

Comprehensive Digitization

- Everything Patrons Need to Digitize and Preserve Their Pictures, Home Movies, Audio and Slides



Chris Smith

Digital Media Specialist
Arlington Heights Memorial Library

Definitions to Know

- Digitization
 - the conversion of text, pictures, or sound into a digital form that can be processed by a computer

What We Will Cover

- Identify the types of media that are able to be digitized.
 - Photos and Documents
 - Tapes and Films
 - Records and Cassettes
- What equipment do you need?
 - Storage Media
 - Computer/Conversion Kit
 - Local Services
- Services and hardware offered at my library.
- Tips and additional resources.

A vintage silver and black camera is positioned on the left side of a wooden surface. Several black and white photographs are scattered around it, some resting on the surface and others slightly overlapping. The background is a dark, textured wooden surface, possibly a suitcase or a table. The overall lighting is warm and focused on the camera and photos.

Photos and Documents



The Originals

File Types

JPEG



- great for creating smaller file sizes for uploading on the internet, or for use with e-mail

File size about 0.7 - 15 MB

PNG



- is a good choice for storing line drawings, text, and iconic graphics at a small file size
- Can have transparency.

File size about 0.7 - 15 MB

TIFF



- great for archiving images when all detail must be preserved and file size is not a consideration

File size about 4 - 85 MB

Image Quality

PPI = Pixels Per Inch

sometimes called DPI (Dots Per Inch)

300 PPI – best for photos

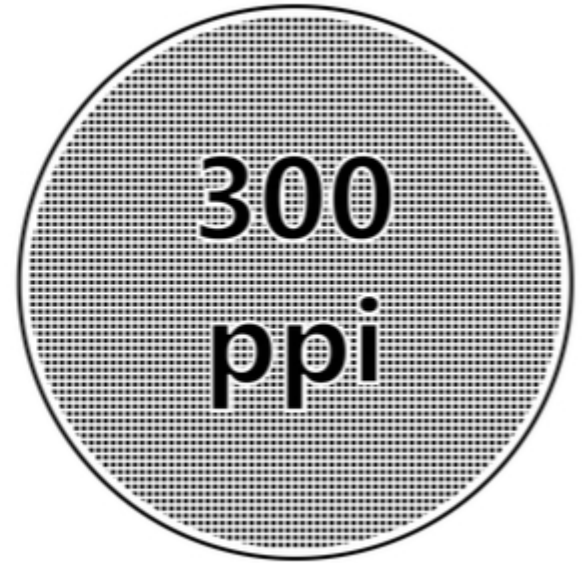
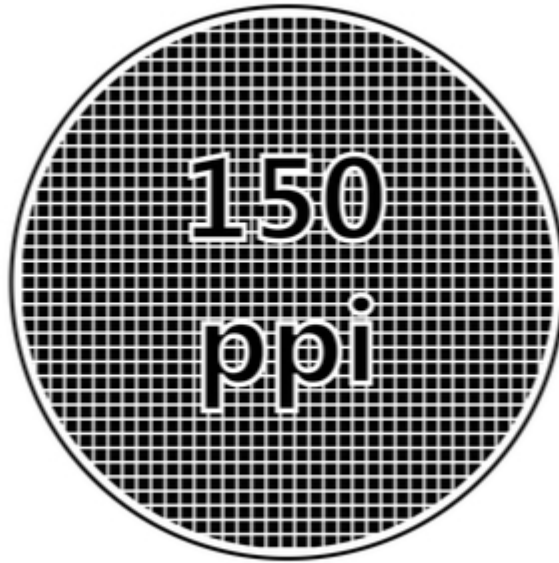
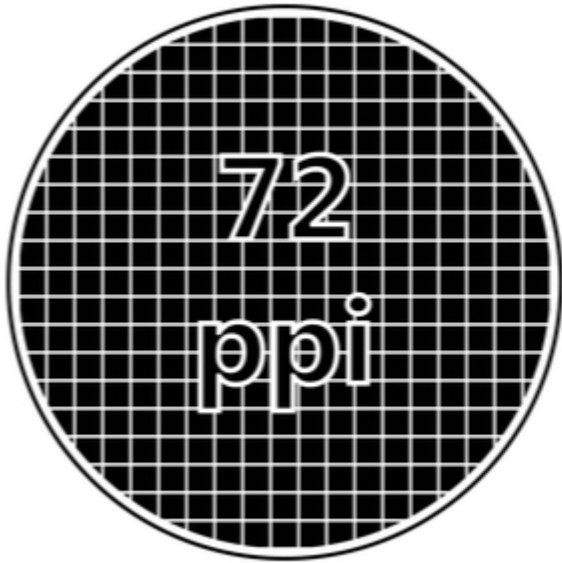
600 PPI – best for enlarging photos

2400 PPI – best for slides and film

Higher PPI = larger file size & longer scan time



Quality Comparison



Quality Comparison

300 PPI

401 kB



600 PPI

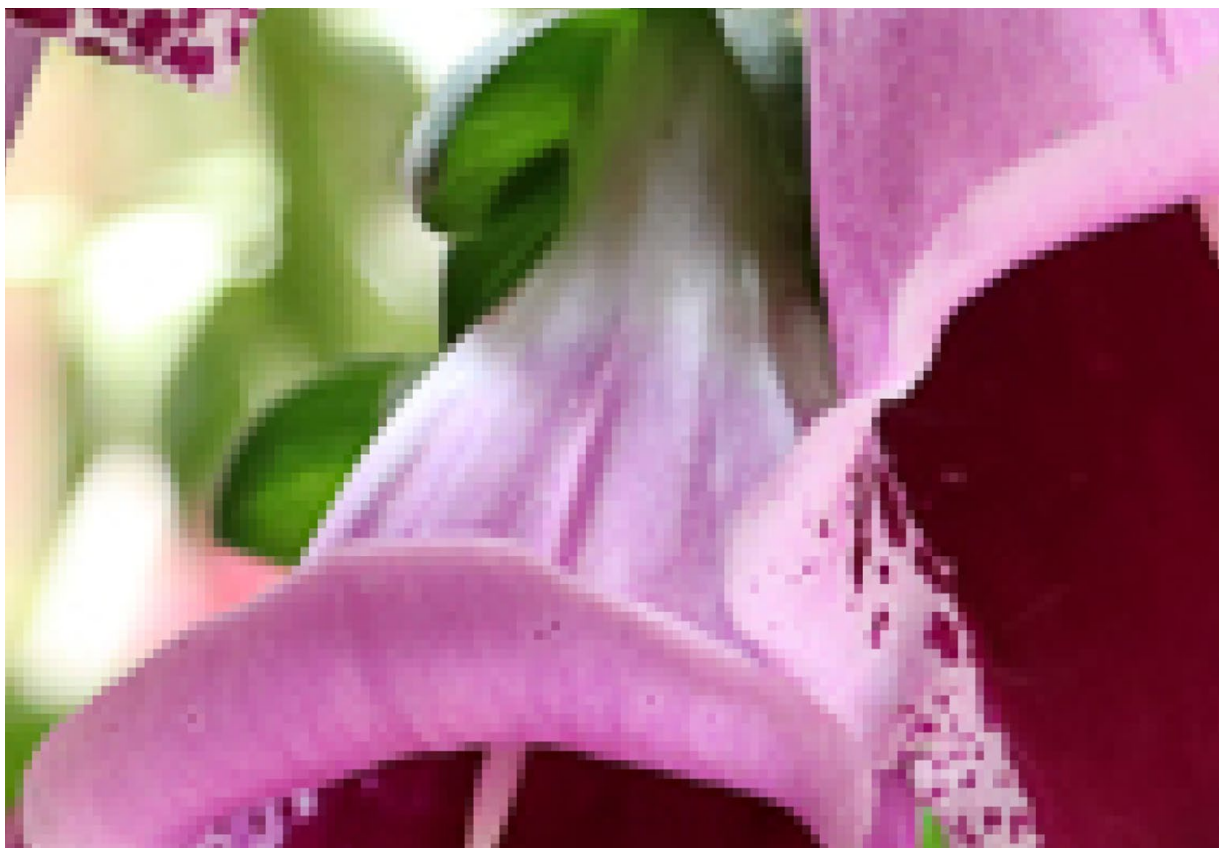
1.1 MB



Quality Comparison

300 PPI

401 kB



600 PPI

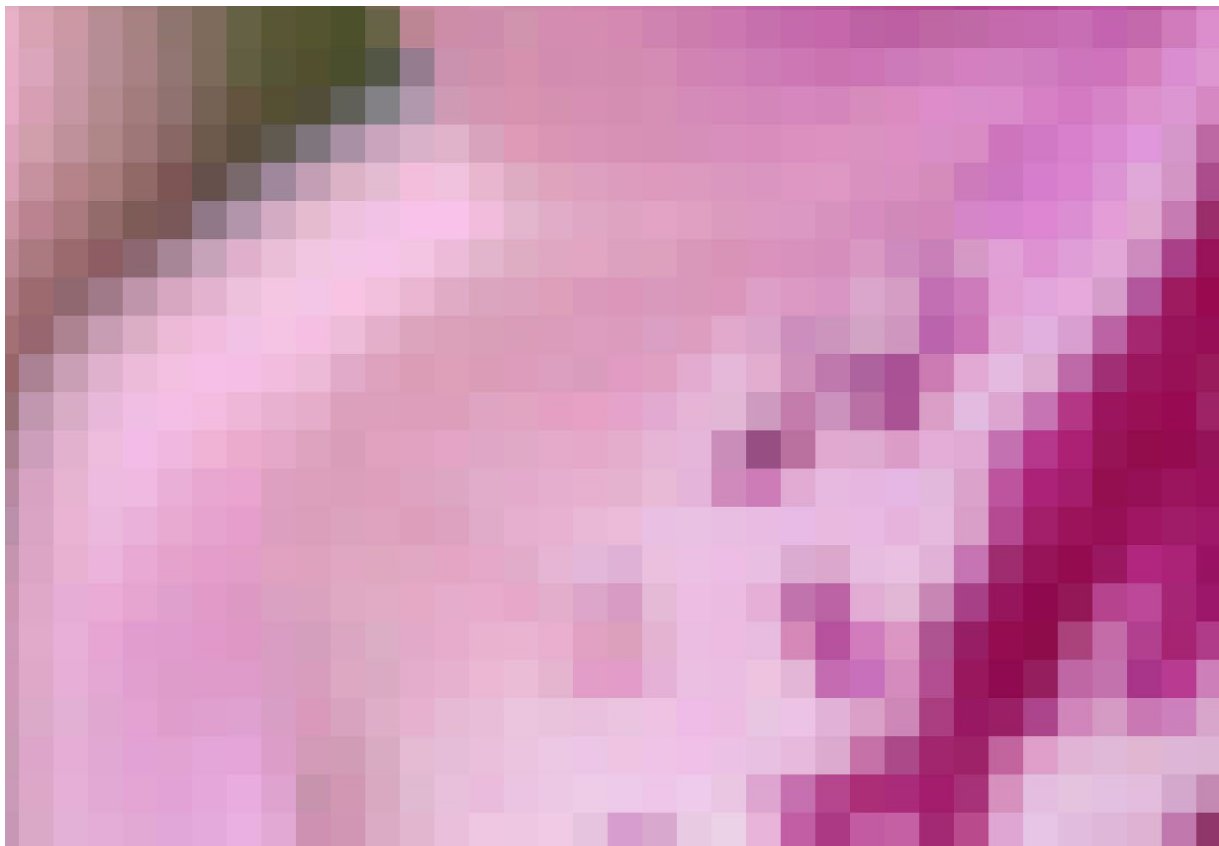
1.1 MB



Quality Comparison

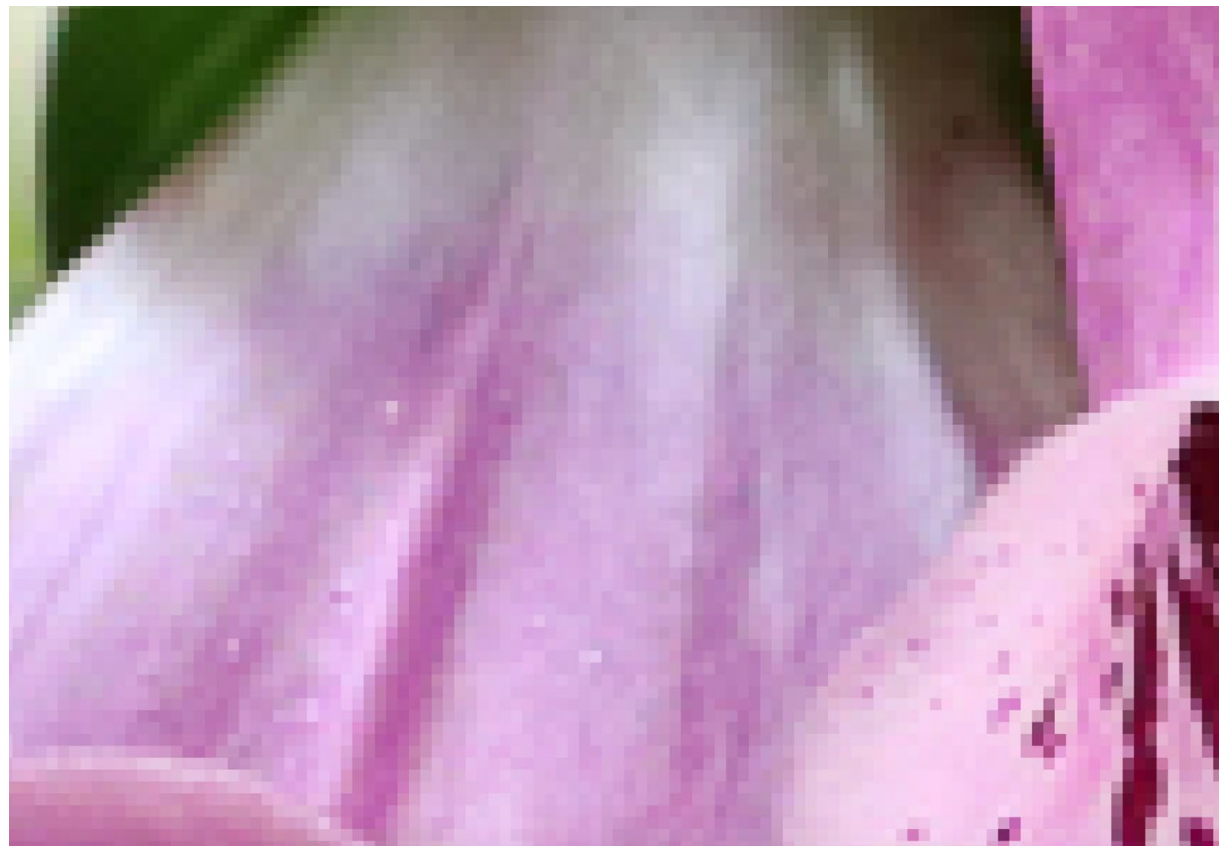
300 PPI

401 kB



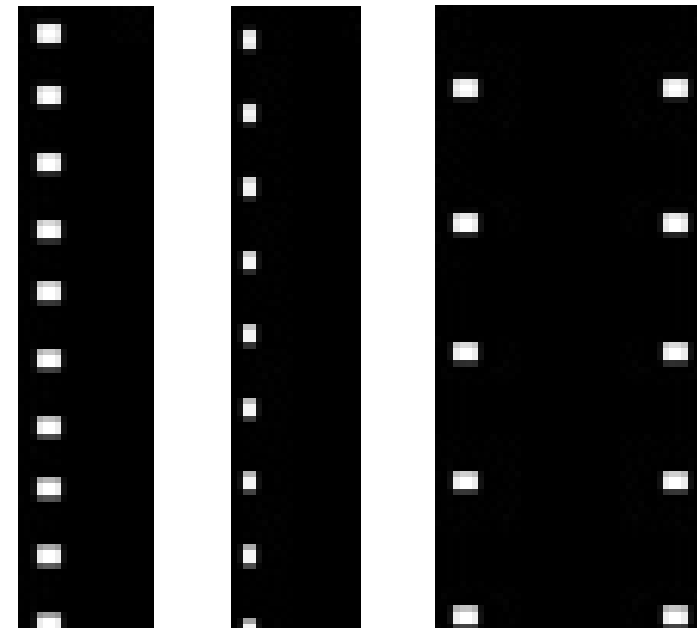
600 PPI

1.1 MB



A collage of vintage video equipment. In the top left is a VHS tape with a yellow label that reads "Hi-Fi 110+ 45". To its right is the top half of a VCR, showing the tape compartment and internal mechanisms. Below these is a dark blue banner with the text "Tapes and Film". Underneath the banner is the front panel of a VCR, featuring various buttons like "CLOCK", "MEMORY", "AUDIO RECORDING", "REW", "PLAY", "PAUSE/STILL", "STOP", "REC", and "EJECT". To the right of the VCR panel is a remote control with a small LCD screen and buttons for "VTR", "CLOCK", "AUDIO OUT", "PAUSE/STILL", "REW", "PLAY", "STOP", "EJECT", "MEMORY RECALL", "REPLAY", "STILL ADV", "SEARCH", and "TRANSIT".

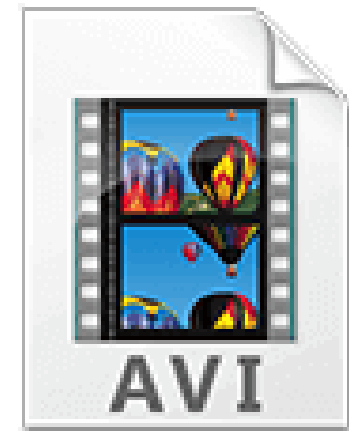
Tapes and Film



The Originals

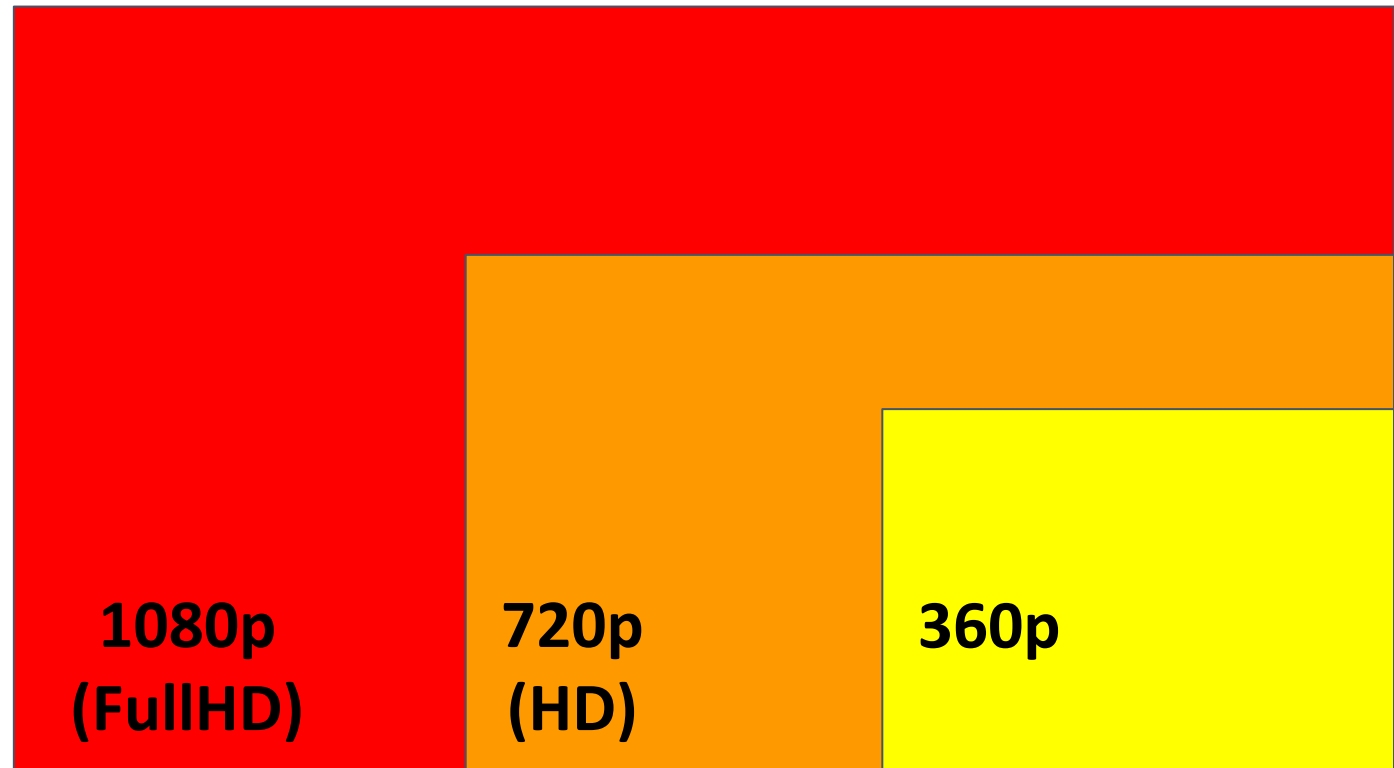
File Types

- Both produce video of equal quality and size
- MOVs work better with Apple devices
- MP4s are more universally compatible
- AVIs have much high-quality audio fidelity

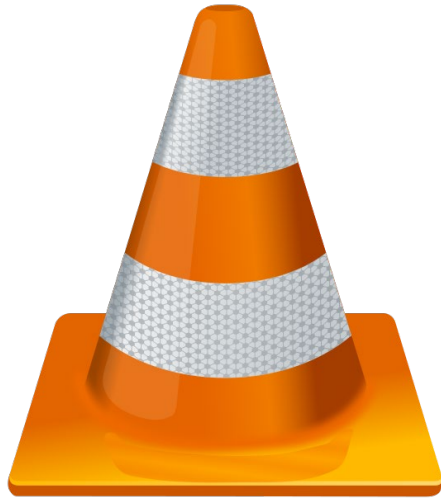


Software Specs

- Video Resolution
 - **360p** – approximate VHS quality
 - **480p** – max DVD quality
 - **720p/1080p** – High Definition
- Higher Resolution = larger file size







VLC



Handbrake



QuickTime Player

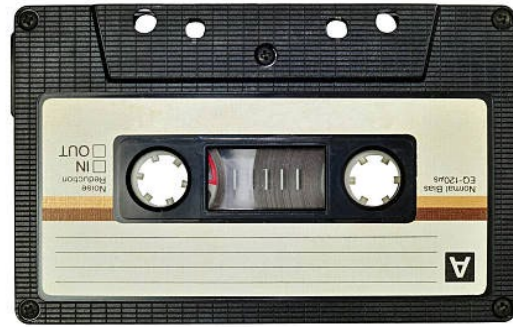
Video Software

Software Specs

- VLC
 - Open source video player
 - Can play most video CODEC's
- Handbrake
 - Used to extract Audio/Video data into digital files
- Quicktime
 - Used to play MP4's and MOV's on apple devices.

A transparent cassette tape is shown horizontally against a solid red background. The tape's internal mechanism, including the two yellow reels and the red magnetic tape, is visible through the clear plastic casing. A dark blue rectangular box is superimposed over the center of the tape, containing the text "Records and Cassettes" in white. The lighting is even, highlighting the textures of the plastic and the vibrant colors of the tape components.

Records and Cassettes



The Originals

File Types

- Lossy Formats
 - MP3
 - Works on most devices
 - Small file type
 - AAC (MPEG-4)
 - Better sounding audio for mobile devices, Apple products and YouTube.

File Types

- Lossless Formats
 - FLAC
 - No compression or audio loss.
 - Can be difficult to find applications or mp3 players to play them.



Audacity



fre:ac



Apple Music

Audio Software

Software Specs

- Audacity
 - Free multi-track audio editor and recorder for Windows and macOS.
- Fre:ac
 - fre:ac is a free audio converter and CD ripper with support for various popular formats and encoders
- Apple Music
 - Can play AAC, AIFF, Apple Lossless, MP3, and WAV

Storage





Flash Drive



External Hard Drive



CD or DVD

Which is best?

- Up to 1TB (1000GB)
- Very Portable

Flash Drive

- Up to 16TB (16,000 GB (depending on the model)
- Slightly less portable

External Hard Drive

- Up to 4.7 GB
- Store at most 8 hours*
- Less compatible

CD or DVD

Which is best?



Computer/Conversion Kit





VHS to Digital Converter

- Equipment:
 - VHS player
 - \$150 - \$700
 - **Video Cables**
 - \$6.00
 - Capture card
 - \$16.00 - \$500





VHS to Digital Converter

- Equipment:
 - VHS player
 - \$150 - \$700
 - Video Cables
 - \$6.00
 - **Capture card**
 - **\$16.00 - \$500**





Film Reel to Digital Convertor

- Equipment:
 - **Film reel scanner**
 - \$255
 - SD Card
 - \$9.00 for a 32 GB SD card





Film Reel to Digital Convertor

- Equipment:
 - Film reel scanner
 - \$255
 - SD Card
 - \$9.00 for a 32 GB SD card





Film Reel to Digital Convertor

- Equipment:
 - **Film reel scanner**
 - \$9000
 - converts 8mm, super 8 and 16mm
 - PC to run software
 - Website: <https://www.moviestuff.tv/>





35mm Slide Scanner

- Equipment:
 - **Slidesnap**
 - \$3000
 - converts 35mm slides in to jpg format.
 - website: <https://slidesnap.com/>





Digital Scanner

- Equipment:
 - **Epson V600**
 - \$299
 - Flatbed size: 8.5" x 11.7"
 - Scans documents, slides, film negatives, photos
 - Software Included





Slide & Film Scanner

- Equipment:
 - **Kodak SCANZA Digital Film & Slide Scanner**
 - \$160
 - 35mm, 126, 110, Super 8 & 8mm Negatives & Slides to JPEG Digital Files
 - SD Card
 - \$9.00 for a 32 GB SD card





Slide & Film Scanner

- Equipment:
 - Kodak SCANZA Digital Film & Slide Scanner
 - \$160
 - 35mm, 126, 110, Super 8 & 8mm Negatives & Slides to JPEG Digital Files
 - **SD Card**
 - **\$9.00 for a 32 GB SD card**





Book Scanner

- Equipment:
 - **ScanSnap SV600 Scanner**
 - \$500
 - recognizes document size, A3, A4, A5, A6, B4, B5, B6, Post card, Business card, Double Letter, Legal
 - save files as pdf and jpg.
 - can use OCR





Audio Conversion Kit

- Equipment:
 - **TEAC LP-R550 LP & Cassette To CD/Digital Converter**
 - \$150-400
 - USB 2.0 Type B
 - \$10
- Software:
 - Audio Hijack
 - \$64
 - Audacity
 - Free





Audio Conversion Kit

- Equipment:
 - TEAC LP-R550 LP & Cassette To CD/Digital Converter
 - \$150-400
 - **USB 2.0 Type B**
 - \$10
- Software:
 - Audio Hijack
 - \$64
 - Audacity
 - Free





Audio Conversion Kit

- Equipment:
 - TEAC LP-R550 LP & Cassette To CD/Digital Converter
 - \$150-400
 - USB 2.0 Type B
 - \$10
- Software:
 - **Audio Hijack**
 - \$64
 - **Audacity**
 - Free





Cassette to Digital Convertor

- Equipment:
 - **Reshow Cassette Player**
 - \$35
 - USB 2.0 Type B
 - \$10
- Software:
 - Audio Hijack
 - \$64
 - Audacity
 - Free





Cassette to Digital Convertor

- Equipment:
 - Reshow Cassette Player
 - \$35
 - USB 2.0 Charger Cable - A-Male to Mini-B Cord
 - \$10
- Software:
 - Audio Hijack
 - \$64
 - Audacity
 - Free





Cassette to Digital Convertor

- Equipment:

- Reshow Cassette Player
 - \$35
- USB 2.0 Charger Cable - A-Male to Mini-B Cord
 - \$10

- Software:

- Audio Hijack
 - \$64
- Audacity
 - Free





Document Scanner

- Equipment:
 - **Compact Color Desktop Scanner**
 - **\$200**
 - **Up to 25 pages per minute scanning**
 - **20-page capacity auto document feeder**
 - **Scan to optional USB flash memory drive**
 - **USB Flash Drive 32GB**






Document Scanner

- Equipment:
 - Compact Color Desktop Scanner
 - \$200
 - Up to 25 pages per minute scanning
 - 20-page capacity auto document feeder
 - Scan to optional USB flash memory drive
 - **USB Flash Drive 32GB**
 - **\$7.00 - \$17.00**



A photograph of a computer workstation. Two large monitors are visible, both displaying the word 'STUDIO' in a stylized font over a background of concentric circles. A large, dark blue rectangular box with white text is superimposed over the center of the image. In the foreground, the back of two blue mesh office chairs are visible. On the desk, there are various items including a black M-Audio speaker on the left, a small black device with a red light in the center, and a black box with the number '543' on the right. The background wall is a solid reddish-pink color.

Services and hardware
offered at my library

Arlington Heights Memorial Library

- 45 Mins northwest of Chicago
- Population served 75,071
- Average digital media lab use per month: 255 users
- Library of things budget: \$8000
 - consisting of small electronic items, cameras, hotspots, streaming devices and more





Reel to Reel Conversion Kit



Video Conversion Kit



Batch Slide Conversion Kit



Audio Conversion Kit

A person wearing a white shirt is seated at a desk, working on a silver laptop. Their hands are visible, with one hand holding a blue card and the other near the keyboard. A spiral-bound notebook with papers is open on the desk in the foreground. The background is softly blurred, showing the person's torso and arms. A dark blue rectangular box with the text "Local Services" is centered over the image.

Local Services

Walgreens DVD Transfer



Videotapes

Accepted media formats: Betamax, VHS/SVHS, VHS-C, 8mm, Hi8, Digital8, MiniDV, Micro/Mini

DVD: \$24.99 per videotape + \$9.99

Blu-ray: \$24.99 per videotape + \$19

[Find a store](#)

[Get started](#)



Movie Films

Accepted media formats: 8mm, Super 8, 16mm

DVD: \$19.99 per 50' of film + \$9.99 per DVD

Blu-ray: \$19.99 per 50' of film + \$19.99 per Blu-ray

[Find a store](#)

[Get started](#)

Photos

Accepted media formats: Photo prints, slides, negatives

DVD: \$0.59 per photo + \$9.99 per DVD

Blu-ray: \$0.59 per photo + \$19.99 per Blu-ray

USB: \$0.59 per photo + \$19.99 per USB

*Minimum of 30 photos per order



Legacy Box



STARTER

Up to 3 Tapes or 3 Films
or 3 sets of 25 Pictures

OR MIX & MATCH *

\$59.98



FAMILY

Up to 10 Tapes or 10 Films
or 10 sets of 25 Pictures

OR MIX & MATCH *

\$279.98



CLOSET

Up to 20 Tapes or 20 Films
or 20 sets of 25 Pictures

OR MIX & MATCH *

\$559.98

A glass jar is shown in the foreground, partially filled with US dollar bills. A yellow label with handwritten text is attached to the jar. The background is a blurred bokeh of warm, colorful lights. A dark blue rectangular box is overlaid on the image, containing white text.

Tips and additional resources

Tips and additional resources

- Create a specific spot for your equipment.
- Set time limits for machine use.
- Host classes or perform appointments to make sure equipment is being used by those familiar with it.
- Guidebooks for equipment.
- Purchase equipment that you can easily service.
- Work with staff to see if they have old equipment that can be used or coordinate with a friends of the library.

Thank you!

Feel free to reach out to me for follow up
questions at:

Csmith@ahml.info

Chris Smith

Digital Media Specialist

Arlington Heights Memorial Library

