The Robert Altman Archive Digital Physical Media Collection

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Taking the First Steps

The Altman Digital Collection arrived, as many collections of digital physical media do, in several cardboard boxes full of jumbled material. Floppy disks sat on top of DVDs; ancient rubber bands clung gummily to everything they touched; a rainbow of post-it notes threatened to fall away from the materials they labeled. After studying the OCLC Report "You've Got to Walk Before You Can Run: First Steps for Managing Born-Digital Content Received on Physical Media," we came up with six questions that needed to be answered to establish intellectual control over the collection and begin a preservation strategy:

1) What is in the collection?
2) What condition is the collection in?
3) What hardware and software will be needed to preserve the bitstream of the digital files?
4) What hardware and software will be needed to open the digital files in a readable format?
5) What are the steps we need to take to ensure long-term preservation of the information in the collection?
6) What are the steps we need to take to ensure long-term preservation of the physical media in the collection?

To answer question one, an inventory was created. Each item in the collection was entered into the inventory spreadsheet and assigned a unique identifier. Because there was no original order to be preserved, identifiers were simply assigned in ascending numerical order. In addition to the unique identifier, categories in the final spreadsheet included each object's media type, memory capacity, apparent date of creation, label text, apparent project association (if any), and the likelihood that the item's contents were duplicated in the paper portion of the collection. Items which did not appear to hold user-created content (such as cleaner disks or disks containing commercial software) were consigned to a Digital Separations box, where they were saved but not inventoried. The results of the inventory are discussed in Collection Contents below. In consultation with the archivist, Kathleen Dow, the decision was also made to label each object in the inventory with its unique identifier using a soft-tipped media safe pen.

To answer question two, a column in the inventory was left open for notes on the condition of each item. This column referred to physical condition only, as none of the items has yet had its digital contents examined. The collection was found to be in generally good condition, with some exceptions. These include bent, detached, rusted or missing sliders on 3.5" floppy disks, decomposing rubber band pieces which have become indelibly attached to collection objects, dirty CD surfaces, large labels which may interfere with disk drives, and warped floppy disks. These problems only affect a small percentage of the collection.

The remaining questions are much more difficult to answer because standards and best practices are still emerging, and there are several options for dealing with the collection's digital content, each with its advantages and disadvantages. Much of this internship was devoted to researching questions three and four, regarding hardware and software, and the results are shared in the sections below.

Question six, regarding physical media preservation, is not addressed below because there is so

little information available on the topic, especially from a long-term point of view (I had the opportunity of speaking to an archivist at the Smithsonian Institution Archives, who admitted that even they had simply put their floppy disks in an acid-free cardboard box and called it "good enough"). In order to preserve the collection's good physical condition, all media were kept away from magnets of all kinds. Most materials postdating floppy disks arrived in protective sleeves or cases of one sort or another and were kept in those cases; CDs and DVDs which arrived loose were given individual plastic cases by the archives. External hard drives arrived in their original, Styrofoam padded packaging and were kept in this packaging.

The main dangers to floppy disks are erasure due to contact with a magnet and exposure to excessive heat or dust. After consultation with Kathleen Dow and Shannon Zachary, it was decided that 8" and 5.25" floppy disks were not likely to last long enough to justify re-housing. 3.5" floppy disks, which make up the bulk of the collection as far as number of items, have been housed in individual paper sleeves. The sleeves used were originally intended for microfiche; no floppy disk-specific housing is commercially available. All sleeves have had their disk's unique identifier recorded on the outside and are housed in numerical order in acid-free cardboard boxes.

Altman Digital Collection Contents

The Digital Collection consists of 632 physical digital objects, which together add up to 1086.58 GB (1.06 TB) of memory. Additionally, there are more than 200 objects in Digital Separations. On the whole the collection is in very good physical condition, with some individual exceptions.

The total collection memory is calculated by adding the maximum capacity of each piece of hardware, and so is almost certainly an overestimate. Part of the Altman A/V Collection was reassigned to the Altman Digital Collection midway through this project. This subcollection (including three external hard drives) comprises 1033.789 GB of the total collection memory. Because the last decades have seen an exponential expansion in the memory size of available hardware, the items that make up the majority of the Digital Collection number-wise make up barely a percentage point of the collection memory, and vice-versa. For example, the 541 floppy disks in the collection take up only 0.69 GB of memory. This is illustrated by the graph on page 7.

A disk-level inventory of the collection is available as a separate document, which is currently maintained by Special Collections. Special Collections staff who are familiar with the paper contents of the Altman collection have rated each digital item's likelihood of paper duplication. Options are "duplication likely," "duplication possible," "duplication unlikely," and "not enough information to tell." Since none of the digital items have had their contents examined, the estimations are based on disk labels, and the largest portion (roughly half) fall under "duplication possible." However, we were able to establish that, among other duplications, 84 floppy disks containing payroll information for the movie Afterglow are already contained in the paper collection, while most of the A/V subcollection is likely unique. The "not enough information" rating chiefly applies to media that arrived unlabeled.

Each type of media in the collection has been given a priority rating (low, medium or high) based on its likelihood of paper duplication, it memory size, and the difficulty and expense of extracting its information. The chart below includes these priority ratings along with a short explanation, as well as information on the hardware required for each medium. Price estimates have been included when available.
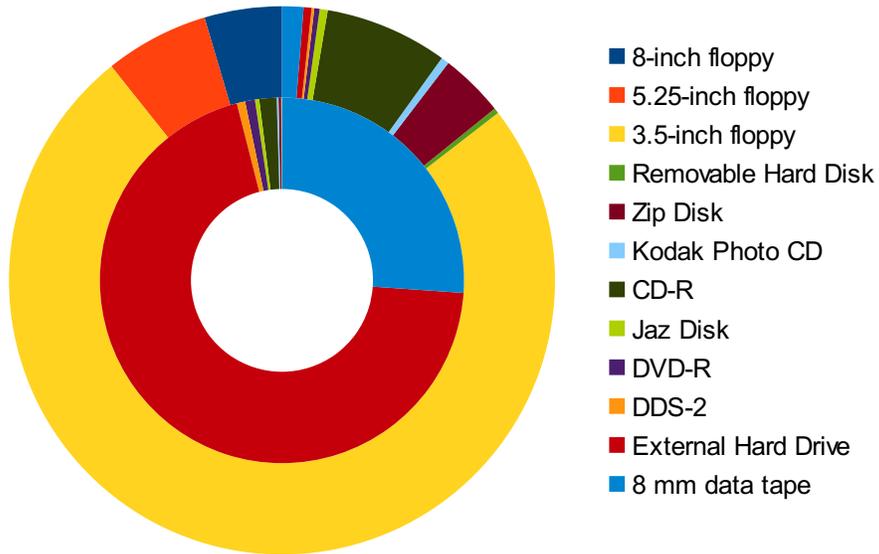
Media Type	Number of Objects	Memory	Hardware Options	Priority
8" Floppy Disk	29 disks	1200 KB/disk, 33.98 MB total	Legacy computer (no external drives available)	Low: Drives are rare and memory size is small. Paper duplication likely.
5.25" Floppy Disk	39 disks	20 at 360 KB/disk, 19 at 1.2 MB/disk, 29.83 MB total	FC5025 device by Device Side plus legacy disk drive	Low: Drives are rare and memory size is small. Paper duplication likely.
3.5" Floppy Disk	473 disks	647.33 MB total*	External drive (USB) New: $8-50 (See Appendix 1)	High: Drives are inexpensive and some disks likely contain unique material.

Zip Disk	24 disks	100 MB/disk, 2400 MB total	External drive (USB) New: $175-200, Used: $45-80	Medium: Drives are moderately priced, and most disks were rated "too little information."
Jaz Disk	3 disks	2 at 1 GB/disk, 1 at 2 GB/disk, 4 GB total	External drive (USB) New: $115-200, Used: $28-45	Medium: Drives and disks are rare, but memory size is relatively large. Paper duplication possible.
Removable Hard Disk	2 disks	105 MB/disk, 210 MB total	Legacy Syquest drive	Low: Drives are rare and memory size is small. Paper duplication possible.
DDS-2	1 cartridge	8 GB	DDS tape drive. Legacy (DDS-2) used: $50. Contemporary drive (backwards compatible) new: $700.	Low: Only one cartridge in the collection. New drives are expensive and legacy drives are only available on sites like eBay with no quality guarantee. Paper duplication possible.
8mm AIT	8 cartridges	280 GB (native), 560 GB (compressed)	Exabyte tape drive	Medium: Drives are rare but memory size is large. Contents are likely unique.
Kodak Photo CD Master Disc	3 discs	600 MB/disc, 1800 MB total	Photoshop CS5 will open (but not CS 6)	High: No equipment purchase necessary and contents are likely unique.
CD/CD-R	46 discs	20 at 700 MB/disc, 26 at 650 MB/disc, 16.5 GB total	Should be able to image if not read files on a current PC.	High: No equipment purchase necessary. Most disks rated "duplication possible."
DVD-R	2 discs	4.7 GB/disc, 9.4 GB total	Should be able to image if not read files on a current PC.	Medium: No equipment purchase necessary, but contents likely duplicated.
External Hard Drive	3 drives	250 GB/drive, 750 GB total	Should be able to image if not read files on a current PC. Write-blocker should be purchased before attempting access (see Appendix 2).	High: Memory size is large and contents are likely unique.

*3.5" Floppy Disk Breakdown: 382 at 1.44 MB/disk, 54 at 800 KB/disk, 21 at 2 MB/disk, 10 at 1 MB/disk, 3 at 400 KB/disk, 2 at 720 KB/disk, 1 at 500 KB/disk.
Total=662,869.92 KB=647.33 MB= 0.632 GB

Items vs Memory:
Outer Ring=Collection by Number of Items
Inner Ring=Collection by Memory Size

- 8-inch floppy
- 5.25-inch floppy
- 3.5-inch floppy
- Removable Hard Disk
- Zip Disk
- Kodak Photo CD
- CD-R
- Jaz Disk
- DVD-R
- DDS-2
- External Hard Drive
- 8 mm data tape

Media Information

The collection contains several uncommon pieces of digital material, including memory storage items that were commercially available for only a few years.

Removable Hard Disk: A sort of precursor to the external hard drive, removable hard disks were marketed as a way to conveniently store and transfer large files such as audio, video, or high-quality images. Removable hard disks were supplanted by CD-R and zip disk technology, and the company that made the disks in this collection (Syquest) went out of business in 1998. The disks or cartridges were read by being inserted into a Syquest drive, either internal or external.[1]

Zip Disk: Similar to an extra-thick floppy disk, a zip disk worked much like a floppy but was able to hold a larger amount of memory. Zip disks were introduced in 1994 but were never widely adopted, and were soon supplanted by CD-R and USB flash drives, which had much greater memory capacity. Zip disks were read by being inserted into a zip disk drive, either internal or external.[2]

Jaz Disk: A jaz disk resembles a zip disk with one rounded side, rather than four straight sides. Jaz disks were introduced in 1995 as higher-capacity zip disks, but were used mostly by industry professionals and rarely adopted for home use. They were supplanted by CD-R and USB flash drive technologies, and no new disks were manufactured past 2002. Jaz disks were read by being inserted into a jaz drive. Jaz and zip disks and drives are not interchangeable.[3]

DDS-2: DDS stands for Digital Data Storage, a way of storing computer files on digital audio tape. The tape in this collection is DDS-2, which means it was manufactured between 1993 and 1996 and contains a tape 3.81 mm in width and 120 meters in length[4]. DDS-2 cartridges are compatible with several HP StorageWorks drives[5].

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1   Gough's Tech Zone, "Tech Flashback: SyQuest SQ5510 88Mb Removable Hard Disks."
2   Wikipedia, "Zip Drive."
3   Wikipedia, "Jaz Disk."
4   Wikipedia, "Digital Data Storage."
5   HP Support, "HP StorageWorks DDS/DAT Media - DDS/DAT Media Compatibility Matrix."

8mm AIT: AIT stands for Advanced Intelligent Tape. AIT was developed by SONY as a high-capacity form of magnetic tape data storage. It is no longer manufactured. [6]

Kodak Photo CD Master Disk: Photo CDs were a proprietary image format popular in the early 2000s. Master disks were the highest quality photo CDs offered by Kodak, often used by professional photographers. Each image was automatically saved at five different resolutions.[7] Disk capacity was roughly 25 images.[8] Kodak Photo CDs are no longer commercially available. Images should be openable using Photoshop CS5.

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6   Wikipedia, "Advanced Intelligent Tape."
7   Kodak, "The Kodak Photo CD Master Disc."
8   Wikipedia, "Photo CD."

Likely File Formats

This list has been compiled based on the media labels and software disks in the Altman Digital Collection. It is meant to be an aid in developing a digital preservation workstation and may not be complete.

Program	Extension(s)	Deep Blue Preservation Level[9]
WordPerfect	.wpd, .wp, .wp7, .wp6, .wp5, .wp4	Not Listed (Level 3)
Microsoft Word	.doc, .docx	Level 2
MacWrite II	.mcw	Not Listed (Level 3)
ZIP	.zip	Level 1
DOS Basic	.dat	Not Listed (Level 3)
Quickbooks 1.0	.iif	Not Listed (Level 3)
VobSub (Subtitling Software)	.idx	Not Listed (Level 3)
Quicken Backup	.bud	Not Listed (Level 3)
Microsoft Excel	.xls, .xlsx, .xlsm, .xlsb	Level 2
Cine-Com Show Auditor	unknown	unknown
Kodak Photo CD	.pcd	Level 3
Avid Media Composer	Quicktime, .avi, .mpg, .mpeg, .m2v, .mp2, .mp3 .jpg, .tiff, .psd, .png all possible[10]	Level 1-3
Still images, programs/format unknown	.tiff, .jpg, .gif, .bmp, .psd all possible	Level 1-3
Sound files, programs/format unknown	.aif, .aiff, .wav, .au, .snd, .mp3, .ra, .rm, .ram, .wma all possible	Level 1-3

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9   Deep Blue, "Deep Blue Preservation and Format Support Policy."
10 Avid, "Avid Editing Systems—Supported Formats."

Computers & Operating Systems

Based on the media labels and types of software in the separations box, it appears that Robert Altman owned several computers over the years. The following list of computers and operating systems may be helpful in trying to identify file formats and place hardware or files in date order. The list is based on possibly unreliable labels and may therefore be incorrect or incomplete.

Computer	Years of Manufacture	Link to Further Information
(Macintosh) PowerBook	1991-2006	http://en.wikipedia.org/wiki/Powerbook
Operating System	**Year of Debut**	**Link to Further Information**
Windows 3.11	1993	http://en.wikipedia.org/wiki/Windows_3.11#Windows_3.11
MS-DOS 6.21	1994	http://en.wikipedia.org/wiki/MS_DOS#Versions
MS-DOS 3.0	1984	http://en.wikipedia.org/wiki/MS_DOS#Versions

Similar projects

A great deal has been written about the difficulty of dealing with digital physical media, but very few practical guides to solving these difficulties exist. The following briefly summarizes recent projects at other institutions that may help to inform the next steps for the Altman collection.

Cornell

Cornell's File Format and Media Migration Pilot Service was launched in 2004 and is no longer active[11]. It allowed faculty to submit migration requests via a simple web form. The project used a three-part workflow that included an inquiry form, manifest, and migration form. It appears to have been successful but was never extended past the pilot phase. The workstation included:

- A Pentium II tower running Windows 98 (includes 3.5" and 5.25" floppy drives)
- A PowerMac 7300 running Mac OS 8.6 (also includes floppy drives)
- Emulators and file format converters for MS-DOS , Windows, and Classic Mac OS (details not specified)
- Copies of popular 80s and 90s software such as WordPerfect, Lotus 1-2-3, and WriteNow

MITH (Maryland Institute for Technology in the Humanities)

MITH is one of the creators of BitCurator (together with SILS at North Carolina, Chapel Hill). Their blog details the creation of their BitCurator Digital Curation Workstation.[12] The workstation includes:

- A Windows 7 64-bit PC with an i7 Intel processor, 24GB of RAM, and a 2TB SATA hard drive
- An All-in-One memory card reader
- An optical drive capable of reading CD, DVD, and Blu-Ray
- A USB zip drive
- A USB 3.5" floppy disk drive
- A FC5025 device by Device Side, along with a 5.25" floppy disk drive

Born Digital: Guidance for Donors, Dealers and Archival Repositories

This report treads the familiar ground of "examining issues" in digital preservation, but offers much more practical recommendations than most, including a checklist for repositories that covers the ingest process.[13] This list confirms many of the actions already taken regarding the Altman collection. For a collection of legacy media, the following steps are recommended:

1) Create an inventory
2) Using write protection, create checksums
3) Image disks
4) Consider whether inaccessible media retain value as physical artifacts

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11 Entlich and Buckley, "Digging Up Bits of the Past: Hands-on With Obsolescence."
12 Porter, "Digital Curation Workstation."
13 Forstrom et al, "Born Digital: Guidance for Donors, Dealers, and Archival Repositories."

Recommended Workstation

It will be difficult (if not impossible) to construct a single workstation capable of dealing with all the digital media that may come into Special Collections in the future. To deal with the Altman collection specifically, an ingest workstation should meet these minimum requirements:

<table>
<tr><td align="center">Hardware</td><td align="center">Software</td></tr>
<tr><td>

- 5.25" floppy disk drive
- 3.5" floppy disk drive
- Zip drive
- Jaz drive
- Optical drive capable of reading CDs & DVDs
- Firewire port
- External hard drive write blocker

</td><td>

- Photoshop
- Word processor
- Spreadsheet software
- Imaging software
- Video & music player

</td></tr>
</table>

In practice, most workstations dealing with digital physical media fall into one of two categories: either they are composed mostly of legacy hardware and deal with outdated media, such as floppies and zip disks, or they are based on modern hardware, including digital forensics components, and are meant to deal with the ingest of modern and future media. If Special Collections anticipates receiving both legacy and modern digital physical objects in the future (a reasonable assumption), a good policy may be to create two workstations, one to migrate files from legacy hardware and the other devoted to the ingest of newer materials. The following setup is an example of a dual-workstation option. Some terms (such as "legacy computer tower") have been left intentionally vague, as there are several brands/models that may work equally well in such a setup.

Workstation 1: Legacy Media
- Legacy computer tower with internal 5.25" and 3.5" floppy drives
- Zip and Jaz drives (internal or external)
- Iomegaware
- Legacy software, including several word processors
- Emulations of several popular operating systems, both Mac and PC

Workstation 2: Current and Future Media
- Current computer tower with internal USB ports and card readers
- Optical drive capable of reading CDs, DVDs, and Blu-ray discs
- Firewire-to-USB adapter
- External hard drive write blocker
- Flash drive write blocker
- Internet connection
- Up-to-date MS office suite
- Photoshop
- A/V player
- Emulations of PC, Mac, and Linux operating systems
- Imaging and checksum software

Write Blockers

During ingest of the files in the Altman collection, it will be important to protect against accidental overwrite. Each media type has its own version of a write blocker, some of which are built into the physical media and others which will need to be purchased.

5.25" floppy disks have a physical write protection notch situated at the upper right of the disk (circled in red in the image at right). Covering this notch with an opaque material (such as masking tape) will prevent any new information from being written to the disk. Some 5.25" disks originally came with tape or other material for this purpose, but none of these have survived as part of the Altman collection.

3.25" floppy disks are among the easiest items to write block. Each disk comes equipped with a rectangular hole and small slider in one corner (circled in red in the image at right). Moving the slider so that it covers the hole makes the disk read-only until the slider is returned to its original position. [14]

There is scanty information available about write protection for zip and jaz disks. The Iomegaware software used to interact with zip disks apparently had a write-block feature,[15] and presumably the software used to interact with jaz disks had similar features. A version of Iomegaware appears to be available from Lenovo, but its efficiency is unclear.[16]

The CDs and DVDs in the collection will not need write blockers. Some of them are write-once and all would need CD writing software as well as an optical drive with burn capabilities in order to overwrite the disc information. It would be very difficult to overwrite an optical disk without realizing it.

No information appears to be available on write blockers for magnetic data tapes.

External hard drives do not come with any kind of write blocker, so one should be purchased before any attempt to read or extract files from the three drives in the Altman collection. Write blockers for external hard drives come in both hardware and software options. For more information on purchasing hard drive write blockers for this collection, please see Appendix 2.
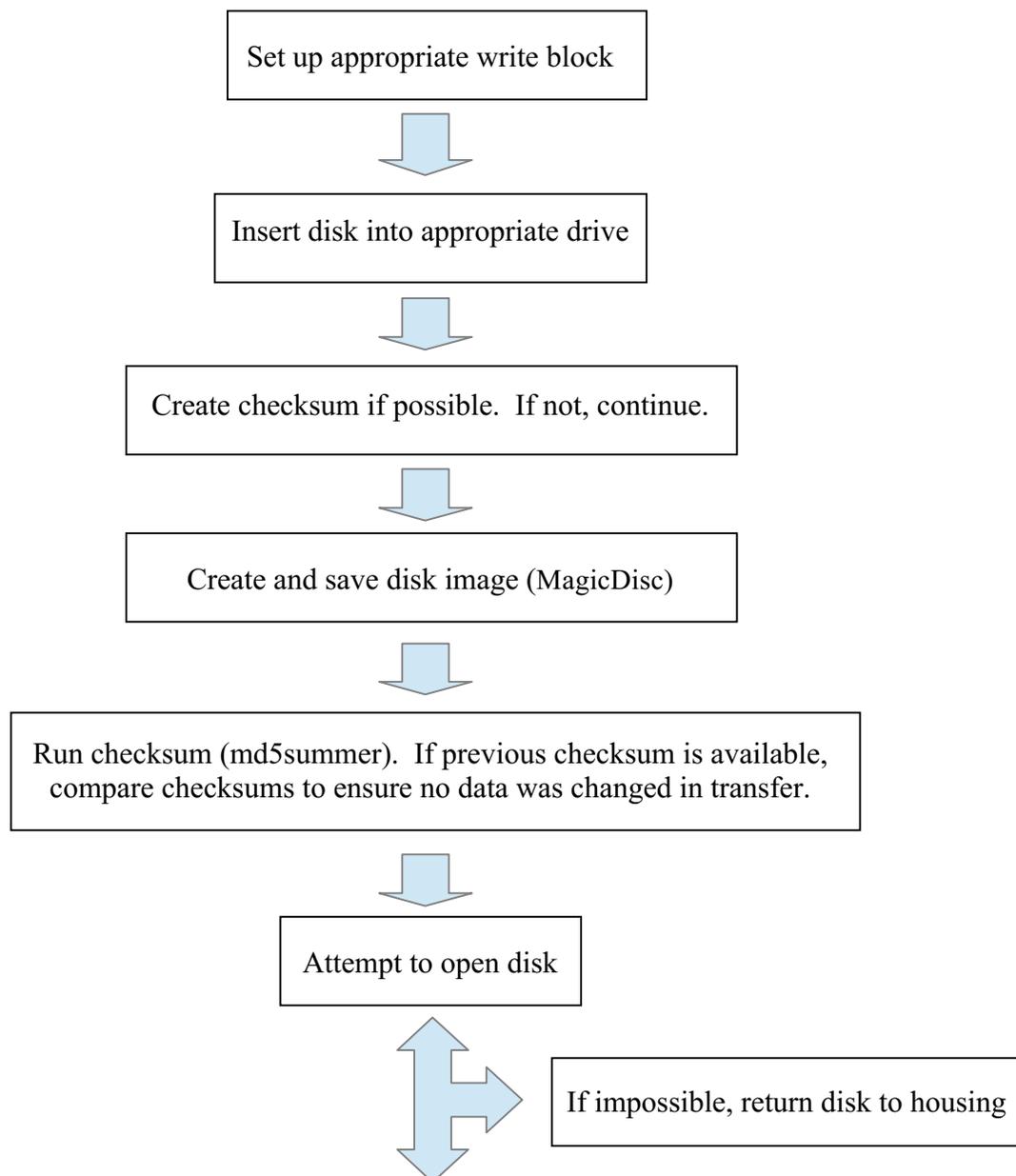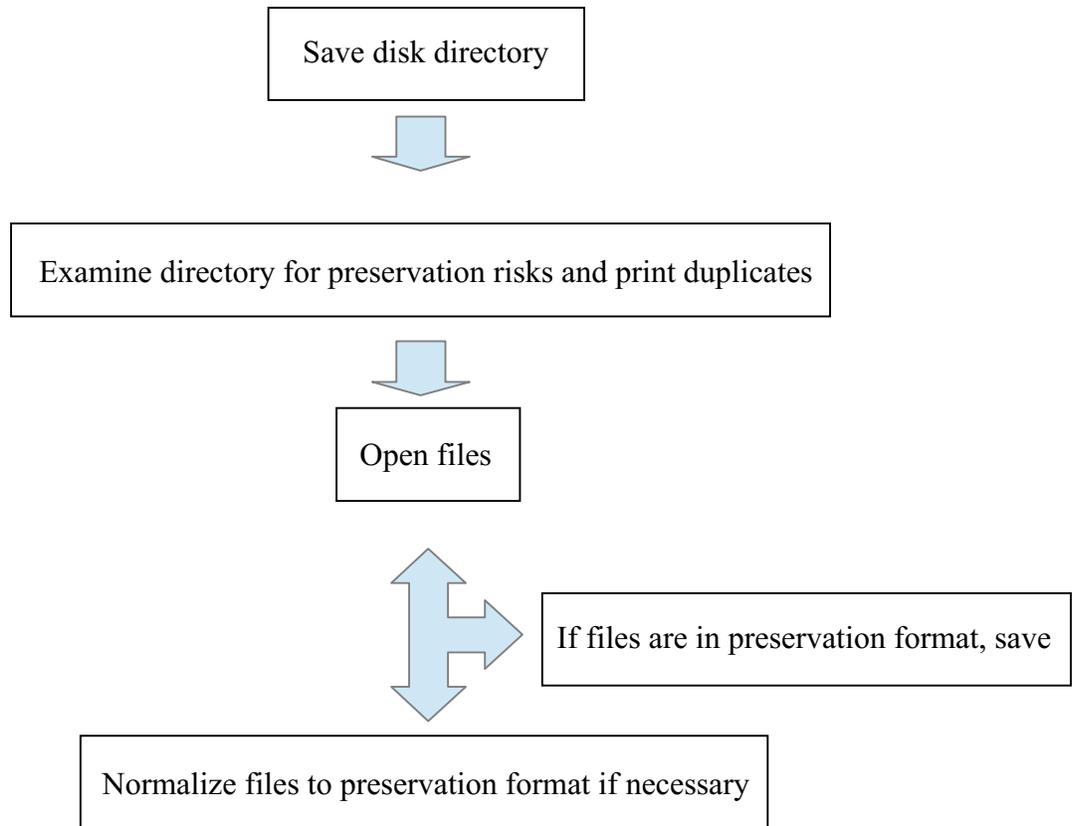
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14 Wikipedia, "Floppy Disk."
15 Wikipedia, "Write Protection."
16 Lenovo, "Support for Iomega Products."

Suggested Workflow

Because of the range of materials in the collection, some files will be easy to open and will already be in a recommended preservation format. For other items, such as the 5.25" floppy disks, a disk image and checksum may be the extent of initial preservation activities. The following diagram is a suggested workflow intended to take the collection to the end of the ingest phase in the OAIS model. The instruction to "save" has been intentionally left ambiguous, since permanent digital storage for the collection has not been finalized. Software names appearing in parentheses are taken from the requirements for the SAA's Digital Forensics for Archivists class. It is worth noting that 3.5" floppy disks in particular will sometimes appear unreadable on the first attempt, but will read correctly on subsequent attempts.

Set up appropriate write block

⬇

Insert disk into appropriate drive

⬇

Create checksum if possible. If not, continue.

⬇

Create and save disk image (MagicDisc)

⬇

Run checksum (md5summer). If previous checksum is available, compare checksums to ensure no data was changed in transfer.

⬇

Attempt to open disk

➡ If impossible, return disk to housing

⬇

Save disk directory

⬇

Examine directory for preservation risks and print duplicates

⬇

Open files

If files are in preservation format, save

Normalize files to preservation format if necessary

End Notes

"Avid Editing Systems—Supported Formats." Avid,
        http://www.avid.com/static/resources/us/documents/Avid_Editing_Systems_Supported_Format
        s_Feb-2011.pdf

"Deep Blue Preservation and Format Support Policy." Deep Blue,
        http://deepblue.lib.umich.edu/static/about/deepbluepreservation.html

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"The Kodak Photo CD Master Disc." Kodak,
        http://www.kodak.com/digitalImages/samples/fiveResolutions.shtml

Lui, Gough. "Tech Flashback: SyQuest SQ5510 88Mb Removable Hard Disks." Gough's Tech Zone,
        http://goughlui.com/?p=2220

Olsen, Porter. "Digital Curation Workstation." MITH Blog, 26 Nov. 2012 http://mith.umd.edu/digital-
        curation-workstation/

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Wikipedia contributors. "Advanced Intelligent Tape." Wikipedia,
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---. "Jaz Disk." Wikipedia, http://en.wikipedia.org/wiki/Jaz_disk

---. "Photo CD." Wikipedia, http://en.wikipedia.org/wiki/Photo_CD

---. "Write Protection." Wikipedia, http://en.wikipedia.org/wiki/Write_protection

---. "Zip Drive." Wikipedia, http://en.wikipedia.org/wiki/Zip_drive

Appendix 1: USB Floppy Disk Drive

The Altman Collection contains 473 3.5" floppy disks, as well as 200 disks in Digital Separations, some of which may prove useful. These will need to be read in a 3.5" floppy disk drive, which is not currently owned by the U of M library system. External floppy disk drives are still available for purchase and generally connect to the workstation via USB. Floppy drives capable of reading high-density disks are supposed to be backwards-compatible with lower-density disks, but there is not a great deal of literature on this topic.

This write-up was made using information from four websites: amazon.com, newegg.com, bestbuy.com, and officemax.com. Most drives on these sites come from third-party vendors; it appears that few (if any) large companies sell floppy drives any longer. All disk drives listed are new, not used.

The price of a USB-connected external 3.5" floppy disk drive ranges from $8-50, with most drives falling in the $12-20 range. After examining search results and reading user reviews, I found these top choices and recommend #3:

1) 1.44MB USB External Floppy Disk Drive (Black) from Newegg.com
http://www.newegg.com/Product/Product.aspx?Item=9SIA1ZZ0NB2736
- USB 1.1/2.0 compatible
- OS Compatible: Windows 98/ME/2000/XP/Vista/Win 7
- $15.99 + shipping

2)D353FUE MITSUMI from Amazon.com
http://www.amazon.com/D353FUE-MITSUMI/dp/B004I4KPTU/ref=sr_1_7?ie=UTF8&qid=1365539345&sr=8-7&keywords=usb+floppy+drive
- LED activity light
- OS Compatible: Windows 2000, XP, VISTA and 7
- $19.59 + shipping

3) UPNP External USB Portable 1.44 MB Floppy Disk Drive from Newegg.com
http://www.newegg.com/Product/Product.aspx?Item=9SIA1EF0H07609
- USB 1.1/2.0 compatible
- OS Compatible: Windows98SE/ME / 2000 / XP/ VISTA / 7 Mac OS8.6 or higher
- Not Linux compatible
- $16.69 + shipping

NB: I read the customer reviews on many different models of disk drive, and it appears that external floppy disk drives have a generally high failure rate, no matter the price or manufacturer. Disks failing to read were also reported on every drive model, though whether this is due to problems with the drives or disks is unclear.

Appendix 2: Write Blockers for External Drives

There are three external hard drives in the A/V subcollection of the Altman Digital Material. Two are GT 050 Glyph tabletop firewire drives. These drives were designed for audio and video production. They have LED indicator lights on the outside, green for AC power and yellow for drive activity. The third drive is a LaCie d2 Hard Drive Extreme. It also operates on a firewire connection. The LaCie drive is more generic in design, but judging from the label on its box it also contains audio files.

Before imaging or attempting to open files from the three external hard drives, it will be important to make sure that they are write protected. This will ensure that no information currently contained on the drives can be accidentally changed, either by deletion or addition. Write blockers come in two forms: software options and hardware options. Software options are quicker and easier to use but are usually tailored to a specific operating system, while hardware options are software independent. Hardware options are also much easier to share between different workstations or libraries. Given the materials already held by the library, adapters may need to be purchased to accommodate various types of connection (USB, IDE, firewire, etc). These adapters are commercially available and generally inexpensive.

One problem with the write blockers currently available is that most are designed for digital forensics in law enforcement. Thus many of the marketed features, such as field portability or ability to access intentionally hidden files, are not applicable (or at least not top priority) for digital archives. I have done my best to select for features that will be an advantage in an archival setting. I found these top choices and recommend #3:

1) NoWrite from MyKey Technology
http://www.mykeytech.com/nowrite.html
- IDE to IDE connections
- Works with Windows, Mac, Linux
- Would require firewire to IDE adapter and USB to IDE adapter
- $200 + shipping and adapters

2)Read Only UltraBlock USB 3.0 IDE-SATA from Digital Intelligence
http://www.digitalintelligence.com/products/ultrablock_usb3_ide-sata_ro/
- IDE, SATA, USB 3.0 ports
- Would require firewire to IDE adapter
- Works with Windows 98, ME, XP, and 7; Mac/Linux compatibility unclear
- $349 + shipping and adapter

3) Forensic ComboDock v5 from Weibetech
http://www.wiebetech.com/products/Forensic_ComboDock_v5.php
- USB, firewire, IDE and eSATA ports
- Would require connector cables
- Works with Windows 7, Vista, XP, and Mac OS X
- $299 + shipping and cables