

# Preserving Music Recitals before they fade away

Session: Local Digitization Case Studies:  
Making Local Collections Global  
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Hi! I'm Monica Rivero and come from Rice University.  
Today, I will share our ongoing efforts to locally digitize a large collection of music recitals spanning over 30 years of content. We rely solely on in-house expertise, equipment, and infrastructure to build this collection.

## Acknowledgements

I wish to especial thank my colleagues for their generosity in sharing their knowledge and expertise. In particular...

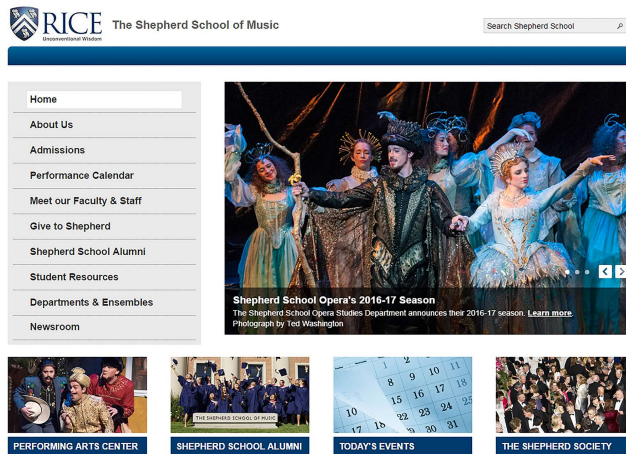
Dara Flinn, CA, DAS, Archivist/Special Collections Librarian, Woodson Research Center, for kindly allowing the use of her prior presentation information to be

Mary Brower, Music Reference Librarian, for providing a history of Shepherd School of Music.

**Wednesday, April 5 • 8:30am - 9:15am**

[S089 - Local Digitization Case Studies: Making Local Collections Global](#)

# Shepherd School of Music



- Formally opened in 1975
- Currently over 300 faculty and students
- Thousands of performances recorded and collected in multiple formats over the years

## First a bit of history

Formally Opened in 1975, the Rice University Shepherd School of Music has become one of the most prominent music schools in the country. It's Faculty and alumni include Pulitzer Prize and Grammy winners, and musicians who have performed at Carnegie Hall, the Metropolitan Opera, and other world class performing venues. Over time thousands of performances by faculty, students and guest artists have been recorded. These performances are very important records of the academic and musical achievements for the people involve. The Shepherd School sent these sounding recordings and related printed programs to the library for safe keeping.

## Challenges and Goal

- Library holdings of Shepherd School audio cassette tapes (1983-2002) are becoming at-risk (reasonable useful life = 20 years)
  - Cassettes are non-circulating and only partially cataloged.
- **Digitization will improve access and discovery**

Our biggest challenges are around preservation and access. Most of the sound recordings are on audio cassette tapes, which typically has a 20-year useful life. These tapes are currently stored behind the CIRC desk, are non-circulating and mostly uncataloged, so in-effect hidden from the public. And even if someone could identify a tape they wish to listen to, the library no longer has cassette players available on the floor. Therefore, the general consensus was digitization will improve discovery and access as well as preserve these recordings for the long term.

## Copyright concerns

- Current practice is to require students to sign a release form for performances; this practice was not in use for the performances in the project years
- Performances were conducted for academic purposes; there is no commercial use
- Rice University pays blanket license fees for copyrighted music to BMI and Ascap
- Deemed low risk of copyright issues for cassette performances since scope is limited to 1980's-2002
- Rice University legal counsel advised that placing legacy recordings online should not require special licensing or permissions
- If a complaint occurs the policy is for the performance to be taken down
- All recordings contain statement "Copyrighted material. All rights reserved."

One of the barriers to placing these materials online is copyright concerns. Music recitals have inherit copyright of the players as well as any rights associated with the music pieces played. After much discussion and internal debate we consulted university legal counsel who advised us that...

Since performances were conducted for academic purposes; there is no commercial use, they are deemed low risk of copyright issues. And that placing legacy recordings online should not require special licensing. This was great relief to the library as seeking permissions from potential hundred of 1000s of performers from decades ago would have been a an impossible task.

Our policy is two part:

- 1) If a complaint occurs we will take it down immediately and
- 2) All recordings contain simple statement that All rights reserved.

Though copyrighted, media is still available publicly

## Equipment and expertise

- Mac Pro workstation set up for cassette digitization by Fondren IT (includes storage for project 3 TBs)
- 5 Cassette tape decks (pulled out of storage)
- Staff with digital archiving, metadata and media expertise



Next step was to find equipment. Through informal conversations, we found out that though Library IT removed the cassette tape decks from the floor, they didn't actually throw the equipment away. Just stored it away. Which turned out to be very lucky as 1) We had no funds to purchase equipment and 2) we also had an old mac pro that is compatible with this equipment (new computer would not be!)

We dedicate 3 TBs storage to this project.

# Infrastructure for online collection



Rice Scholarship Home / Publications and Performances / Shepherd School of Music Programs

## Shepherd School of Music Programs

Search within this collection:

Collection of programs (PDFs) for concerts and recitals given by the Rice University Shepherd School of Music, since it opened in 1975. Events represented include performances by Shepherd School faculty, students, ensembles and guest artists. The online collection is in process and currently includes programs through late 1990s with plans to eventually include dates up to 2012. A smaller selection of concert recordings will also be made available in the near future.

### Recent Submissions



THE SHEPHERD SCHOOL PREPARATORY PROGRAM CONCERT LXXIII  
Saturday, May 3, 2003 2:30 p.m. Lillian H. Duncan Recital Hall  
(Shepherd School of Music, Rice University, 2003-05-03)



CHAMBER MUSIC CONCERT featuring students of The Shepherd School of Music  
Friday, May 2, 2003 8:00 p.m. Lillian H. Duncan Recital Hall  
(Shepherd School of Music, Rice University, 2003-05-02)



VOCAL CHAMBER MUSIC OF JOHANNES BRAHMS AND ROBERT SCHUMANN  
Friday, May 2, 2003 8:00 p.m. Studs Concert Hall  
(Shepherd School of Music, Rice University, 2003-05-02)

<https://scholarship.rice.edu/handle/1911/77130>

- Institutional Repository
- DSpace Platform
- Browse by Title, Date, Performer
- Local Customization to browse by Composer, Performance Type (e.g Guest artist, Faculty, Student, etc.) and in near future will add facet for browsing by “Recitals for degree” (Master or Doctoral)

Upload audio (MP3) files to our IR, which uses the open source platform, DSpace. Default software provides browsing by Title, Date and performer names. Since we have programmers on staff, we also customized the collection to browse by Composer name, Performance type and in the near future will add facet browsing for recitals given for degree

# Workflow : Inventory Step

- Remove any damaged tapes
- Match to Printed Program (\*)
- Flag any special performances for highlighting through social media

Performed by Subject Specialists:

- Music Librarian, primary liaison to Shepherd School of Music
- Music Cataloger



(\*) Digitization of printed programs already online

Our workflow is comprised of 3 key steps.

The first step is to conduct a physically inventory. We process in batch by year. This step is performed by staff with deep subject knowledge of the collection. Our music cataloger is a Rice Grad.

Key tasks include:

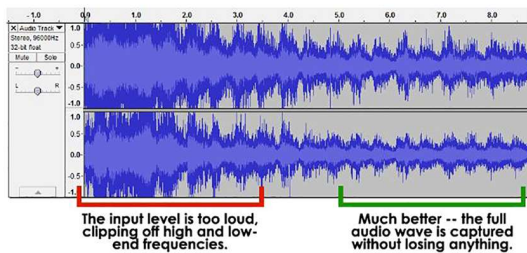
Assess physical condition and remove any physically damaged tapes.

Match each tape (label title) to performance program (PDF).

Plus flag any special performances that we can later use to promote the collection.

# Workflow: Audio digitization & file format specifications

- Technical guideline developed by media specialist and metadata coordinator
- Reformatting by Archivist & Access Services staff



Use Audacity to digitize performances

- Monitor volume to avoid clipping
- Remove silence between tape sides
- Normalize audio to -0.5 dB
- Perform spot checks of audio at 15 minute intervals
- Combine multiple tapes to single audio file

Master: WAV format, 16 bit/ 44.1 kHz  
(cassette tapes typically do not store higher than CD quality audio)

Access: MP3, delivery via streaming server at 320 kbps

Next step is actual conversion. Here we are fortunate to have staff with expertise in A/V formats. Our metadata librarian is also an expert in indie record label preservation. He crafted our digitization guidelines and training.

Most of the digitization is performed by Access Services Staff, who are encouraged to participate in digital library work, develop new skills and work in other areas of the library. Without this added staff support this project would not be possible.

Other tasks include:

- Do NOT use DOLBY noise reduction (NR) functions
- Make sure tape is rewound to beginning of side A
- Determine a reasonable audio level prior to digitization
- While tape is digitizing confirm performance metadata in tracking spreadsheet (compare to online program PDF)
- Remove the write protection tabs on the tapes

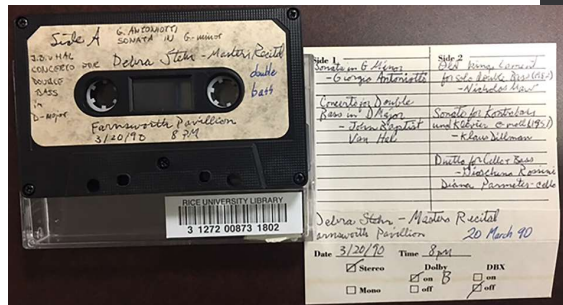


# Workflow: Metadata

- Performance Level: Title, Date, and basic boilerplate (e.g. source, genre and type, etc.)
  - Extracted from digitized PDF of printed programs using OCR tools and command line scripts

## Audio Level : Subtitles and Names

- During digitization step, copy/past movements and piece subtitles directly from related program
- Transcribe performers and composer names (Authoritative names are later applied by cataloging)
- If no printed program, transcribe from cassette label



Metadata is created in three parts.

First performance level information is extracted from the printed programs through use of OCR tools and command line scripts.

Second, information about the recording is prepared. If there is a catalog record, we will pull data from that source, otherwise...

And finally, cataloging will perform name authority work (i.e. composer names).

# Embedded metadata based on FADGI

## WAV files (BEXT & INFO-CHUNK)

- Description
- File Originator
- Creation Date
- Digitization History
- Artist
- Copyright
- Genre
- Medium
- Name
- Subject
- Software

## MP3 files

- Title
- Creator
- Date
- Genre
- Copyright note

Also batch embed metadata for archival purposes based on international standards  
Use tool BWF MetaEdit, <http://www.digitizationguidelines.gov/guidelines/digitize-embedding.html>

# Synchronized Viewer

Students from Shepherd School of Music time encode performances to create playlist for each performance

The screenshot shows a web-based interface for a synchronized viewer. At the top, it displays the title "Campanile Orchestra Concert, Luke Douglas Sellers, conductor. Sunday, January 28, 1990" and the location "8:00 p.m. in Hamman Hall". Below this, it identifies the source as "Rice University Interview | Shepherd School of Music Programs I". The main area features a video player with a play button, a progress bar showing "0:00:00" to "1:18:43", and volume controls. Below the player is a playlist with three items: "0:00 - Orchestral suite no.1", "24:08 - Unanswered question", and "33:14 - Symphony no. 1". To the right of the playlist, there are tabs for "TRANSCRIPT" and "INDEX", and a search box labeled "Search this index" with a "Search" button.

<https://scholarship.rice.edu/handle/1911/78219>

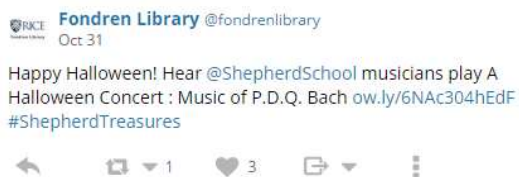
We started this year to enhance audio with interactive “playlists” to improve usability of sound recordings.

We are adapting a tool developed at University of Kentucky Libraries “a web-based, system called OHMS (Oral History Metadata Synchronizer) to inexpensively and efficiently enhance access to oral history online. OHMS provides users word-level search capability and a time-correlated transcript or indexed interview connecting the textual search term to the corresponding moment in the recorded interview online.” <http://www.oralhistoryonline.org/>

Instead of indexing “key words”, encode timecodes per piece. This worked is being done by graduate students from the Shepherd School of Music. (composition or musicology majors)

Target all audio files digitized to date will have interactive playlist by end of summer.

# Social media posts



Total Visits Per Month

	June 2016	July 2016	August 2016	September 2016	October 2016	November 2016	December 2016
A Halloween Concert : Music of P.D.Q. Bach (1807-1742?)	5	4	14	5	29	132	26

Outreach activities include use of social media postings to build awareness about this collection (#ShepherdTreasures).

Content for posts come from our [Music Librarian](#) and assisted by [Library's Scholarly Communications Liaison](#). And planning blog posts to provide more in-depth stories of performers and their performances.

Planning future articles in community newsletters, and new releases to professional organizations such as the Music Librarians Association. Later this year the plan is to utilize iterative usability testing and other assessment methods to understand how faculty, students, and professionals in the field of music are using the online collection.

## Collection Stats to date

5,000 Programs (PDFs) covering years 1975-2003

132 Audio performances digitized covering years 1982-1986 & 1990.

- Approximately 50% of programs found to have sound recording
- But of these recordings
  - 1980s more than half were found to be damaged;
  - 1990 only 1 tape was damaged.

Over 25 years of printed programs have been digitized.

Audio content:

~100 GB WAV master files

~160 hours playing time

## Future steps

- Continue digitization of remaining cassette performances through 2002
- Long-term storage or deaccession of cassette tapes?
- Determine preservation storage for Master WAV files to offline /cloud.
- Born-digital materials
  - Convert InDesign programs to PDF format (2012-current)
  - Audio on CDs (2002-current)

# Project Team

Mary Brower, Music Reference Librarian

Scott Carlson, Metadata Coordinator

Keith Chapman, Music Cataloger

Arnold Chee, Fondren IT

Dara Flinn, Archivist/Special Collections Librarian

Ying Jin, Application Programmer

Mario Norton, Digital Media Support Specialist

Monica Rivero, Digital Curation Coordinator

Susan Garrison, Access Services Manager  
Access Services Staff: Michael Chiles, Kevin Rivas, DaVian Smith, Heidi Vieira and Andrew Vieira

Digital project assistants:

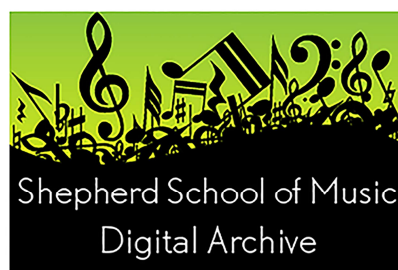
Clare Glackin

Cynthia Holman

Paul Novak

Sadie Richardso

Yinzhou Yu



Take's a village approach!

Cross departmental team: staff from reference, cataloging, access services, Library IT and digital scholarship services. Plus student workers and library interns.

Only together could we preserve and share these unique performances with the campus and beyond.