Film and Video Digitization and Editing

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Digital Media Commons

Fondren Library

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Outline

- Rice projects and activities that have multimedia component
- Technologies involved and tools used in these projects/ activities
  - Creation of media
  - Digitization of analog materials
  - File format conversion
  - Editing
  - Transcribing
  - Archiving
  - Publishing/Distributing
- Resources available at the DMC

Fall 2005, a Video Project of RELI 207 Course

 Professor Gregory Kaplan asked the students in his class to make a 4-7 minute documentary based on the testimonies they selected from Shoah Visual History Archive.

Survivors of the Shoah

- a student group project from RELI 207
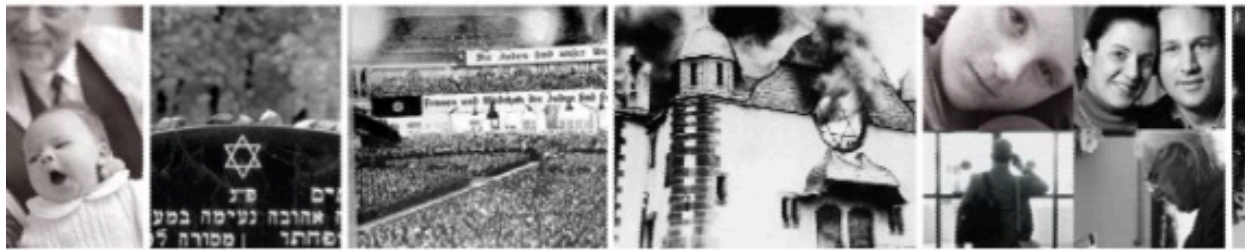
Digital Storytelling at Rice

- Digital storytelling is the practice of using computer based tools to tell stories.

- In the Summer 2007, Dr. Lisa Spiro, the former DMC director, introduced Digital Storytelling workshops to Rice.

- Starting Fall 2009, Digital Storytelling workshops have been offered to the classes such as COMM 103, COMM 321.

- Starting Fall 2012, Digital Storytelling workshops have been offered to the freshman writing intensive seminar (FWIS).

Making a Short Video from Start to Finish

– a Variation of Digital Storytelling

- o Overview of video making
- o Shooting great video with DMC's video cameras
- o Editing with iMovie
- o Publishing

Sample works

Digital Storytelling

- [See you later, Alligator!](#) by Sara Trejo, 2007
- [Inside My Head](#) by Cristina Tortarolo, 2010

Making a Short Video from Start to Finish

- [Jones College Video 2012](#) by Marissa Howat, Assistant Director of Wellness Center, RA of Jones College, 2012
- [Study Abroad Ambassadors](#) by Shelly Royer, International Programs Advisor, 2012

Oral History Projects at Rice

- 1949-2009, Fondren Through the Years: An Oral History of the Library
- Houston Asian American Archives Oral History Project
- Vietnamese American Oral History Project

Fondren Library's Oral History Project

- Fall 2009, in order to capture the oral history of library staff members, a video task force of the library interviewed 6 library retirees and 23 current employees.

- The finished movie is 42 minutes long and is available to view at https://scholarship.rice.edu/handle/1911/36086 from Rice Institutional Repository and on YouTube via the following links:
  - 60th birthday part I
  - 60th birthday part II
  - 60th birthday part III
  - 60th birthday part IV
  - 60th birthday part V

Houston Asian American Archives Oral History Project

- Summer 2010, Oral History Project for Houston Asian American Archive http://chaocenter.rice.edu/haaa/

- The collection:

  o 83 English audio interviews

  o Includes audio recordings and transcripts of interviews

  o URL from Rice Institutional Repository: http://scholarship.rice.edu/handle/1911/36136

Vietnamese American Oral History Project

- In April 2012, HAAA collaborated with the 500 Oral Histories Project of the Vietnamese American Heritage Foundation (VAHF) and received 94 oral history video interviews donated by VAHF.

- The collection
  - 94 video interviews, most are in Vietnamese, some are in English.
  - 8 of them are available online now. No transcripts. Only brief abstract.
  - URL from Rice Institutional Repository: http://scholarship.rice.edu/handle/1911/36136

Digitization of Rice University Archives: Audio Visual Materials 1920-2008 (UA 151)
- Summer 2012 Woodson Research Center Pilot Project

- Goal

  Make important content available online or at least on a server in a managed environment.

- Formats

  12" Vinyl Record LPs, films, VHS tapes, audio cassette tapes, reel-to-reel tapes, and more.

- Content

  Rice events, speeches, news, "Golden Anniversary" film, and more.

- **Starting point – VHS tapes**

Other Activities

- A submitted dissertation from Anthropology department in 2010 has a video component.
  URL from Rice Institutional Repository:
  https://scholarship.rice.edu/handle/1911/35296

- PowerPoint presentation

- OWL-Space course

Beyond Rice

- Shoah Visual History Archive
  - A massive database of 52,000 video testimonies given by Holocaust survivors.
- Oral Histories of the American South
  - A project containing 500 oral history interviews that cover topics such as civil rights, environmental transformations, southern politics, etc.
  - Audio with transcript
- National Archives on YouTube
  - An archive including more than 500 videos and 22 playlists featuring topics such as space exploration, World War II films, etc.
- Philaplace: Sharing Stories from the City of Neighborhoods
  - An interactive web site that includes text, pictures, audio, and video clips, and podcasts that connects stories to places across time in Philadelphia's neighborhoods.

Inside the projects

- Audio and video recording
- Digitization of analog materials
- File format conversion
- Editing
- Audio transcribing
- Archiving
- Publishing/Distributing

Media Creation

- Audio recording
  - Example: HAAA oral history project – Audio only
    - [Ping Sun oral history interview part I](#)
  - Audio recorders – Edirol R09
    - Portable
    - Very good built-in microphones
    - Recording formats: Wave or MP3
    - **Recommended settings for HAAA: Wave with 16bits/44.1 kHz**
    - **Recording time: 2GB memory card, 3 hours**
    - 2 AA batteries (4.5 hours continuous recording) or Power from the wall
    - Drag and drop the recording files from the SD memory card to computer

An example: Y. Ping Sun, oral history interview and transcript
http://scholarship.rice.edu/handle/1911/63604

Y. Ping Sun oral history interview and transcript

Files in this item

Files	Size	Format	View	Description
wrc02594_001.mp3	63.97Mb	audio/x-mp3		Streaming audio
wrc02594_002.mp3	63.97Mb	audio/x-mp3		Streaming audio
wrc02594_003.mp3	63.97Mb	audio/x-mp3		Streaming audio
wrc02594_004.mp3	63.94Mb	audio/x-mp3		Streaming audio
wrc02594_photo.jpg	103.8Kb	image/jpeg		Interviewee photo
wrc02594_xscript.pdf	131.7Kb	application/pdf		Transcription of interview

Media Creation

⮎ Video recording

- o Example: Fondren 60th oral history project
- o Video: Sony HDV Z1U
- o Audio:
  - Wireless microphone
  - Shot gun mic
  - Edirol audio recorder – for backup purpose

Fondren Library's Oral History Project

- 60th birthday part I
- 60th birthday part II
- 60th birthday part III
- 60th birthday part IV
- 60th birthday part V

Rita Marsales
Preservation Librarian (1959-61, 1963-2004)

0:42 / 7:34

Digitization of Analog Materials
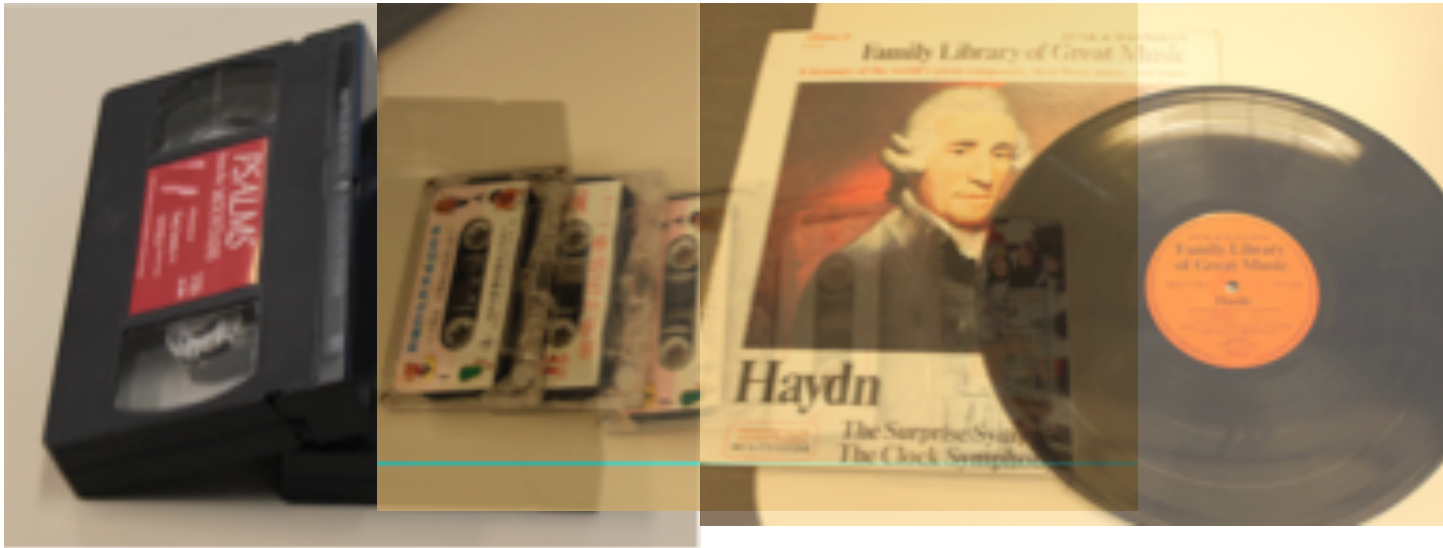
Video Digitization

- Dubbing VHS to DVD
- Capturing VHS to computer files

VHS -> DVD

To back up your VHS tape or to play it in a DVD player,
use a VHS/DVD dual deck to dub the content directly from VHS to DVD.

VHS – Computer files

To use the digitized files online or in a PowerPoint presentation, capture the content to computer files.

Hardware setup:

Archival Video Digitization Settings

Software – digitization setup

for the example of Digitization of Rice Audio Visual Materials (1920-2008)

Application	Final Cut Pro 6
Preservation Video Codec Specifications	Uncompressed, 10-Bit, 4:2:2, YUV (YCbCr)
Preservation Audio Codec Specifications	48 kHz/16-bit
Captured QuickTime mov file size	100GB/hour

Challenges: how can we effectively store and maintain the huge size files?

Video Digitization Settings for General Purpose

Software – digitization setup

Example: Embedding to PowerPoint Presentation, Posting to YouTube

Application	Final Cut Pro (FCP), iMovie, Adobe Premiere
Video Codec Specifications	DV NTSC
Audio Codec Specifications	48 kHz/16-bit
Captured QuickTime mov file size	12GB/hour
Exporting mov to smaller mp4	FCP, iMovie, Premiere

Audio Digitization

- Audio cassettes/LPs – computer files
- Applications: Audacity
- File formats: mp3, aiff, wave

File Format Conversion

- Example: VAHF oral history project
- Source file formats: MTS, MPG, MP4
- Targeted file format:
  - Mp4 as access copy
  - Mov as master copy
- Tools
  - HandBrake: (MTS, MPG, MP4) -> MP4   for access copy
  - FFmpeg/ffmbc: (MTS, MPG, MP4) -> MOV   for master copy

HandBrake – Video Converter

◈ Free

◈ Multiplatform (PC and Mac)

◈ Input

- most common multimedia files
- DVD/Bluray that are not copyright protected

◈ Output

- mp4 and mkv

HandBrake – Video Converter

FFMPEG Audio/video Converter

- ❧ Free
- ❧ Multiplatform (PC and Mac)
- ❧ Convert and stream audio and video
- ❧ Command line program, run at the Terminal

Terminal Shell Edit View Window Help

🏠 dmcguest — bash — 72×11

```
Moving-Images-Test:~ dmcguest$ ffmpeg -y -i /Volumes/originals/item-2-te
st/2011.03.07_VuKimYen/00001.MTS -vcodec copy -acodec pcm_s16le /Volumes
/converted/VAOF-ffmpeg-testing/ffmpeg-master-mov-h264-pcm16/00001.mov
```

An example: Nguyễn Cong Anh Tuan video oral history interview
https://scholarship.rice.edu/handle/1911/68492

Nguyễn Cong Anh Tuan video oral history interview

Files in this item

Files	Size	Format	View	Description
	69.37Mb	video/mp4	View/ Open	video of interview

Audio Editing

- Examples:
  Reli 207 video project, Digital Storytelling project, Fondren 60th oral history project

- Audacity
  - Free
  - Multiplatform (PC and Mac)

Video Editing

- Examples:
  Reli 207 video project, Digital Storytelling project, Fondren 60th oral history project

- Free applications: **iMovie (mac only)**, Windows Movie Maker (PC only)

- $ professional applications: Final Cut Pro, Adobe Premiere

Transcribing

- Example: HAAA oral history project
- Express Scribe
  - Free
  - Multiplatform (PC and Mac)
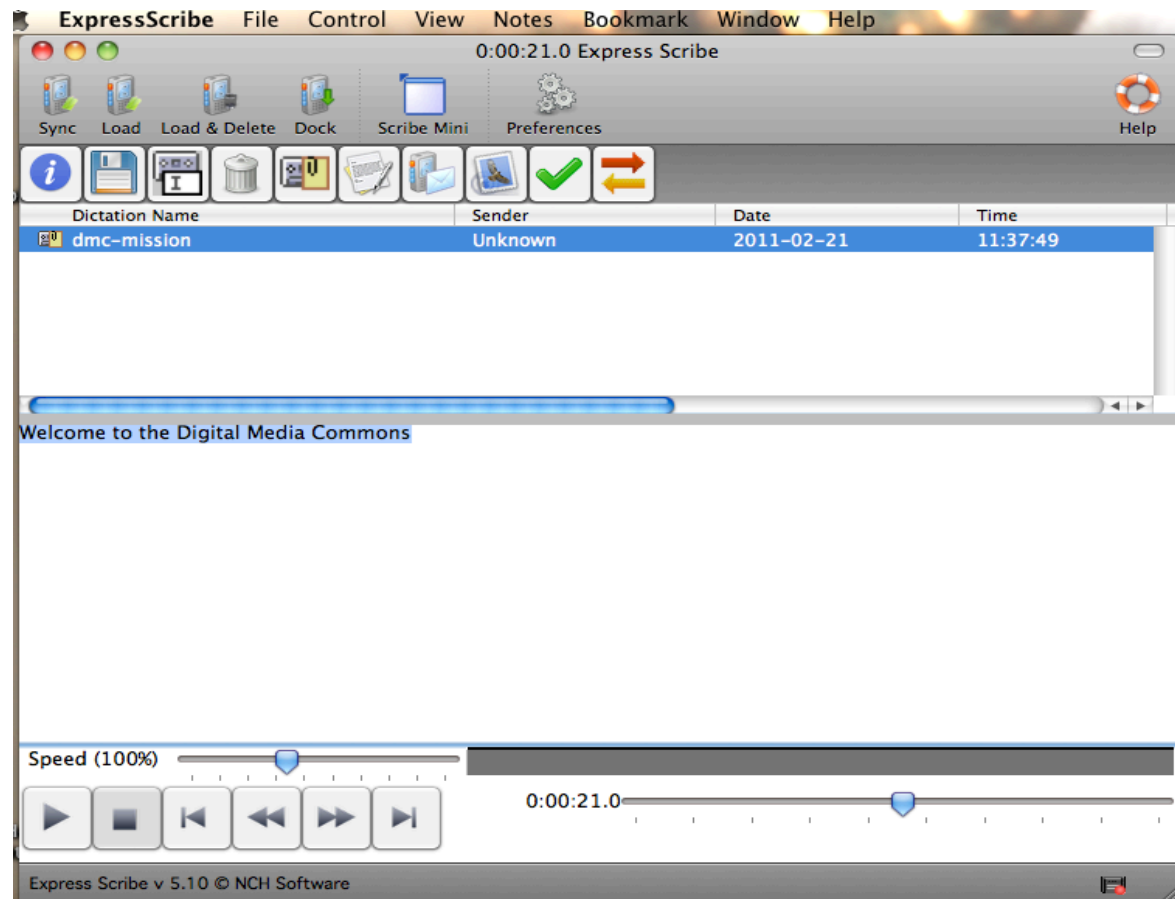
Express Scribe

Hot keys or foot pedal

0:10:49.3 Express Scribe		

File	Control	View	Notes	Bookmark	Opt

Play	Num 1	
Play Real Speed	F10	
Play Slow Speed	F11	
Play (With Pausing)	F12	
Play Fast Speed	F3	
Stop	Num 0	
Go to Start	Ctrl+Home	
Rewind	Num 4	
Fast Forward	Num 6	
Go to End	Ctrl+End	
Jump to time...	Ctrl+J	
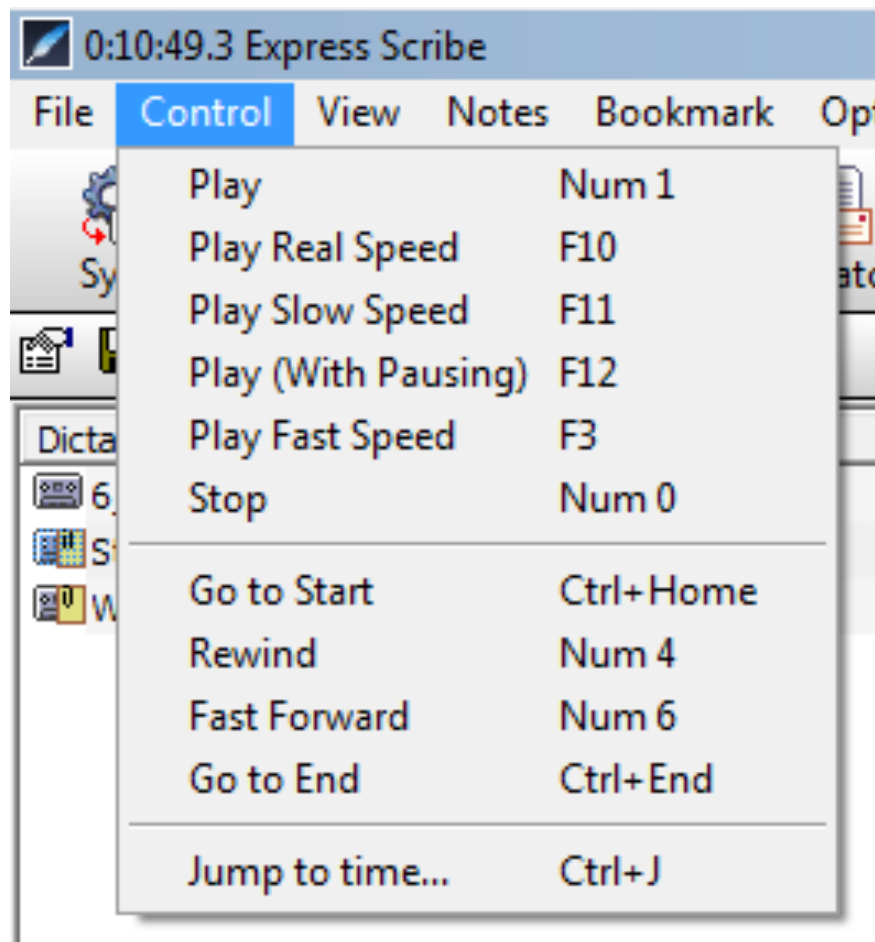
Preserving/Archiving

- Examples: oral history projects

- Where: [Rice Institutional Repository](#)
- What formats: downloading format, streaming formats, and preserving format
- What metadata
  - Descriptive metadata
  - Technical metadata

- [Y. Ping Sun's oral history interview](#) from [HAAA oral history project](#)

Publishing/Distributing

- Examples:
  Reli 207 video project, Digital Storytelling project

- Burning a DVD
  less common nowadays. *Both iDVD and DVD Studio Pro have been discontinued.*

- Posting to YouTube
  more common practice.

Handy A/V Tools

- Audio editing – **Audacity,** Logic Express, SoundTrack Pro
- Video editing – **iMovie**, **Windows Movie Maker**, Final Cut Pro, Adobe Premiere
- File conversion – **HandBrake**, **MPEG StreamClip, iTunes**, **FFmpeg**, **VLC**, Toast
- Media player – **Quicktime Media Player**, **Windows Media Player**, **VLC**

Note: The tools in bold type face are free.

Demonstration of Audacity and iMovie

DMC Resources

Free training short courses   **Walk-in assistance**

DMC Resources

- [Checking out equipment for free](#)
- [Poster printing](#)
- [Document scanning](#)
- [Online guides](#)

Find out more at the DMC's website:

http://dmc.rice.edu

Film and Video Digitization and Editing

Media creation	Edirol R09, Sony HDV camera, Canon Vixia camera
Digitization of analog materials	VHS->DVD dual deck, digitization diagram, digitization settings, FCP 6
File format conversion	HandBrake, FFmpeg, iTunes, Toast
Audio/Video Editing	Audacity, iMovie
Audio transcribing	Express Scribe
Preserving/archiving	Where, what format, what kind of metadata, Rice Institutional Repository
Publishing/Distributing	YouTube or DVD disc

Come to the DMC to polish your multimedia skills!