**Jump In Too/Two Initiative Final Report from the University of Iowa Libraries**

**May 1, 2014**

**Introduction by Emily Shaw, Digital Preservation Librarian**

Special Collections at the University of Iowa Libraries consist of five collections: Rare Books, Manuscripts, Maps, the Iowa Women’s Archives (IWA), and the University Archives. These collections share a lot with respect to space, staff, but each has its own history, curation scope and practices. Several of these collections contain at-risk digital media, but we decided to limit the scope of our participation in Jump In Too/Two on the University Archives.

Since it was founded in 1932, a wide diversity of collections have come to the University Archives from across the University and the State of Iowa; sometimes in trickles, sometimes in droves, and sometimes in steady streams. Like many of our peers, the University Archives collects much faster than we can process, and we have thus accumulated a significant backlog of unprocessed accessions. We recognize that archival content captured on external media is arguably the collection type most at risk of permanent loss. We also know that digital archiving is organizationally and technologically complex work that requires focused, concerted attention and cannot be readily be folded into the portfolio of responsibilities already assigned to current staff. So, when a call came over a listserv National Digital Stewardship Alliance for an Iowa institution to host a practicum student in Wayne State University’s distance SLIS program, we saw this as a perfect opportunity to begin to wrap our heads around the at-risk digital media in our University Archives.

We brought practicum student Mallory Schulte on board for the Spring 2014 semester to round up and describe any and all external digital media she could find in the University Archives. Working closely with University Archivist David McCartney and reporting to Digital Preservation Librarian Emily Shaw (both SAA members), Mallory combed through collection guides and accession logs in search of evidence of CDs, DVDs, flash drives, floppy disks and other digital media. Knowing that descriptions of unprocessed collections are, by definition, incomplete, we also encouraged Mallory to branch out to investigate unprocessed accessions from the last several decades, to see if there might be digital media contained within them that was not yet recorded in the accessions log.

The data from Mallory’s inventory will help the University of Iowa Libraries and Archives plan future projects and workflows to preserve, arrange, describe and provide access to at-risk digital media. This is one important piece of our broader efforts to plan and develop digital preservation and archiving services at Iowa. Participation in “Jump In Too/Two” has prompted us to examine our treatment of digital media objects that come in to the University Archives, and to think about how we can improve our stewardship practices for these at-risk collection materials. Having an active project in this area has also afforded us the opportunity to improve trust, communication and understanding between stakeholders across departments that must work together to address the challenges of digital archiving, and to illuminate the need to dedicate staff and resources to work in this area.

What follows this introduction is Mallory’s report about her experience. Because Mallory had little prior experience with archives, we organized an archives reading group to complement her project work, as well as to provide a forum for other permanent staff to learn about archival theory and practice. A nuanced understanding of archival ethics, theory and practice can take many years to develop. We are grateful for this opportunity to “jump in” to better stewardship of digital media in the archives, and hope this project provided Mallory with some perspective on the complexities of effectively managing a living, breathing, and very active archive.

**Report by Mallory Schulte, MLIS candidate at Wayne State University SLIS**

When I was first introduced to the Jump In Too/Two Initiative in December 2013, I was initially intimidated, not necessarily by the project itself but by working with an unfamiliar collection. As a graduate student in Wayne State University’s LIS program I was required to participate in a practicum program and Emily Shaw and David McCartney, here at the University of Iowa, invited me to join them this semester to complete that requirement. The Jump In Too/Two Initiative was seen as a starting point as their departments, Preservation and University Archives respectively, work towards improving their relationship with one another.

To gain familiarity with the project, beyond simply reading the description, I decided to review the reports from last year’s participants. While reading the reports one thing I frequently noticed was participants felt they did not have sufficient time to go into the archives for an in-depth inventory of their collections with their other responsibilities. However, as this was my main project, I knew I would be able to devote the majority of my time working on this project to create a valuable inventory.

Once I had decided to focus solely on physical digital media, leaving online media for a later time, my first step in the process was combing through the Collection Guides that can be found on the University Archives webpage and the Accessions Log, a spreadsheet that began in 2001 when David became the University Archivist. I looked through each guide and record for any mention of digital material. Some key words I searched for were: DVD, CD, disk, disc, floppy, digital, etc. While these searches turned up several results, I did not have many places or collections to look through. Since I had not found many results through this method, I began to simply make note of the years the particular collection contained and was able to remove many collections simply because of their date ranges. Later in the semester, as my time in the Archives was drawing to a close, David invited me to use PastPerfect to look for more possibilities. Once again, I searched for the keywords I had used earlier in the semester online and in Excel. This search produced many of the same results from the Accession Log and several other collections I had already discovered.

After going through all the Collections Guides and the Accession Log, I began digging through the Archives looking for physical digital media in the various collections I had noted. As a probable result of the limited time participants had to work on their inventories last year, their inventories did not yield many results so I originally decided to expand my inventory to include any and all digital media, not just born-digital. After my first day in the North Storage area of the Archives I was skeptical of how many born-digital media I would find; all I was finding were reformatted films. However on my second day I found the Theses and Dissertations - Nontraditional Formats Collection. Within a few days I had everything from Floppy Disks (3.5” and 5.25”) to DVDs. When I then stumbled upon the Department of Dance Video Collection, I knew that I would have very large inventory of just born-digital media to record and stopped recording reformatting projects as a matter of time.

There had been no mention of DVDs in the Dance Department Video Collection in the Collection Guide online but I soon discovered that starting in 2004 all performances were recorded and put on DVD (before that point they had been recorded to VHS or U-matic tapes). Altogether I found 313 DVDs, after removing all the duplicates, in just this collection in both North Storage and in the latest accession.

After finishing up in North Storage with a few more pieces of digital media, I moved to the Archives main storage area, vault, and audio cabinet. Currently, for lack of a better solution, there is a drawer in a file cabinet that contains digital media in this main area. Since most digital media in the Archives is relatively new, many items from the Accession Log were found at this location. However, the largest collection of digital media in the main storage area was the Oral History Collection containing 30 3.5” Floppies and 126 Minidiscs.

I had been working on data entry throughout the semester so that if I found any missing information I could go back to find that information within several days, but I still had a lot to do at the beginning of April. My inventory includes information about the Record Group and Collection name, location, inventory numbers and barcodes, media information, title, duplicate location, and several different pieces of additional information about the data contained on the media. When it was time to move away from the Archives to finish data entry and the other requirements of this project, I had found 656 items, after weeding out all duplicates, but know there are many more items that I did not have time to locate.

Using the storage capacity on the media or from the list provided in the Sample Inventory, I began calculating the maximum storage space that would be required for everything in the inventory. Any unlabeled media was given the highest storage capacity in order to err on the high side. Each Record Group was broken down by location and then media type. The maximum capacity was calculated using megabytes (MB) and eventually shifted to gigabytes (GB) and finally terabytes (TB).

**Difficulties**

As with any project, I ran into a few difficulties while working on my inventory. The main difficulty I faced was the lack of records of digital media both in the Collection Guides and Accession Log. The content in the collections and accessions are well described but there are rarely any notes on the type(s) of material that collection contains. As I mentioned before, many places I looked simply contained material from a date range where digital media was possible and not because they specifically mentioned digital media. I hope that my inventory will show the necessity of recording digital media for all future accessions and accruals.

The second difficulty I ran into has existed for several years. In 2008, Iowa City was hit by a major flood. At the time, the University Library was storing some of their Archive collections in the basement of the main building. Situated near the river, the Library was forced to quickly rearrange and move their collection to remove it from harm’s way. During this process a lot of materials were moved with little time to make note of the new locations. Not only were materials moved up from the basement but materials already upstairs were moved in order to accommodate the displaced boxes. While looking through the Accession Log and PastPerfect, I found many records with the location still listed as being in the basement. I updated the location for all the items I found while working on my inventory and highlighted all other instances for Archives Department to work on at a later date.

**Suggestions**

The difficulties I faced while working on the inventory led me to think of possible solutions and other suggestions to better maintain and preserve the collection of digital media.

The first thing I would suggest working on in order to get better control over the digital media in the Archives is to assign each item an unique identification/inventory number. While this did not cause any problems during this inventory, it could cause problems in the future. Several items already have an identification number assigned to them but they do not follow a unified schema. As the collection of digital media now stands, the Dance Department DVDs have a simple chronological numbering given by the Dance Department while Theses and Dissertations have a more complex identification number based on the author and year and others are just identified by their Accession number. I think that the Archives and Preservation Departments should work together to create a numbering schema for all digital materials, especially with the upcoming move to ArchivesSpace. Some physical items are currently being assigned barcodes but online, born-digital items must also be considered; a solution is needed that works for both physical and online media. This will not only help the departments maintain and preserve the collection, it will also help with future access to the collection.

A second suggestion I have after working on this project is to invest in technology that can read the various types of media in the Archives or at least find a vendor that Iowa can outsource this work to. While a new computer can read the CDs and DVDs in the collection, it would be impossible to read Floppies, Zip Disks (not included in this inventory), or Minidiscs without their specific drives. The library needs this capability if for no other reason than to help with the digitization of Theses and Dissertations. While the digital media in this collection is still under copyright and will not be open to access for many years (without permission from the author), the data on the various media is slowly deteriorating and could be lost completely if not migrated to current technologies.

On a related note, a device that can be used to recover data from various storage options would be a valuable piece of equipment as the Archives receives more digital media. One such device is known as FRED (Forensic Recovery of Evidence Device). Optimized for stationary laboratory acquisition and analysis, it can acquire data directly from IDE/EIDE/ATA/SATA/ATAPI/SAS/Firewire/USB hard drives and storage devices and save forensic images to Blu-Ray, DVD, CD or hard drives. FRED systems also acquire data from Blu-Ray, CD-ROM, DVD-ROM, Compact Flash, Micro Drives, Smart Media, Memory Stick, Memory Stick Pro, xD Cards, Secure Digital Media and Multimedia Cards.[[1]](#footnote-1)

While investing in new technology can seem like a lot of money, these are investments that could save the University money in the future. This collection is going to continue to grow and it must be properly preserved to maintain its value. An investment in technology would ensure the University’s ability to read and recover the data on various forms of media in-house instead of continually sending media to vendors.

Another suggestion would be to just continue looking through every piece of digital media. While doing my inventory I came across several DVDs that were damaged, I tried to inspect each item but could have missed something. The majority of these had labels peeling off and were too damaged to repair. Not only can the disks not be played in their current state, some valuable information could be lost with the label. There is a better chance of recovering the information contained on the item if the damage is found early.

My last suggestion is to give this collection the staffing it requires. The University’s Preservation and Archives Departments are so busy with their current responsibilities they do not have time to dedicate to this digital media collection. Current workflows could not accommodate room for a digital media collection. A Digital Archivist would be able to lead efforts to preserve, describe, and provide access to born-digital archival and special collections materials and develop processes for archiving and preserving born-digital materials including email, Web sites, social media, and other digital primary materials acquired on a variety of current or legacy formats such as tape, floppy disks, hard drives, and mobile devices. This position would also bridge the gap between the Preservation and Archives Departments.

**Conclusion**

The Jump In Too/Two Initiative is a great project to gain awareness of the digital media in an institution’s collection. Not only did it benefit me as a student in LIS, but I know it helped the Preservation and Archives Departments here. Creating this inventory was the first step in the process to cultivate and preserve the current and future digital media collection. I hope that when I leave the University of Iowa after completing my practicum hours, the information I leave about these at-risk collection materials will inform planning and future action for preservation and access to born-digital media.

1. Digital Intelligence. (2014). Fred. Retrieved from http://www.digitalintelligence.com/products/fred/ [↑](#footnote-ref-1)