkivum.

IV.   Information security and file formats

Currently, Searing Young is the only employee with access to the Museum's digital archival files, so she is presumably the only person who is authorized to edit, move, or delete records. If digital preservation becomes a more central focus of the Museum's work however, they will need to identify who has permission to access these files and maintain a log of all changes done to the repository.

Additionally, the Museum should provide guidance to staff, volunteers, and donors on what file formats they prefer (i.e., .TIFF instead of .JPG images) when accepting digital content. An inventory should also be kept of the kind of file formats used so the organization can easily assess if they are using an outdated format.

V.   Conclusion

Finally, the Museum has a Collections Policy that has not been updated since 2006, before Searing Young joined the organization. While the policy is quite comprehensive and could provide guidance, it should be revised to meet the current collection goals of the Museum and to ensure that day to day activities align with policy. Much can be done to improve the digital preservation strategies of Greenbelt Museum, and it will be best achieved in small, incremental steps. Once inventory is done of the organization's digital holdings, staff can determine where they should direct their focus; what areas might need more attention than others; and which files they value most.

Digital Preservation Policy

I.   **Purpose**

This document contains the Greenbelt Museum's policy and strategies for managing their digital collection. It is meant to:

- Establish a strong foundation in digital preservation practices

- Complement the Collections Management Policy and Manual

- Support the mission statement of the Museum–We are a community museum that provides gateways to the New Deal history and living legacy of Greenbelt, Maryland. The Greenbelt Museum inspires residents, students, and visitors to explore this planned cooperative community.

II.   **Responsibility**

The Museum Curator/Director is responsible for the Museum and is solely responsible for its digital collection. The Curator/Director will work with the Friends of Greenbelt Museum (FOGM) Board to improve the Museum. With the approval of the Collections Committee, they shall have the authority to accept acquisitions for the Museum collection. The Curator/Director will report annually to the Board on the condition of the digital collection.

This policy is a living document and will be regularly reviewed as digital preservation technology and strategies naturally evolve.

III.   **Preservation Strategies**

The Museum considers digital preservation as critical to their institutional mission and has identified strategies that aim to provide comprehensive, meaningful access to their digital collection over time. These will include:

- Identifying weaknesses and strengths of the collection to determine preservation priorities

- **Bit-level preservation** of digital objects

- Maintaining authenticity and provenance with appropriate metadata

- Scheduled review of file formats, metadata standards, and other preservation practices

A. Standards

The Museum utilizes the Levels of Digital Preservation from the National Digital Stewardship Alliance (NDSA) as broad guiding principles when creating policy and their digital preservation approach.

IV.   File Formats

Below are the recommended file types for the Museum's digital content. While donations in different formats will be considered based on content and collection needs, acquisitions in the supported formats will be given priority. These formats were chosen because they are open source, widely utilized by the digital preservation field, and more likely to ensure file stability over time.

Recommended file formats:

- PDF for text documents

- TIFF for images

- MP3 or WAV for audio

- MOV for video

If the Museum acquires digital content in a different format than those listed above, it will be converted to a recommended format, provided the file's original content and function will remain intact. Any questions or concerns can be directed to the Curator/Director whose contact information is listed on the Greenbelt Museum website.

V.   Storage and Fixity

At least two copies of the Museum's digital collection will always be maintained in two separate locations: one with the Curator/Director's computer and one with the city of Greenbelt's IT Department. A third copy of the collection will eventually be kept with a secure cloud storage service.

The Curator/Director will perform **fixity** checks twice per year on all copies to ensure that they are identical in number of file formats and metadata. Verifying fixity information allows the Museum to ensure that they have received the files they expected; check for corrupted or altered files; and to communicate to users that the organization's digital objects are authentic and trustworthy. A master inventory will be kept of all digital objects; one copy with each backup of the collection. Files will be updated as needed. Digital records donated to the Museum by private donors or other organizations will be ingested using Exactly, a free tool offered through AVP that guarantees secure transfer of content and authentication of file integrity.

VI.   Metadata

Digital archival records are currently handled differently than artifactual records and are not included in the Museum PastPerfect catalogue. However, it is imperative that the metadata for these records be standardized and consistent across the collection.

Metadata will include:

- Administrative data, or technical information such as when the file was created, file format, who can access it, and intellectual property rights.

- Descriptive data, or data that describes the object for purposes such as identification and searching.

VII.   Digitization

When selecting material for digitization, the Museum will first ensure that there is copyright permission to digitize the original files and to make surrogates of the digital copy for preservation and/or distribution. They will then select the appropriate file format from the list of recommended formats. Photos and documents should be scanned at 300 **dpi.** All actions taken during the digitization process should be documented and included in the object's metadata. Backup copies should be created at the point of ingest.

VIII.   Glossary

Bit-level preservation: all the practices that preserve a file's original content as it was collected or created.

Dots per inch (dpi): a measure of how many dots of color or shading are contained within one inch. Often used interchangeably with pixel per inch, or ppi.

Fixity: the property of a digital file or object being fixed or unchanged.

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