MLIS Portfolio

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Department of Information Studies

Graduate School of Education & Information Studies

University of California, Los Angeles

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Curriculum Vitae

EDUCATION

University of California, Los Angeles – Master's of Library & Information Science, Speciality in Media Archival Studies (Expected June 2019)

University of Southern California – Bachelor of Arts, Communication

EXPERIENCE

The Autry Museum of the American West, CLIR Recordings at Risk Intern
Burbank, California – October 2018-Present
- Create new and enhanced catalog records in Mimsy XG for the sound and moving image collections identified in the Digitizing a Century of Native Voice and Song project.
- Compose and enter item-level finding aids for the audiovisual collections in ArchivesSpace for posting to the Online Archive of California.
- Stabilize and rehouse collection items in archival enclosures.
- Track, retrieve, and return collection items to/from preservation reformatting vendor.
- Work closely with the Autry's Repatriation and Community Research Manager to prepare notices for affiliated tribal groups.

Visual Communications, Mellon Community Archives Intern
Los Angeles, California – October 2018-Present
- Digitize photographic images.
- Conduct full inventory of film negative and transparency collection.
- Develop filing and retrieval system for 35mm color slide images.
- Supervise undergraduate interns.
- Curate and design a two-month long photo exhibit using archival images.
- Present on the digitization and curatorial process and conduct a live interview with a contributing photographer.

UCLA Music Library, Graduate Student Assistant
Los Angeles, California – October 2017-Present
- Aid students with inquiries and research at the reference desk.
- Process new materials (CDs, scores, and books) into collection.
- Prepare and process (edit MARC 21 records) the LP collection for offsite storage.
- Assist Inquiry and Research Librarian and Technical Services Librarian with projects and exhibits.

Los Angeles Public Library, Administrative Clerk
Los Angeles, California – February 2017-Present
- Charge library holdings in and out.
- Collect fines and assist patrons at the circulation desk.
- Maintain and process collection materials (books, CDs, DVDs, and periodicals).

John Levin Cylinder Collection, Fieldwork Intern
Los Angeles, California – January 2019-April 2019
- Took inventory of brown wax cylinder collection.
- Researched existing library, museum, and archive CMS and metadata fields captured in catalog records.
- Constructed a database in FileMaker Pro for the Levin Cylinder Collection catalog records.
- Entered the catalog records for 579 of the brown wax cylinders.

Library of Congress Packard Campus for Audio-Visual Conservation, Junior Fellows Summer Intern
Culpeper, Virginia – May 2018-August 2018
- Performed the archival processing of lacquer disc master recordings from the Universal Music Group collection.
- Created, curated, and presented a Display Day final project on the "Life of a Lacquer Disc" to Library staff, members of Congress, and the public.

UCLA Library Special Collections, Graduate Student Assistant
Los Angeles, California – March 2018-May 2018
- Sorted and rehoused books and periodicals in the Eiko Ishioka collection.
- Assisted processing archivist with maintaining audiovisual inventory database.

Living Out Loud – Los Angeles, Senior Staff Editor
Los Angeles, California – June 2013-January 2018
- Copyedited all online content.
- Oversaw staff of writers, photographers and interns (assigned articles, coordinated interviews).

Campus Circle Newspaper, Editor-in-Chief
Los Angeles, California – August 2004 - January 2012
- Copyedited and designed cover and layout of weekly newspaper.
- Oversaw staff of writers, photographers and interns (assigned articles, coordinated interviews).

AWARDS & LEADERSHIP

- 2019 Music Library Association (MLA) Kevin Freeman Travel Grant
- 2018-2019 American Library Association Spectrum Scholarship
- 2018 Association for Recorded Sound Collections (ARSC) Conference Travel Grant
- 2018-Present: Membership Officer, MLA's Music Library Students and Emerging Professionals Group
- 2018 Conference Committee for the AES International Conference on Audio Archiving, Preservation & Restoration
- 2018-Present: ARSC Newsletter Editor
- 2017-Present: Founder and Chair, the Student Chapter of ARSC at UCLA

CONFERENCE PRESENTATIONS

Posas, L. and Shimoda, Y. "Digitizing a Century of Native Voice and Song at the Autry Museum," presentation scheduled for October 1, 2019 at the International Association of Sound and Audiovisual Archives (IASA) 50th Annual Conference in Hilversum, Netherlands.

Garrett-Davis, J., Ortega, L., Minks, A., Posas, L. and Shimoda, Y. (scheduled for October 10, 2019) *Community Collaboration and Access: Digitizing Native American Sound Archives*. Presentation at the International Conference of Indigenous Archives, Libraries, and Museums (ATALM), Temecula, California.

Shimoda, Y. (September 2018) *The Archival Processing of Master Recordings from the Universal Music Group Collection*. Presentation and panel discussion at the Audio Engineering Society (AES) L.A. Section meeting on Audio Archiving, Restoration, and Preservation - Past, Present, and Future, Hollywood, California.

Shimoda, Y. (September 2018) *A Summer of Mid-1940s Melodies: Processing Master Recordings*

from the Decca Label. Presentation at the MLA California Chapter meeting, San Diego, California.

Patton, C. and Shimoda, Y. (May 2018) *Wes Anderson: Audio Auteur*. Poster presentation at the ARSC Conference, Baltimore, Maryland.

WEB-BASED PUBLICATIONS

Shimoda, Y., "A Summer of Mid-1940s Melodies: Processing Master Recordings from the Decca Label," The Library of Congress Blog, July 23, 2018, https://blogs.loc.gov/loc/2018/07/a-summer-of-mid-1940s-melodies-processing-master-recordings-from-the-decca-label/.

LIBRARY AND ARCHIVAL SKILLS

CMS: Mimsy XG, CONTENTdm, ArchivesSpace
Library Systems and Cataloging Tools: Voyager, CARL-X, OCLC Connexion
Metadata Structure and Content Standards: EAD, DACS, MARC, PBCore
Thesauri and Controlled Vocabularies: AAT, LCNAF, LCSH, ULAN

RELEVANT SKILLS

Protégé, Zotero, Airtable, FileMaker Pro, Microsoft Office Suite, advanced proficiency with Adobe Photoshop and InDesign, OSX and Windows operating systems, graphic design, exhibit curation, preparation, and installation, grant writing

Professional Development Statement

One of my earliest memories is receiving a Fisher-Price record player from my father. I remember tracing the lines etched into the record with my finger, placing it on the turntable, and being mesmerized when "Twinkle Twinkle Little Star" filled the air. I immediately had to find out how this plastic disc could produce music, so my dad helped me take the brand-new toy apart to see how its wind-up mechanism worked. Years later, my fascination with sound recordings proceeded to grow, as did my penchant for solving puzzles and my desire to understand the mysteries of how things work. This inquisitiveness served me well as I obtained a Bachelor of Arts in Communication at the University of Southern California, and thereafter, as I spent a decade researching and unfolding the stories of musicians' lives into feature articles as a music journalist. When the newspaper I worked for began to evolve into an online publication, I started contemplating other professional avenues. I sought the advice of a friend who obtained his MLIS at UCLA, applied to the program, and started working as a clerk for Los Angeles Public Library. I realized how much I love assisting patrons, and after attending Media Archives Boot Camp prior to beginning the UCLA program, I became excited to see that an MLIS would enable me to combine my passion for recorded sound with my desire to help others.

Since entering the program, I have had the goal of acquiring a position as a processing archivist within a sound/audiovisual archive, museum, or library special collections in mind. I have tailored my course selections, internships, student jobs, and involvement in professional organizations towards achieving this goal. I specifically have been looking to the core knowledge and skill requirements of an audio archivist laid forth in the National Recording Preservation Board's *The State of Recorded Sound Preservation in the United States: A National Legacy at Risk in the Digital Age* as a reference guide. To date, this is the only comprehensive study that has been conducted, and it sets forth recommendations for curricula in audio archival training. The study details necessary competencies within four knowledge areas – Recorded Sound Foundations (formats, material science and technology), Preservation Foundations (history, storage requirements), Preservation Reformatting of Audio (techniques, technology assessment),

and Collection Management[1] (archival processing, reference) – and I have utilized these bullet points as a checklist to assess my progress within the classroom and in the field.

Although I was already familiar with most recording formats, I was able to dive deeper into the science and structure of sound carriers through the assigned readings for Ethnomusicology C200-Audiovisual Archiving in the 21st Century and IS 484-Sound Technologies in Society. Both courses reinforced the importance of being aware of the technology that went into creating the physical media, as well as the basic audio properties of their recorded contents. Outside of the classroom, I have been able to easily identify the many sound formats I have encountered in my internships processing thousands of lacquer discs at the Library of Congress' (LC) National Audiovisual Conservation Center (NAVCC) and over 400 Native American sound and audiovisual recordings on wire, magnetic tape, and discs dating from 1887 to 2007 at the Autry Museum of the American West.

I learned about the history of media preservation in IS 480-Introduction to Media Archiving and Preservation and IS 481-Moving Image Technology. Being able to identify the time period in which a recording was made just by examining its carrier's physical properties is an essential skill for media archivists, and these two classes drove this point home. I can confidently create a collection needs assessment and disaster preparedness plan because of exercises I participated in during Ethno C200. One class activity had groups determine security measures and storage needs according to a set budget and a list of natural disasters that might occur in the geographic region they were assigned. I directly applied much of what I learned about the proper handling and storage of audio formats from this Ethno class to working with the Universal Music Group (UMG) master studio recordings on 1940s lacquer discs during my summer internship as an LC Junior Fellow in the Recorded Sound Section at the NAVCC, to working with the unique tribal recordings at the Autry, and in my fieldwork with brown wax cylinders over the winter quarter. Brown wax cylinders were the first commercial sound recordings ever sold, and I constructed a custom database for the cataloging of my site supervisor's vast collection of these rare items from

1 Rob Bamberger and Sam Brylawski on behalf of the National Recording Preservation Board, *The State of Recorded Sound Preservation in the United States: A National Legacy at Risk in the Digital Age* (Washington, D.C.: Council on Library and Information Resources and the Library of Congress, 2010), 148.

the 1800s.

I obtained a foundation in digitization techniques and processes during Ethno C200 and in guest lectures by National Public Radio audio archivist Will Chase and UMG audio engineers Dave McEowen and Christina Paakkari during IS 484. I conducted research to ascertain what transfer technology and equipment would be needed to digitize patrons' audiovisual materials in an outreach program (a series of 'Preserving Memories' workshops) I designed for the Brand Library & Art Center in my IS 423-Public Libraries final project. In the field, I took the initiative to observe the LC engineers' digitization workflow at the NAVCC whenever I could this summer, and I was able to learn transfer techniques for cylinders and discs from my fieldwork site supervisor and the reformatting vendor I am working with at the Autry, respectively.

In terms of Collection Management, I had to submit two group projects for IS 484, both of which concerned the appraisal of archival audio collections. My final paper for IS 289-3-Intellectual Property focused on the effects of the Music Modernization Act for libraries and archives, and my quarter-long project for IS 433-Community-Based Archiving consisted of writing a grant application for the preservation reformatting of two of the UCLA Chicano Studies Research Center's moving image collections. For the past two years I have worked shifts at the reference desk at the UCLA Music Library, and last spring, I spent the quarter processing an archival collection in UCLA Library Special Collections (LSC). My experience in LSC and at the NAVCC cemented my desire to become a processing archivist, and through my two internships this year I have expanded my hands-on experience with media: film negatives and slides at a Mellon grant-funded community archives internship at Visual Communications, a media arts center for Asian-American and Pacific Islander filmmakers, and the collection of tribal recordings on an array of sound formats at the Autry.

The Autry project is allowing me to pursue my interest in tribal community-institution collaboration when describing indigenous sound recordings. In addition to processing the recordings, I am researching their tribal affiliations in preparation for the Autry's Repatriation and Community Research Manager to contact tribal councils with an invitation to collaborate in

describing the songs and implementing Traditional Knowledge Labels into the materials' catalog records. I am scheduled to present on this work at the International Association of Sound and Audiovisual Archives' (IASA) 50th anniversary conference and at the Association of Tribal Archives, Libraries, & Museum's (ATALM) International Conference of Indigenous Archives, Libraries, and Museums next fall.

There are four audio-related professional organizations – IASA, the Music Library Association (MLA), the Audio Engineering Society (AES), and the Association for Recorded Sound Collections (ARSC); I have been an active member in all four and held positions in three. I founded the first-ever student chapter of ARSC and have served as the UCLA chapter chair for two years. I presented a poster at the 2018 conference, am the current ARSC Newsletter editor, serve on the Education and Training Committee, and am co-chair of the mentoring program for first-time attendees at the next ARSC Conference. I am the IASA Ambassador for the western United States and will be presenting at the anniversary conference in Hilversum, Netherlands in October. I currently serve as the Membership Officer for MLA's Students and Emerging Professionals Group. So far, I have recruited 82 new members to the group that is 413 members strong. I presented on the processing work I did at the NAVCC at the MLA California Chapter meeting and an AES Los Angeles section meeting last September. I was on the planning committee for the 2018 AES International Conference on Audio Archiving, Preservation & Restoration and was invited to be a part of the committee again for the next conference. I hope to deepen my involvement in all of these groups in the years ahead to continue to broaden and enhance my knowledge and skills in the realm of audio archiving.

I founded the chapter of ARSC at UCLA to acquire more hands-on training from the organization's members and build a stronger network between students, collectors, and archives professionals. My involvement with the chapter has helped me develop my ability to advocate for myself and my cohort. When several students expressed that funding was the only thing stopping them from attending this year's ARSC Conference, I fought for the implementation of a volunteer program, in which students would work a shift at the registration desk in exchange for a rebate of

their conference fees. I am proud to say that the student chapter is sending nine delegates to this year's conference, triple the amount from last year.

While I hope to acquire a position as a processing archivist in a sound/audiovisual archive or a library special collections with audio formats in its holdings after completing my MLIS, my five-year plan also includes a commitment to community archives and fostering tribal-institutional collaboration in describing sound recordings. I would welcome the opportunity to be a part of implementing Traditional Knowledge labels at more institutions like the Autry that steward major collections of indigenous sound recordings. Ideal institutions include the Archives of Traditional Music at Indiana University Bloomington, the American Folklife Center at the Library of Congress, and the Rinzler Folklife Archives and Collections at the Smithsonian Center for Folklife and Cultural Heritage.

50-Word Issue Summary

Extracting sound recordings from damaged lacquer discs is a pressing task for audio archivists, as this format is inherently at risk, and lack of action will lead to loss of valuable cultural materials. This paper explains why optical playback is the best means of rescuing these recordings and compares existing methods.

Issue Paper

Extracting Sound Recordings from Damaged Lacquer Discs

> [T]here remains a considerable part of the audiovisual legacy that is still stored on its original carriers. The main reason is obviously the lack of funds. But also lacking is a sense of urgency to complete the digitisation of content. There is an ever-decreasing time window to complete the digitisation process before the small pool of equipment in operable condition required for the replay of traditional formats vanishes. Today, this window is estimated to be between 10 to 15 years.[1]

During the first month as an MLIS student at UCLA, I attended a talk on collection sustainability organized by the UCLA Digital Archiving Collective. In his segment, Curator of UCSB Library's Performing Arts Collection David Seubert brought up the "ever-decreasing time window" left to digitize audiovisual materials held by cultural heritage institutions in an even more vivid way: a looming cloud of obsolescence hanging over archivists' heads. The image remained with me throughout my first year of coursework, but the dark cloud actually confronted me face-to-face this summer while I was conducting work for my internship at the Library of Congress (LC) National Audiovisual Conservation Center (NAVCC).

In 2011, Universal Music Group (UMG) donated over 200,000 master recordings to the LC. Within the collection were historic works by artists such as Bing Crosby, Louis Armstrong, the Andrews Sisters, Ella Fitzgerald, and Les Paul. Many of these tracks were recorded onto thousands of 16-inch instantaneous lacquer discs with either a glass or aluminum base. Those created during the 1940s served as the focus of my LC Junior Fellows project over the summer at the NAVCC. I processed all of the glass discs in the UMG collection, in addition to several boxes of aluminum-based lacquers, for a grand total of about 2,000 discs during my 10 weeks in Culpeper, Virginia. Many of the discs were broken, extremely fragile, or showing other signs of degradation. Some days, the carpet in my cubicle would be littered with pieces of sound in the tiny black specks of lacquer that had flaked off of discs or my desk would be piled with boxes of broken/cracked lacquers. My interaction with these delicate sound carriers prompted the decision to write about rescuing audio material from discs in my portfolio. I wondered if there were measures that could be

1 Dietrich Schüller and Albrecht Häfner, eds., *Handling and Storage of Audio and Video Carriers (IASA-TC 05)* (London: International Association of Sound and Audiovisual Archives, 2014): 5.

taken to prevent or stave off degradation. How could archivists ensure that the culturally significant speeches, songs, and other sounds these discs contained be preserved? If a disc was fractured into several pieces, was there something an archivist could do to rescue its recordings?

As with all organic compounds, analog sound recordings are inevitably going to start decomposing. Due to its unique physical composition, the *ARSC Guide to Audio Preservation* states that "the most fragile commonly encountered audio format is the lacquer disc. … All lacquer discs are at risk of deterioration and are a preservation priority."[2] Extracting sound recordings from damaged lacquer discs is a pressing task for audio archivists, as this format is inherently at risk, and lack of action will lead to loss of valuable cultural materials. This paper explains why optical playback is the best means of rescuing these recordings on damaged discs and compares existing methods.

History

The lacquer type of instantaneous disc was introduced in the 1920s and underwent a series of transformations as it remained the dominant sound recording format until the late 1940s. Instantaneous discs could be used to record and replay signals in real time without a complicated electrotyping and pressing method. While earlier cylinder technology used for ethnographic and commercial recordings could only capture around two minutes of sound, these discs could hold fifteen minutes of audio per side. The most widespread type of instantaneous discs were lacquer transcription discs, ranging in size from seven to sixteen inches in diameter. The soft lacquer coating of these discs consists mainly of cellulose nitrate that is plasticized with castor oil or camphor on a metal (usually aluminum), glass, cardboard, or paper base.[3] During World War II, aluminum was rationed, so disc manufacturers could only produce lacquers with glass substrates.

"Most of these discs are unique,"[4] carrying early radio broadcasts and other, ethnographic

2 Harrison Behl, "Audio Formats: Characteristics and Deterioration," ed. Sam Brylawski et al, *ARSC Guide to Audio Preservation* (Eugene, OR: Association for Recorded Sound Collections; Washington, DC: Council on Library and Information Resources and the Library of Congress, 2015), 17 and 21.
3 National Archives & Record Administration, "Format Guide to Sound Recordings," archives.gov, October 2014, accessed January 31, 2019, https://www.archives.gov/files/preservation/formats/pdf/format-guide-to-sound-recordings.pdf. These discs are sometimes referred to as 'acetates,' which is actually a misnomer that might be attributed to early lacquers needing to be played with acetate needles (see Michael Biel, "History of Instantaneous Recording, Part II: The Lacquer Disc" (presentation, ARSC Conference, Syracuse, New York, May 22, 1998).
4 Schüller and Häfner, 11.

field recordings, historically important meetings and court trials, home recordings, or irreplaceable studio sessions like the aforementioned UMG masters. Lacquer discs replaced cylinders in both the home recording and commercial audio industries by the mid-1930s and remained the dominant format until the rise of magnetic tape in the late 1940s.[5]

Urgent Need for Preservation

Knowing how to identify a lacquer disc in a collection is of the utmost importance for all archivists, as is the ability to tell the difference between glass, metal, or paper/cardboard-based discs and awareness of the format's deterioration issues for several reasons: the medium's instability, uniqueness of their content, and their prevalence in collections. It is for these reasons that this paper points to an active approach (copying from one physical format to another) to preservation versus a passive one (storing the materials in ideal conditions to slow down/halt deterioration).[6]

To understand the need for active preservation, it is necessary to investigate the instability of the format. As evidenced by the large amount of broken and/or delaminating discs that crossed my desk this summer at the NAVCC, the clock is ticking; the amount of time left to preserve lacquer discs continues to dwindle. Lacquers, most notably glass-based discs that become brittle and more subject to cracks and breaks with time, are literally falling apart. In addition to scratches, groove wear, and surface contamination (dirt, dust, and mold), all lacquer discs are susceptible to two forms of deterioration: delamination and exudation.

As cellulose nitrate reacts with oxygen and water vapor, it produces acids, which cause the lacquer coating of a disc to begin to shrink. Since its metal or glass substrate is not able to shrink, the lacquer begins to crack and come apart from the base.[7] This decomposition is known as laminate separate or delamination. Once delamination begins, it cannot be reversed and becomes accelerated in warmer and more humid storage environments. The condition is eventually going to spread across a disc's surface. Delaminating or cracked/broken discs must be stored horizontally to alleviate stress from gravity and to prevent further damage. Several institutions, such as Stanford

5 Behl, 21.
6 Bob Pymm, "Preservation of Audiovisual Media: Traditional to Interactive Formats," eds. G.E. Gorman and Sydney J. Shep, Preservation Management for Libraries, Archives and Museums (London: Facet Publishing, 2006), 99 and 105.
7 Schüller and Häfner, 11.

University,[8] Indiana University (IU) Bloomington,[9] and, as mentioned, the LC, have created customized broken disc housing for such storage.

Exudation occurs when the plasticizer in a disc begins to break down and its acid components begin to appear on the surface of the lacquer in the form of a white, greasy powder. Acid exudation can be mistaken for mold since it manifests in the form of a white powder, but is distinguished by its greasy texture. There have been studies to determine what kind solution might work best to remove exudation from a disc without damaging it, such as Marcos Sueiro Bal and Jeff Willens' survey of treatments presented in a poster at the 2018 Audio Engineering Society International Conference on Audio Archiving, Preservation & Restoration.[10] While cleaning a lacquer's surface with castor oil, mineral oil, or solutions like Disc Doctor removes signs of exudation from the disc as indicated by the study, it is only a temporary fix. Once exudation begins, there is no way to permanently stop it from reappearing on a disc's surface and covering its recorded contents. As I witnessed this summer at the NAVCC, an exudating disc can be played, but it must be cleaned until all signs of the white powder are gone. No amount of washing can prevent the acid exudation from continuing to eat away at the disc, though. Soon enough, its surface will once again become covered by the greasy white spots.

Instantaneous discs were popular because of their convenience, but they were only meant to be played so many times. The rarity of the often-unpublished recordings that the lacquers contain is also an argument for the urgent need to digitally reformat them for posterity. A final reason is their prevalence in collections.

> Tens of thousands of lacquer discs in archives in the United States remain unpreserved. In the very near future, custodians of these collections will have to decide whether to preserve these recordings or lose access to their content. … [There is] meaning that attaches to sound recordings after the passage of time, a meaning that can be bestowed by their creators, by historians, or by society. … if the proper care or preservation of sound recordings is postponed until their significance is realized, it may well be too late. … it is impossible to preserve everything, and it may be similarly impossible

8 Brandon Burke, "Designing a Housing for the Horizontal Storage of Cracked or Broken Phonograph Discs," *ARSC Journal* 25, no. 1 (Spring 2018), 28-40.
9 Elise Calvi, "Floating Disks," *E. Lingle Craig Preservation Lab Blog*, March 9, 2016, https://blogs.libraries.indiana.edu/craiglab/2016/03/09/floating-disks/.
10 Marcos Sueiro Bal and Jeff Willens, "Survey of Suggested Treatments for Removing Acidic Exudation from Vintage Lacquer Discs" (poster presentation, Audio Engineering Society International Conference on Audio Archiving, Preservation & Restoration, Culpeper, Virginia, June 28-30, 2018).

> to anticipate which recordings will assume greatest significance in the future; consequently, the individuals making choices among collections to be preserved must be sufficiently knowledgeable to assess which recordings most merit attention.[11]

In 2014, AVPreserve and the Northeast Document Conservation Center (NEDCC) performed an assessment of existing audio items held in institutions across the United States. They found that 177 institutions (academic libraries, non-profit broadcasting organizations, state and large city historical societies, special libraries, archives/museums) had over two million items classified as "grooved media" in their collections.[12] This survey was not able to provide counts for specific grooved media carriers like lacquer discs, so I decided to ask four institutions that I knew had at least a small amount of the medium for a current approximation of their holdings.

As of January 2019, the LC Recorded Sound Section maintains 3.6 million recordings at the NAVCC; over 370,000 of them are lacquer discs. The Head of the Recorded Sound Section, Caitlin Hunter, states that some of these lacquers have been transferred to open reel tape in the past, and a portion of those tapes have been digitized.[13] However, only approximately 5,600 of the lacquer discs have directly been digitally preserved. According to Jeff Willens, sound engineer for New York Public Library's (NYPL) Audio and Moving Image Preservation Labs, there are approximately 28,000 lacquers system-wide.[14] Only 10-percent of these discs have undergone preservation reformatting.

In a January 21, 2019 email interview I conducted with Adam Tovell of the British Library, he shares that all of the approximately 22,000 lacquer discs in their collections have been digitized, save for about 20, which he says "are too damaged to attempt to play." There are just over 8,100 lacquer discs held by Indiana University, and the institution's Mass Digitization & Preservation Initiative (MDPI) Audio Preservation Engineer Melissa Widzinski says they have yet to digitize about 3,500 of them.[15] Around 100 of these have not been digitized due to cracks, delamination, or

11 Rob Bamberger and Sam Brylawski on behalf of the National Recording Preservation Board, *The State of Recorded Sound Preservation in the United States: A National Legacy at Risk in the Digital Age* (Washington, DC: Council on Library and Information Resources and the Library of Congress, 2010), 23 and 35.
12 Bertram Lyons, Rebecca Chandler, and Chris Lacinak, *Quantifying the Need: A Survey of Existing Sound Recordings in Collections in the United States* (Brooklyn, NY: AVPreserve, 2014), 8.
13 Caitlin Hunter, email message to Yuri Shimoda, January 28, 2019.
14 Jeff Willens, email message to Yuri Shimoda, December 3, 2018.
15 Melissa Widzinski, email message to Yuri Shimoda, January 4, 2019.

warpage.

Solutions: Mechanical

Using a turntable and stylus is the ideal means of listening to any disc because this is how they were meant to be played. It has taken decades to develop the mechanical components within a playback system. It is easy to take for granted how much work has gone into housing the magnets, rubber suspension arm, and plastic parts within a head cartridge, let alone the technology that has gone into manufacturing tiny styli able to effectively read the material in a groove at affordable prices for consumers. However, it is not possible to even attempt to play cracked, broken, or delaminating lacquer discs mechanically without proper training and expertise.

I witnessed an audio preservation specialist at the LC's NAVCC artfully use tape to hold down sections of lacquer that had already begun to delaminate from the disc, just so he could try to get one clean transfer attempt with it at his turntable station. Two of the other institutions I spoke with also report similar attempts at the mechanical playback of delaminating discs. "We attempted to retrieve what we could from all of our discs using 'traditional' replay equipment," comments the British Library's Tovell in our January 21, 2019 email correspondence. "We do have several hundred affected by delamination. We attempted to replay these with a turntable if the engineers felt it was safe to do so, using various techniques to keep the lacquer in place (temporary adhesive, playing backwards, playing at half-speed, etc.)." Audio engineer Willens also details instances where he has had to repair broken discs within NYPL's large collection of glass-based lacquers. One was broken into three pieces, but "I was able to reassemble, play back, and digitize [it] successfully. … Delaminating discs are a different story. Either they're playable, or they're not. You retrieve as much as you can without doing more damage," he shares in an email dated December 4, 2018. "Optical systems … are of course much more preferable than doing a physical playback. ... NYPL will use IRENE at NEDCC on the rare occasions when physical playback would be detrimental to the source."

In our email conversations dated January 4 and 31, 2019, IU's Widzinski describes their policy of not attempting mechanical transfer with cracked and/or delaminating discs: "We store

them until an opportunity arises where an optical scan might be feasible. The scope of our project is such that we are still required to optimize throughput and not take significant risks with the materials." Widzinski, like Willens, is referring to the IRENE system, which is an optical solution that is highlighted in the next section. IU sent three broken, glass-based discs from Orson Welles' "The War of the Worlds" broadcast to be scanned by IRENE at the NEDCC. Although these were copies from the originals, they were owned by Welles himself before being accessioned by IU. "These discs were chosen due to cultural value, since that is one of the most famous radio broadcasts in history," Widzinski continues in her email.

While the preservation reformatting of lacquer discs via mechanical playback is ideal, when it comes to damaged or deteriorating discs, the amount of labor needed to perform a custom, 1:1 (one preservation specialist working with one disc at a time) workflow in order to extract recordings is high. "Getting the 'last, best play' from a fragile recording may require four hours of skilled labor for one hour of sound."[16] Mechanical transfer of 16-inch lacquer discs require special styli, as well as a professional turntable designed to accommodate a large disc and a wide range of playback speeds; this can be quite hard to find due to equipment obsolescence. In addition, mechanical replay does cause deterioration to the shape of the disc's grooves and "because of their susceptibility to deterioration by replay, strategies have to be in place to restrict the replay of mechanical carriers to the absolute minimum."[17] The ultimate cost of losing highly unique material by worsening a break or losing a flake of delaminated lacquer in the mechanical transfer process is a risk all institutions would be unwilling to take.

Solutions: Optical

The IRENE system mentioned by Widzinski and Willens utilizes no-contact digital imaging to optically recover sound recordings from cracked, broken, and delaminating discs. Carl Haber and Vitaliy Fadeyev, two scientists at the Lawrence Berkeley National Laboratory came up with IRENE after hearing the drummer for Grateful Dead talk about the loss of cultural heritage due to the breakdown of recordings on a radio show in 2003. Their experiments resulted in the system

16 Virginia Danielson, "Stating the Obvious: Lessons Learned Attempting Access to Archival Audio Collections," *Folk Heritage Collections in Crisis*, (Washington, D.C.: Council on Library and Information Resources, May 2001), 7.
17 Schüller and Häfner, 13-14.

that they ended up naming for "Goodnight, Irene" by the Weavers because it was the first record they were able to extract sound from.[18] 'IRENE' has now come to represent: Image, Reconstruct, Erase Noise, Etc. since it creates a high-resolution digital map of a disc by using light, a digital camera, and a laser (to drive the motorized arm that allows the camera to focus properly) to scan images of the disc's groove floor. Then, software analyzes the lateral motion happening within the grooves and converts the data into sound (wav files).

Once LC Digital Conversion Specialist Peter Alyea heard about IRENE, he began to realize its potential for reading damaged discs and forged a collaborative relationship with Haber and the Berkeley Lab. The first 2D IRENE system for reading lateral-cut discs[19] was installed at the LC in 2006 and eventually found its permanent home at the NAVCC (where I became acquainted with its capabilities) when a second 2D/3D system was delivered to the LC for reading vertical-cut discs and cylinders. In 2013, the NEDCC and Berkeley Lab received a grant to further test and develop IRENE "to create a sustainable digital reformatting service for archives, libraries, and museums across the U.S.,"[20] and another system was installed in the Andover, Massachusetts facility. Since then, the NEDCC has used IRENE to help preserve a native Alaskan dialect with the Alaska and Polar Regions Archives at the University of Alaska Fairbanks[21] and historically significant broadcast recordings within the New York Public Radio Archives,[22] among other projects. IRENE is ideal for fragile or damaged lacquers since a camera reads the discs' grooves, thus, sparing the audio career from any further wear that could be inflicted by the repeated physical contact of a stylus. This optical playback system is not the only one being explored, though. I became aware of three others at the 2018 Audio Engineering Society (AES) International Conference on Audio Archiving, Preservation & Restoration at the NAVCC.

Stefano Cavaglieri of the Swiss National Sound Archives presented on the VisualAudio

18 Mark Hartsell, "Unlocking Sounds of the Past," loc.gov (blog), March 12, 2012, https://blogs.loc.gov/loc/2012/03/unlocking-sounds-of-the-past.

19 When a stylus cuts a groove into the disc in a side-to-side motion it produces a lateral-cut disc.

20 Northeast Document Conservation Center, "History of the IRENE Project at NEDCC," nedcc.org, accessed September 6, 2018, https://www.nedcc.org/audio-preservation/history.

21 Northeast Document Conservation Center, "The IRENE Technology Helps Preserve a Lost Native Alaskan Dialect, nedcc.org, accessed September 6, 2018, https://www.nedcc.org/about/nedcc-stories/attu-audio.

22 Northeast Document Conservation Center, "New Hope for Damaged Media," nedcc.org (IRENE Seeing Sound blog), June 20, 2014, https://www.nedcc.org/audio-preservation/irene-blog/2014/06/20/damaged-media.

system, which takes photos of a disc's surface with an analog camera. The film negatives are digitized at a high resolution so that tracking of the grooves can happen. Cavaglieri emphasizes that ensuring the authenticity of the original recording is the most important part when rerecording for archival purposes: "Some say that imaging is an objective means for transferring the physical representation of a sound recording to another media while retaining full authenticity. I'm tempted as an archivist to jump into this kind of technology because if I trust this sentence, this would be the only way to make an exact copy of an original record."[23] To do so, he attempts to match the specifications of his system to the original recording as much as possible.

Cavaglieri points out that it is not quicker to produce a digital copy with optical photography versus mechanical means, and he acknowledges issues with quantization errors[24] and equalization, specifically in terms of reproducing high frequencies. However, he is quick to note that, unlike mechanical means, VisualAudio can replay broken and delaminated records. "We can take a picture and work on the picture in order to reconstruct the audio. This is the real strength of optical technology. There's room for improvement on the image capture, image processing, and signal processing, [but] imaging is still a good thing."[25] The International Court of Justice (ICJ) in the Hague would agree. Cavaglieri's colleague, University of Fribourg professor Ottar Johnsen and his student Sylvain Stotzer were able to use the VisualAudio method to read fragile, 70-year-old lacquer discs containing recordings of the Nuremberg trials.[26]

Jean-Hugues Chenot of France's Institut National de l'Audiovisuel (INA) has developed the Saphir colored light process to read delaminating and broken discs. Saphir uses the highly reflective properties of a lacquer disc to "highlight subtle changes in the orientation of the groove walls. A standard colour camera is used to collect rings of pictures from the disc. Audio signal is extracted from the collected pictures automatically, under user control."[27]

23 Stefano Cavaglieri, "Expert Transfer Techniques: A Special Focus on Mechanical Discs" (presentation, ARSC Conference, San Antonio, Texas, May 11, 2017).
24 A quantization error is distortion that occurs when analog sound waves are converted to digital.
25 Cavaglieri.
26 Chris Harland-Dunaway, "This scientist used imaging techniques to rescue sound from the Nuremberg trials," PRI.org, accessed February 5, 2019, https://www.pri.org/stories/2019-02-04/scientist-used-imaging-techniques-rescue-sound-nuremberg-trials?fbclid=IwAR3XMTA4_WbfGAOwrxr-AKQTJ9iF87m4WdVFqvm0aGjVfaJnnbezepsACxw.
27 Jean-Hugues Chenot, Louis Laborelli, and Jean-Étienne Noiré, "Saphir: Optical Playback of Damaged and Delaminated Analogue Audio Disc Records," *Association for Computing Machinery Journal on Computing and*

Keeping in mind that INA has around 20,000 cracked lacquer discs and thousands of delaminating discs in its collections, and current scanning time is about three hours for per side of a disc, there are definitely improvements to be made. Sapphir can't be used to read stereo tracks or discs with transparent coating. However, its components are affordable, and imaging has presented good frequency response (up to 20KHz on 78 rpm discs) thus far. Over the past two years Saphir has been used to recover significant recordings within the INA collection, including post-WWII radio broadcasts and the first-ever recording of fado singer Maria Teresa de Noronha, dated 1939.[28]

Nicholas Bergh of Endpoint Audio Labs in Burbank, California, demonstrated his cylinder transfer machine at the AES Conference in Culpeper. A month later, he returned to deliver a system for the Packard Campus. This machine had the added capability for non-contact playback of cracked and fragile audio cylinders. I was able to take part in the engineers' training on the machine where I learned that Bergh is developing an optical playback system for discs. The original Endpoint Cylinder and Dictabelt Machine includes a laser to adjust the position of the mandrel holding the cylinder to achieve optimal playback by the stylus. In the updated configuration, the laser is used to perform a high-resolution scan of the cylinder. Custom software built-in to a newly added box to the system is able to interpret the scan and create audio output.

The Endpoint optical system for reading discs also employs a laser to create a high-resolution digital surrogate. The system is an add-on to a standard Technics SP-10 turntable, which cost about $1,000 used or $10,000 new. "The main benefit of my optical system is that it is real-time. It takes just as long to play a disc optically as it would to play it with a stylus," says Bergh in an email dated January 11, 2019. "Real-time playback is key for one of the important applications [of optical reading], which is just trying to identify content of a disc." The cost of the basic component of Endpoint's system is notable because the price of optical transfer is higher than mechanical. According to the Quantifying the Need survey, the cost to mechanically transfer a standard lacquer disc with no damage is around $75, while the "Specialized Cost per Item" is estimated to be $150.[29] This is why institutions, like IU and NYPL, must carefully consider the condition of the

Cultural Heritage, 11 no. 3 (August 2018), pp 14, 1.
28 Chenot et al, 39-40.
29 Lyons et al, 18.

disc and the value of its recorded contents into consideration when deciding whether or not to pay the NEDCC for an IRENE scan.

Recommendations

While the NEDCC has demonstrated the most success stories with the IRENE system, the price to transfer is too high for many institutions to pay unless they have been awarded a grant, which would account for additional time and labor from its employees. The components of the Saphir and VisualAudio systems are affordable for a wider range of institutions, but require the expertise of highly trained audio or electrical engineers. The Endpoint system is very affordable, making it a strong candidate as the most viable optical method for all institutions.

The need to recognize highly at-risk materials like lacquer discs in their collections is an essential skill for an archivist. Expanding existing library, archival, and information science curricula to strengthen students' training in the area of recorded sound, the composition of sound carriers, and techniques for reformatting analog formats to digital is key. Continuing to stay abreast of existing and emerging reformatting technologies, as well as funding sources to help finance preservation, is just as integral. Indiana University Bloomington professor and Media Preservation Specialist for MDPI Patrick Feaster has been working on software to process the TIFF files produced by the IRENE system with the hopes that users would be able to access the visual preservation masters. Studies such as his should be followed closely by any repository with damaged discs in its collections.

Bibliography

Bamberger, Rob and Sam Brylawski on behalf of the National Recording Preservation Board. *The State of Recorded Sound Preservation in the United States: A National Legacy at Risk in the Digital Age* (Washington, DC: Council on Library and Information Resources and the Library of Congress, 2010).

Behl, Harrison. "Audio Formats: Characteristics and Deterioration." In *ARSC Guide to Audio Preservation*, edited by Sam Brylawski, et al. Eugene: Association for Recorded Sound Collections; Washington, D.C.: Council on Library and Information Resources and the Library of Congress, 2015.

Burke, Brandon. "Designing a Housing for the Horizontal Storage of Cracked or Broken Phonograph Discs." *ARSC Journal* 25, no. 1 (Spring 2018): 28-40.

Calvi, Elise. "Floating Disks." *E. Lingle Craig Preservation Lab Blog*. March 9, 2016. https://blogs.libraries.indiana.edu/craiglab/2016/03/09/floating-disks/.

Cavaglieri, Stefano. "Expert Transfer Techniques: A Special Focus on Mechanical Discs." Presented at ARSC Conference, San Antonio, Texas, May 11, 2017.

Chenot, Jean-Hugues, Louis Laborelli, and Jean-Étienne Noiré. "Saphir: Optical Playback of Damaged and Delaminated Analogue Audio Disc Records." *Association for Computing Machinery Journal on Computing and Cultural Heritage*, 11 no. 3 (August 2018): pp 14, 1-29.

Danielson, Virginia. "Stating the Obvious: Lessons Learned Attempting Access to Archival Audio Collections." *Folk Heritage Collections in Crisis*. Washington, D.C.: Council on Library and Information Resources, May 2001.

Harland-Dunaway, Chris. "This Scientist used imaging techniques to rescue sound from the Nuremberg trials." PRI.org. Accessed February 5, 2019. https://www.pri.org/stories/2019-02-04/scientist-used-imaging-techniques-rescue-sound-nuremberg-trials?fbclid=IwAR3XMTA4_WbfGAOwrxr-AKQTJ9iF87m4WdVFqvm0aGjVfaJnnbezepsACxw.

Hartsell, Mark. "Unlocking Sounds of the Past." loc.gov (blog), March 12, 2012. https://blogs.loc.gov/loc/2012/03/unlocking-sounds-of-the-past.

Lyons, Bertram, Rebecca Chandler, and Chris Lacinak. *Quantifying the Need: A Survey of Existing Sound Recordings in Collections in the United States*. Brooklyn, NY: AVPreserve, 2014.

National Archives & Record Administration. "Format Guide to Sound Recordings." October 2014, accessed January 31, 2019. https://www.archives.gov/files/preservation/formats/pdf/format-guide-to-sound-recordings.pdf.

Northeast Document Conservation Center. "History of the IRENE Project at NEDCC." nedcc.org, accessed September 6, 2018. https://www.nedcc.org/audio-preservation/history.

Northeast Document Conservation Center. "The IRENE Technology Helps Preserve a Lost Native Alaskan Dialect." nedcc.org, accessed September 6, 2018. https://www.nedcc.org/about/nedcc-stories/attu-audio.

Northeast Document Conservation Center. “New Hope for Damaged Media.” nedcc.org (IRENE Seeing Sound blog), June 20, 2014. https://www.nedcc.org/audio-preservation/irene-blog/2014/06/20/damaged-media.

Pymm, Bob. “Preservation of Audiovisual Media: Traditional to Interactive Formats.” In *Preservation Management for Libraries, Archives and Museums*, edited by G.E. Gorman and Sydney J. Shep. London: Facet Publishing, 2006.

Schüller, Dietrich and Albrecht Häfner, eds. *Handling and Storage of Audio and Video Carriers (IASA-TC 05)*. London: International Association of Sound and Audiovisual Archives, 2014.

Sueiro Bal, Marcos and Jeff Willens. “Survey of Suggested Treatments for Removing Acidic Exudation from Vintage Lacquer Discs.” Poster presented at Audio Engineering Society International Conference on Audio Archiving, Preservation & Restoration, Culpeper, Virginia, June 28-30, 2018.

Major Paper

"Funding Proposal: The Sunset Strip Music Archive"

Ethnomusicology C200 – Audiovisual Archiving in the 21st Century (Winter 2018)

Note: In November 2018, the Professional Programs Committee approved my petition request to allow this paper from a course outside of the IS Department to satisfy my major paper requirement. The assignment was to craft a funding proposal for an audiovisual archive using information gleaned from class readings, discussions, activities, and outside research to inspire a desire to support the project in the funder. The paper had to address all of the topics covered in the course, citing archivists, scholars, and professional bodies to bolster arguments for funding.

Abstract: The Sunset Strip Music Archive collects and preserves audiovisual materials related to the musical history of the Sunset Strip, connecting the past with the present, to educate and inspire researchers, musicians, and scholars. This funding proposal presents the West Hollywood City Council with a detailed plan that includes collection development, description, rights management, and access policies as a request for start-up and other costs to ensure the Sunset Strip's musical history is never forgotten.

FUNDING PROPOSAL: THE SUNSET STRIP MUSIC ARCHIVE
Presented to the West Hollywood City Council
8300 Santa Monica Boulevard, West Hollywood, CA 90069

Mission: The Sunset Strip Music Archive collects and preserves audiovisual materials related to the musical history of the Sunset Strip, connecting the past with the present, to educate and inspire researchers, musicians, and scholars.

Although the stretch of Sunset Boulevard between Crescent Heights Boulevard and Sierra Drive is just 1.6 miles, the impact of the Sunset Strip on the L.A. music scene is immeasurable. From the Doors and Black Flag to Tito Puente and Mötley Crüe, Southern California bands of every ilk cut their teeth in clubs such as the Whisky a Go Go, Gazzarri's, and the Key Club before graduating to stages around the world. Due to its rich musical history, cultural significance to the city, and the fact that global artists continue to bring their tours to venues like the Roxy and Viper Room, establishment of the Sunset Strip Music Archive (SSMA) to ensure that future generations have the ability to learn about the Sunset Strip is necessary. While a private donor has already agreed to cover the SSMF's lease payments for its first 10 years, today I am asking the Council for a start-up budget of $1 million to establish the archive according to the plan presented in this proposal and a $200,000 yearly operating budget. With this funding, the Council guarantees the Sunset Strip's musical history is never forgotten.

History

Since the Sunset Strip lies just outside of the Los Angeles Police Department's jurisdiction in between Hollywood and Beverly Hills under the county's provenance, it was legal to gamble in the district, so from its establishment in the 1920s, the Sunset Strip was the scene of all sorts of debauchery. The boulevard was lined with nightclubs and bars that welcomed jazz players, screen stars, mobsters, and everyone in between. Swing dancers did the Lindy hop to Louis Jordan at Cafe Trocadero in the 1940s, and the sounds of jazz artists Les McCann and Carla Bley filled Pandora's Box in the '50s. In the '60s, folk-rockers the Byrds got their start at Ciro's, and authorities tried to impose a curfew on the Strip for those under 18, resulting in confrontations between police and youth at Pandora's Box. The club was eventually bulldozed, but not before these protest became immortalized in Riot on the Strip and Buffalo Springfield's "For What It's Worth."

The Whisky a Go Go opened its doors in 1964, ushering in a new era for the Strip. Go-go girls clad in white boots and miniskirts danced in cages as house band the Doors played whenever locals like the Byrds and Love or out-of-town acts such as the Who, the Kinks, Led Zeppelin, AC/DC and Jimi Hendrix weren't set to perform. Punk and new wave bands (Circle Jerks, the Quick, the New York Dolls, and Venus and the Razorblades) injected new life into the Strip in the '70s. The Roxy opened for business in 1973 and hosted shows by David Bowie, Bruce Springsteen, Neil Young, and Prince. Glam metal ruled the Strip in the '80s with Mötley Crüe, Guns N' Roses, Ratt, and L.A. Guns wreaking havoc on stage at Gazzarri's and off at Rainbow Bar and Grill, Sunset Strip Tattoo, and Gil Turner's liquor store, while Orgy, Red Hot Chili Peppers, and Jane's Addiction were fixtures in the '90s. Incubus, Linkin Park, and Metal Shop headlined the Strip in the early 2000s, and from 2008-2015 the annual Sunset Strip Music Festival paid tribute to the iconic boulevard.

Music Clubs of the Sunset Strip

8117 Sunset Boulevard	Coconut Teaszer
8118 Sunset Boulevard	Pandora's Box
8433 Sunset Boulevard	Club Seville, Ciro's, Crazy Horse, Kaleidoscope, It's Boss, Ciro's Le Disco, Art Laboe's Oldies But Goodies
8514 Sunset Boulevard	Sea Witch
8610 Sunset Boulevard	Cafe Trocadero
8852 Sunset Boulevard	The Melody Room, The Central, Viper Room
8901 Sunset Boulevard	Whisky a Go-Go
8907 Sunset Boulevard	The Unicorn, Sneaky Pete's, Duke's Coffee Shop
8919 Sunset Boulevard	London Fog
9009 Sunset Boulevard	The Roxy Theatre (second story: Largo Burlesque, On the Rox)
9039 Sunset Boulevard	Gazzarri's, The Key Club, 1OAK LA

Audience

The SSMA is for researchers, musicians, and scholars interested in the history of the vibrant music scene of the L.A. area known as the Sunset Strip.

Collection Details

The bulk of the materials housed at the SSMA are sound recordings obtained from L.A. musicians or their families and management teams, fans who attended shows, show promoters, or club owners. In addition to bootleg recordings, there are oral histories of musicians, personalities such as Rodney Bingenheimer, journalists, talent buyers and promoters like Dayle Gloria, club staff, and club owners like Lou Adler, as well as commercial LP recordings (Otis Redding's Live on the Sunset Strip 1966, X's Live at the Whisky a Go Go on the Fabulous Sunset Strip). Audiovisual materials include promotional spots and bootleg footage on videotape, and commercially released documentaries such as Lemmy and Mayor of the Sunset Strip on DVD. The SSMA also gathers concert and candid photographs, promotional materials (billboards, posters, flyers, stickers) and books like Robert Landau's Rock 'n' Roll Billboards of the Sunset Strip. The unpublished audiovisual recordings in the collection especially "hold historical, sociocultural, aesthetic, and personal or family content that may well be irreplaceable. … Their content may be unique; they are often made on the least stable of recording formats; and many were recorded under less-than-ideal conditions by amateur recordists."[1] Thus, the need to preserve and protect these materials is monumental.

Collection Development Policy

The Sunset Strip Music Archive collects audiovisual recordings relating to the musical history of the Sunset Strip in the following formats:

1. Unpublished, noncommercial audio and audiovisual recordings of live music performances that took place in venues along the Sunset Strip on grooved disc (lacquer), magnetic tape (open reel, cassette, videotape), compact disc, film (16 mm, 8 mm, Super 8), and digital media.
2. Unpublished, noncommercial audio and audiovisual recordings of oral histories of musicians, journalists, personalities, talent buyers/promoters, club staff, and club owners associated with the Sunset Strip on grooved disc (lacquer), magnetic tape (open reel, cassettes, videocassette),

1 Curtis Peoples and Marsha Maguire, "Preserving Audio," in *ARSC Guide to Audio Preservation*, ed. Sam Brylawski, Maya Lerman, Robin Pike, and Kathlin Smith (Eugene, OR and Washington, DC: Association for Recorded Sound Collections, 2015), 8.

compact disc, film (16 mm, 8 mm, Super 8), and digital media.

3. Published, commercial audio and audiovisual recordings of promotional spots and interviews to promote Sunset Strip concerts, as well as the actual live music performances that took place in venues along the Sunset Strip on wax cylinder (Blue Amberol), grooved disc (shellac, diamond, lacquer, LP), magnetic (wire, open reel, cartridge, cassette, videocassette), compact disc, film (16 mm, 8 mm, Super 8), and digital media.
4. Other non-audiovisual formats, both published and unpublished, that are relevant to the musical history of the Sunset Strip.

Commercial recordings are purchased with funds provided by the West Hollywood City Council. The SSMA also accepts gifts of audiovisual materials relevant to the musical history of the Sunset Strip. See Appendix A for the SSMA Donor Agreement.

Appraisal Process

Since the bulk of the SSMA's collection is comprised of extremely rare, unpublished sound recordings, they are of the utmost priority when it comes to preservation and digitization. Hence, they – and their playback equipment – are the most expensive to maintain and to provide access to. Their relevance to the musical history of the Sunset Strip is the very first thing to consider since their costs of retention are so high.

The condition of the recordings is the next aspect to consider. Say, for instance, there are signs of sticky-shed syndrome evident in a reel of polyester-backed magnetic tape. Is the damage minimal enough that the tape can be reconditioned by baking it? Making sure that the carriers are in good enough condition to create user copies from so that scholars and researchers will actually be able to access their contents is essential.

Confirming there is accompanying documentation to these legacy carriers is also very important. "Because of the machine-readable nature of the materials, those that are unlabeled or poorly described when they arrive at an archive are more difficult and costly to appraise and process."[2] Since the exact contents of these items are unknown until they are played, proper

2 Christopher Ann Paton, "Appraisal of Sound Recordings for Textual Archivists," Archival Issues 22, no. 2 (1997): 125-126.

labeling can go a long way to helping assess their potential value to the archive.

Cataloging, Metadata, and Intellectual Access

After accepting an item into the collection, it is labelled with a barcode, which becomes its item number. The next step would be to take inventory of all its pertinent details. All of this information is known as the 'metadata' associated with the item. Selecting the best method for the SSMA to catalogue and organize metadata for each item is essential to effectively arranging, describing, tracking, and enhancing researchers' access to materials.[3] A good system enables our archivist to know exactly what shelf an item sits on, and it also helps users discover that it is in the archive. There are three main types of metadata: descriptive (for finding or understanding a resource), administrative (information related to its creation that is needed for management purposes: technical, preservation, and rights details), and structural (relationships of parts of resources to one another).[4]

The SSMA's item-level collection inventory is going to be created in a Microsoft Excel spreadsheet using the Dublin Core Metadata Element Set because it is linear and makes it easier to separate the information into specific categories. First, the Title of the recording should be noted. If it's an unpublished recording without an official name, a devised title would need to be established. Then its Creator, the Date it became part of the collection, Publisher (if applicable), Location in the archive (e.g. row 2, shelf 5), Format (type of medium, size dimensions, and recording speed), Description (condition), Rights, and Identifier (barcode number from a label we have affixed to its container) are noted.

The spreadsheet listing all of the archive's inventory that is available to researchers would then be exported in XML (EXtensible Markup Language) format to be displayed online at SunsetStripMusicArchive.com using Omeka. I have chosen this web publishing tool since, using a special add-on, Omeka allows users to see certain metadata that is relevant to their query in PBCore schema, which was chosen because it is specifically for audiovisual media. Once a researcher finds

3 Majella Breen, Gila Flam et al, eds, "Metadata," in *Task Force to Establish Selection Criteria of Analogue and Digital Audio Contents for Transfers to Data Formats for Preservation Purposes* (South Africa: IASA, 2003), 17.
4 Jenn Riley, *Understanding Metadata: What is Metadata, and What is it For?: A Primer* (Baltimore, MD: National Information Standards Organization, 2017), 6.

an item or items via our website that they would like to study at our archive, they can call or email to make an appointment for access. If they would like to view a clip of a filmed performance before making the appointment, a link to stream the short video can be sent to them upon request.

If they would like to listen to or view one of the SSMA's recordings, they are able to play a compact disc or DVD access copy in our dedicated listening/viewing room. These access copies have been made from their original grooved, magnetic, and film formats by our archivist. Cylinders are sent to an outside vendor to be digitized since the initial price of purchasing an archeophone or a vintage cylinder phonograph, as well as the projected maintenance costs for these legacy players, would be too much of a cost to bear. The SSMA does not provide any researchers with copies to take outside of the listening/viewing room. Patrons are able to ask for a link to stream audio materials only.

Archival Research and Reference; Ethics, Copyright, and Contracts; Licensing

In determining the appropriate ways in which users of the SSMA can access materials for research, there are several issues that need to be discussed. "The ethics of giving access to sound and audiovisual documents have legal and technical aspects. The main technical aspects are that access should not do any harm to the physical integrity of the document and, on the other hand, the user should be given the possibility to access all the content relevant for the document."[5]

The first topic that needs be broached is copyright. Since many of the performance recordings in the archive are bootlegs, researchers are only allowed to view access copies in our facility. No copies of bootleg footage are to be circulated or sold. Performances recorded by a venue with the musical artists' permission are to be treated the same way: viewable only within the confines of SSMA. Three preservation copies of these unpublished works can be made by SSMA since they constitute fair use. In all of the above cases, the archive will approach the performers to seek their authorization for educational use in the archive. Commercial recordings of live shows not in the public domain, as well as oral histories SSMA obtains from journalists or interviewees, are also to be listened to only in the archive's listening room. Researchers can request a link to stream an oral

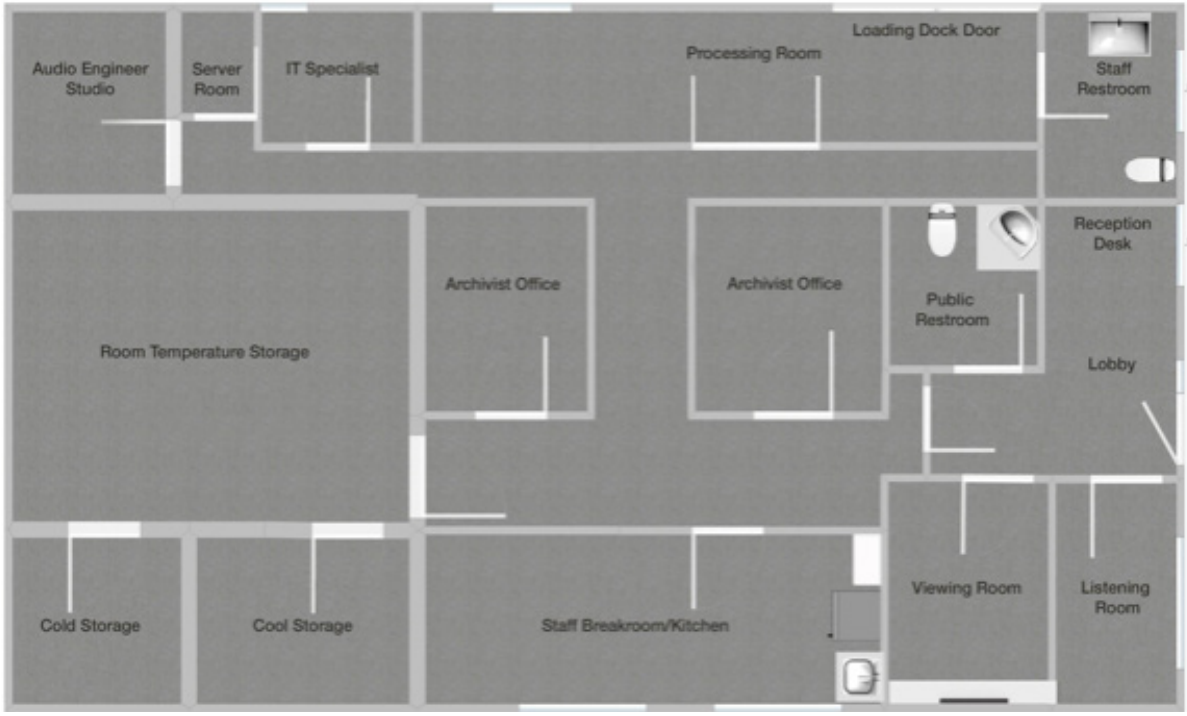
5 Ilse Assmann et al., "Ethical Principles for Sound and Audiovisual Archives," in *IASA Special Publication No. 6* (South Africa: International Association of Sound and Audiovisual Archives, 2010), section 2.3.

history the archive conducted for addition to the collection, however, since our interviewer is to obtain permission and copyright transfer from the subject of each recording before the interview takes place. The archive does not grant permission for any of its audio or audiovisual recordings to be used in films of any kind.

Care and Maintenance

A key component in ensuring all of the materials housed in the SSMA are adequately cared for and maintained is proper staff training. Not only should each employee know how to identify all of the formats in the archive, the archivist should show them how to handle media carriers, detect signs of deterioration in them, and aid in the cleaning of them and their playback equipment. Whether it's mold on a wax cylinder, acid exudation on a lacquer disc, vinegar syndrome on a reel of 16mm film, or sticky-shed syndrome on an open-reel tape, being able to recognize these problems as close to their onset as possible is integral to the overall health of the archive. Once materials are acquired from donors, they are cleaned. They are also cleaned when they are being prepared for digitization. Playback equipment is cleaned and maintained on a regular basis – the tape guides and heads on our reel-to-reel players are cleaned and demagnetized daily.

Physical Environments



The SSMA has three storage vaults, each kept at a different temperature: room temperature for CDs, cassettes, grooved discs, wire recordings, photographs, and DVDs; cool (68 degrees Fahrenheit; 30-50% relative humidity) for wax cylinders and film; and cold (46-53 degrees Fahrenheit; 25-35% relative humidity) for open-reel tapes per standards set forth in the *ARSC Guide to Audio Preservation*.[6] One corner of the cool vault also acts as a staging area for materials being taken out of the cold vault to slowly be acclimatized to cool and eventually to regular for preservation or access purposes. The doors of each storage vault are tightly sealed, and the rooms have no windows. The floor of the entire SSMA consists of sealed concrete to avoid dust and electromagnetic pulses. Filters for removing dust and other particulate matter are placed within the air conditioning system. Food and drink are only permitted in the staff kitchen, and smoking is not allowed in any areas. Patrons are only allowed in the lobby, public restroom, and the viewing and listening rooms.

Security, Storage, Conservation, and Disaster Preparedness

By keeping a digital inventory and a printed/laminated copy of the SSMA's entire inventory in the archivist's office at the archive as well as in her home office, it makes it easier to provide this necessary documentation to insurance companies. A hard drive with digital copies of the SSMF's unique and irreplaceable recordings is kept at the archivist's home to maintain some geographic separation.

All carriers are stored upright and grouped according to format and size on compact, mobile, metal shelving units. Cylinders are kept in individual archival boxes, shellac records in acid-free paper sleeves, LPs in 10-point folder-stock sleeves in their original sleeves that are placed in 1.5 mil polypropylene sleeve covers, and cassettes in their original plastic cases.

Since the SSMA is located in the heart of Los Angeles, the two main disasters to be prepared for are wildfires and earthquakes. Shelves are constructed with special braces and straps to allow for minimal disruption to the carriers during an earthquake. In addition to a fire detection system,

6 Carla Arton, "Care and Maintenance," in *ARSC Guide to Audio Preservation*, ed. Sam Brylawski, Maya Lerman, Robin Pike, and Kathlin Smith, (Eugene, OR and Washington, DC: Association for Recorded Sound Collections, 2015), 69.

there will be a low-oxygen system in place for fire suppression. To avoid damage from water leaks in the building, the vaults are not located beneath a kitchen or restroom, and shelving begins 6-inches off the ground.

The archivist has formulated a written disaster preparedness plan, clearly identifying priority materials in the archive for evacuation and recovery and assigning specific roles to each staff member in case of emergency. Quarterly drills and recovery training workshops are held to keep the information fresh in employee's minds. The archivist keeps an emergency kit that is full of supplies to care for employees and archival holdings in her car and inside the staff kitchen's supply closet along with a portable humidifier. In case of power outage, the archive possesses two stand-by generators to maintain a stable temperature in the storage vaults.

Physical Access

Researchers are able to listen or watch access copies on CD and DVD in the SSMA's dedicated listening and viewing rooms. The listening room is equipped with a CD player and amplifier speakers, and the viewing room has a 32-inch LED TV, DVD player, and surround sound speakers.

Preservation Reformatting of AV Content

While the transfer of the SSMA's wax cylinders is to be outsourced to vendors due to the high cost of archeophone phonographs, the preservation reformatting of the other formats in the collection is going to take place within the archive. The main areas to be discussed in regards to content transfer are: personnel and equipment.

Aside from the archivist, the personnel involved in the preservation process include a part-time audio engineer, who oversees the reformatting procedure and maintains playback equipment, and part-time information technology specialist, who manages digital storage systems. The audio engineer needs a dedicated space for reformatting that is as acoustically isolated from the rest of the archive as possible. "The room should not distort the frequency spectrum of interest, the accuracy of the sonic images, the sense of space, or the timing of the audio content."[7]

7 Mike Casey and Bruce Gordon, "Personnel and Equipment for Preservation Transfer," in *Sound Directions: Best Practices for Audio Preservation*, (Indiana: Indiana University, 2007), 10.

The playback equipment necessary for in-house transfers is as follows: one reel-to-reel player, two record players with appropriate styli for 78s and LPs, one wire recording player, one CD player, one eight-track player, one DAT player, one cassette deck, one 16 mm digital film converter, one 8 mm and Super 8 digital film converter, and one VHS player. Standalone analog-to-digital converters that meet the specifications of the audio engineer also need to be purchased. A line item shall be included in the monthly budget for a small cache of supplies for repairs and maintenance of the equipment and carriers. The audio engineer will create two copies of each reformatted item as Broadcast Wave Format .wav files, with a sampling rate of 96 kHz and a bit depth of 24 bits per channel. Optical discs and DAT formats are to be kept at the sampling rate and bit depth of their originals.

Upon acquisition, the SSMA archivist must be as diligent as possible in documenting each item's administrative metadata (how it was created, its provenance, technical specifications, and any access restrictions[8]) and structural metadata (information about the individual tracks of a recording and their relationships to one another) as she inventories the materials. This is to ensure that the audio engineer has all the pertinent information he/she needs to know in order for the preservation process to run as smoothly and successfully as possible. PBCore is the schema that will be used to document technical metadata and digital provenance, while Metadata Encoding Transmission Standard (METS) will be used for rights management metadata.

In regards to the outsourcing for the digitization of the SSMA's wax cylinders, there are a few options to keep costs at a minimum. One would be to reformat all of the archive's cylinders at the same time to take advantage of any high-volume pricing offered. The SSMA could see if the California Revealed Project would be able to digitize any of the cylinders of California artists. Another option would be to partner with other area institutions, like the Grammy Museum and the Autry Museum of the American West, to get a group discount from one vendor. The SSMA would also try to apply for as many grants as possible to defray spending in this area.

8 William Chase, "Preservation Reformatting," in *ARSC Guide to Audio Preservation*, ed. Brylawski, Sam, Maya Lerman, Robin Pike, and Kathlin Smith (Eugene, OR and Washington, DC: Association for Recorded Sound Collections, 2015), 113.

Grants, Budget, and Staffing

The strategic plan the SSMA's first three years is as follows. Year One: Renovation of the existing office space into an archive; hiring of full- and part-time staff; collection acquisitions begin. Year Two: Inventory, rehousal, and preservation reformatting of materials begin; opening of archive to researchers. Year Three: Aggressive marketing and PR campaign of materials in collection; pursuit of grant funding. The $1 million budget provided by the West Hollywood City Council to get the archiving off and running will be implemented in the following ways.

Renovations (including vaults, fire suppression)	$350,000
Furnishings (including compact shelving)	$80,000
Equipment (access and preservation)	$15,000
Staffing	$325,000
Marketing/Public Relations	$5,000
Digital File Storage	$215,000
Software	$3,000
Archival Storage and Other Supplies	$7,000
TOTAL	$1,000,000

The yearly budget for the SSMA can be broken down into 50% staff salaries, benefits, and development; 30% digital storage, software licensing; 12% equipment maintenance; 5% marketing, outreach programs; and 3% supplies.

The Council will be the primary funding source of the SSMA, but the archive director is also going to pursue various international, federal, and local grants from organizations such as UNESCO World Heritage Centre, the Institute of Museum and Library Services (IMLS), and the National Endowment for the Humanities (NEH) when applicable to projects involving materials within the collection. These grants are a valuable resource not only in the funds they provide the archive, but also in the public relations boost that comes with being awarded highly competitive grants. Other sources of funding will include private donations, licensing of performance footage when within rights limitations, and the revival of the Sunset Strip Music Festival as an annual fundraiser. Bringing back this summer festival that will take place within the clubs and on the boulevard itself will bring both revenue via ticket sales and awareness to the archive.

The SSMA budget includes the aforementioned maintenance and care of playback equipment, as well as staff training workshops for disaster preparedness and any new technologies incorporated into the archive. Staff development is another line item to include in the budget since building a strong network of local, national, and international archives by having archive staff lecture at institutions and conferences, and be active members of organizations like the International Association of Sound and Audiovisual Archives (IASA), Association for Recorded Sound Collections (ARSC), Audio Engineering Society (AES), and Society of American Archivists (SAA), is essential to the SSMA's growth and development.

The archive staff is to be comprised of two full-time employees, archivists with master's degrees in library and information studies. One is the archive director and acts as the administrative head of the archive (serving on the SSMA Board of Directors), overseeing the rest of the staff, grant writing and fundraising, rights management, and new acquisitions. The other archivist would be responsible for accessioning, cataloguing, and entering metadata for the archive's materials. Both archivists would also spend time doing reference and outreach work. In addition to a part-time audio engineer and IT specialist, graduate student interns are also part of the in-house staff. One student would be pursuing their MLIS and would assist bother archivists in processing, outreach, and reference. The other intern would be from an ethnomusicology program, helping to record new oral histories and outreach events for the archive. Legal and accounting matters are handled by independent firms based in West Hollywood, while security and maintenance personnel are provided by the building as part of the lease agreement.

Administration and Advocacy

The Sunset Strip Music Archive Board of Directors is the governing body of the archive, and its five members include the archive director, the mayor of West Hollywood, and three L.A. residents who serve three-year terms (that can be renewed once). These three members must have significant ties to the musical history of the Sunset Strip (e.g. Lou Adler, Rodney Bingenheimer, and Dayle Gloria), one of which can be voted on as Chair of the Board by a majority vote among the five members.

It is imperative that the Board keeps the mission statement of the SSMA in mind when creating policies and determining fiscal plans. The Board of Directors can also serve as powerful allies when it comes to rallying for funding or support within the community of Los Angeles. Another important advocacy tool are the survey forms each researcher who utilizes the archive completes at the end of their visit. These surveys provide valuable statistics for the director to use when preparing grant applications and reports for the Board.

Digital Archives and Digital Collection Management

"Preservation is not a single event, but rather an ongoing process that requires continual maintenance."[9] It would be easy to assume that once recordings on legacy formats have been digitized, preservation work is concluded, but there are still several issues that need to be addressed in terms of the management and maintenance of these digital files. After careful consideration of storage system options, the following plan has been laid out for the SSMA.

The SSMA is to use a multi-tier and distributed storage architecture (i.e. a combination of local and outsourced storage). User access copies are going to be stored locally in online spinning disk storage, while access masters are also kept locally but in a nearline data tape library. Preservation masters are stored locally in an offline LTO tape deck housed in the archive's server room and also on deep cloud storage to maintain geographic separation.

The supplier of the archive's cloud services must pass a vetting process to ensure that they can be trusted to perform the necessary functions that are in line with the SSMA's needs. The criteria to be used when selecting a vendor include: fitting in with the archive's overall storage plan for the near future (three to five years), the satisfaction level of its current users, adherence to basic digital preservation principles, ability to perform checksums, provide system reports, meeting performance requirements, assuring security of materials, strong infrastructure, backup, and protection plan in case of disaster, and desirable end-of-service protocols.[10]

File Formats, Protocols, and Standards

9 Chris Lacinak, "What to Do After Digitization," in *ARSC Guide to Audio Preservation*, ed. Sam Brylawski, Maya Lerman, Robin Pike, and Kathlin Smith (Eugene, OR and Washington, DC: Association for Recorded Sound Collections, 2015), 128.

10 Seth Anderson, "Nine Things to Consider When Assessing Cloud Storage" in *Feet on the Ground: A Practical Approach to the Cloud* (New York: Audiovisual Preservation Solutions, 2014), 1-7.

In order to manage and maintain digital audio files effectively, it's necessary to transform them to a standard data format.[11] As noted previously, the SSMA uses BWF as its standard file format. The archive also follows standards set forth in ISO 14721:2012, which details the reference model for an Open Archival Information System (OAIS), and ISO 16363:2012 that describes the organizational infrastructure, digital object management and technology, and technical infrastructure and security maintained by trustworthy digital repositories (TDRs).

Naming Schemes and Identifiers

In order for items to be identified and retrieved within system, it's necessary for them to be unambiguously and uniquely named.[12] The SSMA is to utilize the Resource Description Framework (RDF) standard as a reference when labelling files.

Outreach and Repatriation

We can have the most culturally valuable materials in our collection, take the greatest care to preserve them, but all of those efforts are for naught if no one is actually coming to learn from them. This is why outreach programs are vital to any archive, especially audiovisual archives like the SSMA. As noted by Anthony Seeger, "When considering the potential impact of audiovisual archives it is absolutely essential to recognize that recordings are more than just sounds. They are sounds to which people attach individual significance that may stem from a specific personal context and/or a more general social process."[13] Once a potential patron realizes that they can relive and reconnect to a musical memory through the materials housed in our archive, they will be more inclined to visit and tell others about their experiences here.

Because the SSMA is located on Sunset Boulevard where all of the material in the archive was obtained, we're in an attractive position to reach out to many of the performers, club owners, and promoters – or if they have passed away, their family members/executors of their estates – who

11 Kevin Bradley, ed., "Preservation Target Formats and Systems," in *IASA-TC 04: Guidelines on the Production and Preservation of Digital Audio Objects* (Auckland Park, South Africa: IASA Technical Committee, 2009), section 6.1.2.1.

12 Kevin Bradley, ed., "Unique and Persistent Identifiers," in *IASA-TC 04: Guidelines on the Production and Preservation of Digital Audio Objects*, (Auckland Park, South Africa: IASA Technical Committee, 2009), section 4.1.1.

13 Anthony Seeger, "New Technology Requires New Collaborations: Changing Ourselves to Better Shape the Future," *Musicology Australia* 27, (2006): 102.

were a part of the shows and venues that are captured in our collection to take part in some of our outreach initiatives.

One program to bring attention to the archive would be a monthly screening series. Once all rights holders have given permission, the SSMA would host a screening of performance footage from the archive's vaults, which would then be followed by a conversation with the artists, promoter, or club owner. If program participants are willing, the Q&A session could be recorded to be streamed online, made viewable via the archive's YouTube channel, and kept for posterity within the archive. As previously mentioned in this proposal, the SSMA would also work to revitalize the annual Sunset Strip Music Festival as an outreach effort. In both cases, archive-community partnerships are essential. The SSMA could team with the West Hollywood Chamber of Commerce to foster relationships with local businesses as sponsors, the music and ethnomusicology departments at UCLA, LMU, and USC, and institutions like the Grammy Museum. Most importantly, building a rapport and trust with the artists, promoters, and club owners who form the musical community of Los Angeles is key.

Birgitta J. Johnson speaks of an archive's need to dispel any unease and establish good faith within community partners through sustained commitment to them in her documentation of the UCLA Ethnomusicology Archive's 2004 collaboration with the Heritage Music Foundation of LA.[14] Making them sure that the SSMA is dedicated to preserving their performances and oral histories in order for future generations to learn of their significance in the area's musical history is key. The SSMA can further nurture that bond by repatriating materials back to musicians, club owners, and show promoters (or their families after they've passed on) whenever possible. By repatriation, we mean making "copies of original recordings and return the copies to the culture group of origin, ensuring that ICH [intangible cultural heritage] can be 'transmitted … from one generation to the the next.'"[15]

The first show I ever saw on the Sunset Strip was at Coconut Teaszer in 1994. The venue

14 Birgitta J. Johnson, "Gospel Archiving in Los Angeles: A Case of Proactive Archiving and Empowering Collaborations," *Ethnomusicology Forum* 21 (2), (2012): 230.
15 Maureen Russell, "Knowledge (or Intangible Cultural Heritage) Repatriation," Ethnomusicology Review, (2012), accessed March 8, 2018, https://www.ethnomusicologyreview.ucla.edu/content/archives-and-archiving-knowledge-repatriation.

is now Hyde Sunset Kitchen + Cocktails, and this is just one example of the constantly evolving nature of the Sunset Strip music scene. The West Hollywood City Council can guarantee the Sunset Strip's rich musical history is never forgotten by funding the SSMA. While businesses and bands come and go, the spirit of the strip embodied in the music created over the nearly 100 years since the area's establishment can live on through the collections housed at the Sunset Strip Music Archive.

Appendix A
Sunset Strip Music Archive Donor Agreement

I (we), _____ ("Donor") of _____ (address) hereby donates to the SUNSET STRIP MUSIC ARCHIVE ("Institution") a collection consisting of _____ ("Collection"). The Donor warrants that the Donor is (are) the sole and absolute legal owner(s) with full right, power and authority to transfer the Collection, free and clear of any liens, to the Institution. The Collection is more particularly described on the attached inventory, Attachment A, which is incorporated herein by reference. Any additional materials that the Donor gives the Institution will be governed by the terms of this agreement unless the Donor and the Institution will be governed by the terms of this agreement unless the Donor and the Institution agree upon different terms in a writing made in advance of such additional gift.

1. The Donor hereby irrevocably assigns, transfers, and gives all of his (her, their) right, title, and interest (exclusive of copyrights) in the Collection to THE SUNSET STRIP MUSIC ARCHIVE.
2. For items that the Donor owns the copyrights, the Donor retails all such rights in the Collection unless otherwise noted in Attachment A. However, no term or provision of this instrument shall be interpreted to limit or restrict the fair use rights of THE SUNSET STRIP MUSIC ARCHIVE or users of the Collection as provided by U.S. Copyright Law, Title 17, U.S.C. ("Fair Use Rights").
3. Notwithstanding the Fair Use Rights, and except otherwise noted in Attachment A, the Donor grants THE SUNSET STRIP MUSIC ARCHIVE a nonexclusive, royalty free, perpetual license: a) To make copies of the Collection for purposes of preservation and creation of a usable archival copy and to permit others to make copies of the Collection consistent with the Fair Use Rights. b) To display the Collection in exhibitions, catalogs, publications, or advertisements. c) To digitize the Collection or use any technological substitute THE SUNSET STRIP MUSIC ARCHIVE deems appropriate to preserve and provide access to the Collection. d) To provide unrestricted access and use, including Internet or other wireless or digital access to the Collection.
4. The Donor shall indemnify, defend and hold THE SUNSET STRIP MUSIC ARCHIVE harmless from any losses, claims, damages, awards, penalties or injuries incurred, including reasonable attorney's fees, which arise from any claim by any third party of an alleged infringement of copyright or any other property right arising out of the access and use of the Collection.
5. The Donor shall provide THE SUNSET STRIP MUSIC ARCHIVE with all information and documentation regarding the provenance of the Collection, including any information relating to intellectual property rights.
6. The Collection will be organized by THE SUNSET STRIP MUSIC ARCHIVE, and a bibliographic record and/or finding aid will be created to describe the content and arrangement.
7. The Collection will be physically stabilized and preserved by THE SUNSET STRIP MUSIC ARCHIVE including, as appropriate, placing the Collection in non-damaging containers and storing in facilities that provide appropriate temperature and humidity control and security.
8. The Collection will be available to researchers after it has been arranged and described for use.
9. THE SUNSET STRIP MUSIC ARCHIVE is authorized to dispose of any duplicate or other material not relevant to the collection which it determines to have no permanent value or historical interest.
10. In the event that the Donor may hereafter donate additional materials to THE SUNSET STRIP MUSIC ARCHIVE, such gifts shall be set forth in an Addendum to this Agreement and will be governed by the terms and conditions stated above. The Addendum shall include a description of the additional materials so donated and any conditions necessary and pertinent to those specific, newly-donated materials and shall be signed by the Donor and THE SUNSET STRIP MUSIC ARCHIVE.
11. Upon the death of the Donor, the entirety of the Collection shall remain entrusted to THE SUNSET STRIP MUSIC ARCHIVE in perpetuity.

Signed: (Donor) _____ Date _____

Attachment A
Donor Information, Materials Description, Rights, and Restrictions

I. Donor Information
Name
Address
Telephone
Email
Website
Other Contact Information (optional)

II. Materials Description (List number, type, and contents):

III. Rights and Restrictions
Yes No I give permission for these materials to be made freely accessible (e.g. online)

Yes No I wish to place the following restrictions on the materials: Archive use only

Other:
Yes No I give permission for the materials to be (re)published (otherwise, the SSMA will contact you for all publication requests)

Yes No I hereby transfer any copyrights I own in the materials to THE SUNSET STRIP MUSIC ARCHIVE

Bibliography

Anderson, Seth. "Nine Things to Consider When Assessing Cloud Storage." In F*eet on the Ground: A Practical Approach to the Cloud*. New York: Audiovisual Preservation Solutions, 2014.

Assmann, Ilse et al. "Ethical Principles for Sound and Audiovisual Archives." In *IASA Special Publication No. 6*. South Africa: International Association of Sound and Audiovisual Archives, 2010.

Bradley, Kevin, ed. "Unique and Persistent Identifiers." In *IASA-TC 04: Guidelines on the Production and Preservation of Digital Audio Objects*. Auckland Park, South Africa: IASA Technical Committee, 2009.

Breen, Majella and Gila Flam et al. "Metadata." In *Task Force to Establish Selection Criteria of Analogue and Digital Audio Contents for Transfers to Data Formats for Preservation Purposes.* South Africa: International Association of Sound and Audiovisual Archives, 2003.

Brylawski, Sam, Maya Lerman, Robin Pike, and Kathlin Smith, eds. *ARSC Guide to Audio Preservation*. Eugene, OR and Washington, DC: Association for Recorded Sound Collections, 2015.

Casey, Mike and Bruce Gordon. "Personnel and Equipment for Preservation Transfer." *In Sound Directions: Best Practices for Audio Preservation*. Indiana: Indiana University, 2007), 9-13.

Johnson, Birgitta J. "Gospel Archiving in Los Angeles: A Case of Proactive Archiving and Empowering Collaborations." *Ethnomusicology Forum* 21, no. 2 (2012): 221-242.

Paton, Christopher Ann. "Appraisal of Sound Recordings for Textual Archivists." *Archival Issues* 22, no. 2 (1997): 117-132.

Riley, Jenn. *Understanding Metadata: What is Metadata, and What is it For?: A Primer*. Baltimore: National Information Standards Organization, 2017.

Russell, Maureen. "Knowledge (or Intangible Cultural Heritage) Repatriation." *Ethnomusicology Review*, (2012), accessed March 8, 2018, https://www.ethnomusicologyreview.ucla.edu/content/archives-and-archiving-knowledge-repatriation.

Seeger, Anthony. "New Technology Requires New Collaborations: Changing Ourselves to Better Shape the Future." *Musicology Australia* 27, (2006): 94-111.

Core Coursework

"The Need for Community-Institution Collaboration in Describing Indigenous Sound Recordings"

Information Studies 212 – Values and Communities (Spring 2018)

Note: The objective of the final paper for this core class was to "survey a significant body of literature that considers questions of ethics, values, cultures, communities, and societies in relation to the information institutions, systems, and technologies of our world." Instructions for the assignment were to "pick an example or case that you would like to briefly introduce, and examine it relative to a thesis that is systematically argued and defended relative to course readings and concepts."

Abstract: Some of the oldest known sound recordings are housed within larger institutions versus community-based archives because of the huge financial burden that comes with proper climate and humidity control and other preservation needs of these materials. However, many of these mainstream institutions fail to accurately represent the true meaning of the content found in these recordings to the native community and the context in which they were originally recorded. This paper argues that collaboration with indigenous communities to describe sound recordings captured within these communities is a goal that cultural memory institutions need to be striving towards. In calling for the need for archival description derived from community-institution collaboration, a brief history of the role of an archivist is presented, as well as an examination of a specific case study of the Library of Congress American Folklife Center's Ancestral Voices pilot project through the lens of existing academic discourse on participatory efforts between indigenous groups and libraries, archives, and museums.

The Need for Community-Institution Collaboration in Describing Indigenous Sound Recordings

The power of music to transcend language, age, and gender barriers is undeniable, which explains why many of the audio holdings found in cultural memory institutions contain songs. Capturing the essence of a community can also take form in oral histories from different elders, birdsong and other nature recordings taken from their physical environment, and performances by skilled bird callers and tellers of folktales. These archival materials are incredibly valuable to the community and researchers, as oftentimes they're the only extant recordings left to document aspects of life during certain eras of time. "When considering the potential impact of audiovisual archives, it is absolutely essential to recognize that recordings are more than just sounds. They are sounds to which people attach individual significance that may stem from a specific personal context and/or a more general social process,"[1] writes UCLA Emeritus Professor, former Distinguished Professor of Ethnomusicology, and former Director of the UCLA Ethnomusicology Archive Anthony Seeger. Archivists care for these recordings because their value lies not just within the sounds they carry, but in the meaning imbued onto them by the community from which they originated.

Some of the oldest known sound recordings are housed within larger institutions versus community-based archives because of the huge financial burden that comes with proper climate and humidity control and other preservation needs of these materials. However, many of these mainstream institutions fail to accurately represent the true meaning of the content found in these recordings to the native community and the context in which they were originally recorded. This paper argues that collaboration with indigenous communities to describe sound recordings captured within these communities is a goal that cultural memory institutions need to be striving towards. In calling for the need for archival description derived from community-institution collaboration, a brief history of the role of an archivist is presented, as well as an examination of a specific

1 Anthony Seeger, "New Technology Requires New Collaborations: Changing Ourselves to Better Shape the Future," *Musicology Australia* 27, no. 1 (2004): 102.

case study of the Ancestral Voices pilot project through the lens of existing academic discourse on participatory efforts between indigenous groups and libraries, archives, and museums. First, however, it is necessary to provide some background on Ancestral Voices.

A few weeks after seeing Dr. Kimberly Christen (Director of Digital Initiatives for the College of Arts and Sciences, Director of the Center for Digital Scholarship and Curation at Washington State University, and founder of Mukurtu CMS (Content Management System) and the Local Contexts initiative) speak about the Ancestral Voices project at a UCLA Digital Archiving Series event on legal and ethical issues, her work was mentioned in a couple of the readings assigned for this course: the Katherine Becvar and Ramesh Srinivasan "Indigenous Knowledge and Culturally Responsive Methods in Information Research" piece (25) and chapter four of Srinivasan's *Whose Global Village? Rethinking How Technology Shapes Our World* (165) book. This prompted me to delve further into Ancestral Voices, and its relevance to several other readings eventually inspired this paper.

Ancestral Voices stems from the American Folklife Center (AFC) at the Library of Congress' (LC) Federal Cylinder Project (FCP), which launched in the 1980s. It was a decade-long, "large-scale initiative to preserve and provide access to historic and fragile field recordings captured on wax cylinders, many dating back to the late nineteenth century."[2]

The end result of the FCP was the repatriation of nine thousand cylinder recordings (transferred to the most accessible format at the time, cassette tapes) to one hundred tribal communities. Three years ago, the AFC partnered with members of the Passamaquoddy tribe of Maine, creators of the Local Contexts initiative (Christen and New York University professor of anthropology and museum studies Jane Anderson), and Mukurtu CMS for the Ancestral Voices pilot project.

> By working with tribal communities to determine what is missing from current collection information and adding that perspective to the catalog records, this effort repositions communities as authorities over their cultural histories and heritage, paralleling the earlier efforts of the FCP.[3]

2 https://www.loc.gov/collections/ancestral-voices/about-this-collection/.
3 Ibid.

Ancestral Voices involves the application of Traditional Knowledge Labels (TK Labels) to the LC finding aid for a Passamaquoddy song, one of the first sound recordings ever made featuring Native American voices, recorded by anthropologist Jesse Walter Fawkes in the early 1890s.

This point in time is also important in the evolution of archival theory since 1898 is when the *Manual for the Arrangement and Description of Archives: Drawn up by the Netherlands Association of Archivists*, aka the "Dutch Manual," entered circulation, articulating that principles like provenance and *respect des fonds* (original order) served as the main thrust in an archivist's duty. Sir Hilary Jenkinson echoes the sentiment of archivists as passive guardians of the "Truth" in records in the 1920s and '30s when "archival records were arranged, described, and maintained to reflect the context of their creation … the properties of records as evidence of actions could rightly be (re)established and defended."[4]

The next major figure in American archival theory arrived in the 1950s. T. R. Schellenberg put the focus on appraisal, with an archivist actively selecting what records should be maintained. "Only the records of 'notable persons,' to use Schellenberg's phrase, were thought worthy of being preserved."[5] Conversely, the emergence of social history in the next decade called for the inclusion of stories that came from the bottom up in society, and for some academics like Howard Zinn, the expectation of a neutral archivist began to melt away.

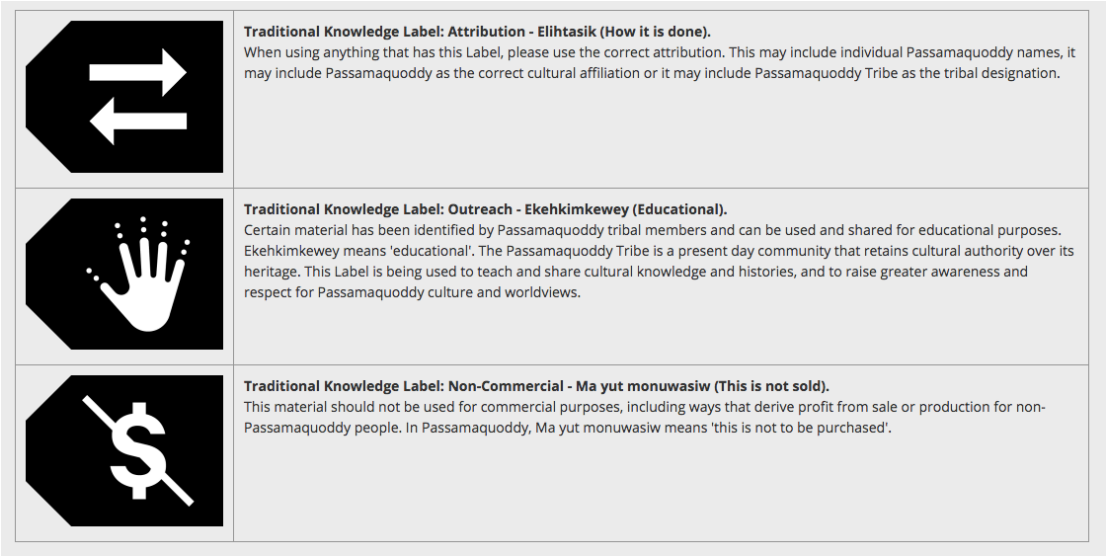
In the 1970s, Zinn stressed the "fakeness" of neutrality and encouraged archivists to create oral histories of the oppressed, collect papers of social movements, and focus on the capture of necessary information to ensure government accountability.[6] Then came a period in the history of archiving that was marked by the dawn of community-based archives and the activist archivist,

> who works in the community to encourage archiving as a participatory process shared with many in society … [with archivists becoming] apprentices to learn new ways (and sometimes, very old ways) that communities have for dealing with creating and authenticating evidence, storytelling memory-making, documenting relationships that are often very different from our own. Aboriginal or indigenous people have

4 Terry Cook, "Evidence, Memory, Identity, and Community: Four Shifting Archival Paradigms," *Archival Science* 13, no. 2-3 (2012): 106.
5 Dominique Daniel, "Documenting the Immigrant and Ethnic Experience in American Archives," *The American Archivist* 73, no. 1 (2010): 84.
6 Anne Gilliland, "Trust Matters," unpublished: 4.

especially rich traditional cultures in this regard from which we could learn much.[7]

The activist archivist is exemplified in the AFC's team of Judith Gray (also a member of the FCP team), Guha Shankar, Margaret Kruesi, and Kelly Revak, who, alongside Christen and Anderson, enabled Passamaquoddy tribal members to apply TK Labels to "identify and clarify community-specific access protocols associated with the materials and convey important information such as guidelines for proper use and responsible stewardship of cultural heritage materials,"[8] as well as additional metadata that adds rich context and meaning to the description of the song in the Library of Congress' online finding aid (https://www.loc.gov/item/2015655578) which celebrated its official launch on June 4, 2018. Beneath the audio file on the page, along the right-hand side, are the TK Labels.



https://www.loc.gov/collections/ancestral-voices/about-this-collection/rights-and-access/

It is worth noting that the name for every label – in addition to the song title, "Mihqelsuwakonutomon," ("He/She tells memories of it") on the main online finding aid page – is listed in the Algonquian language spoken by the Passamaquoddy tribe. This illustrates the tribe's agency in ascribing meaning to the TK Labels and determining what symbols are assigned to this particular cultural artifact. It can also be seen as a means of the indigenous tribe to reclaim the song that has always belonged to them, although its media carrier has remained under the physical

7 Cook, 114.
8 https://www.loc.gov/collections/ancestral-voices/about-this-collection/rights-and-access/.

custodianship of the AFC.

Now that a brief history of theory concerning an archivist's role and background on Ancestral Voices have been presented, it is necessary to attempt to define some of the key terms relevant to this case study in the context of this paper. First is 'community,' which is "any group of people who come together and present themselves as such."[9] Critics may posit that certain members could hold more sway than others in a community, and by only having a handful of members voice their opinions over those others is just further excluding them. Additionally, lumping all Passamaquoddy representatives under one collective heading ignores the multiplicity of characteristics that make each person unique, and every tribal member may consider himself/herself to be a part of many different groups simultaneously within the one tribe. This is why it is necessary to keep the above definition of community extremely open and fluid, to avoid the occurrence that some past participatory efforts may have experienced, where "inequalities, oppressive social hierarchies, and discrimination are often overlooked."[10] In making the term self-determined by the group, it accommodates all the intersecting identities that can possibly exist in one individual tribe member.

In assigning meaning to 'collaboration' between a community and cultural memory institution, Ricky Punzalan, professor in the College of Information Studies at the University of Maryland, finds it helpful to turn to the Collaboration Continuum presented in an OCLC (Online Computer Library Center) report. This continuum of Contact, Cooperation, Coordination, and Collaboration leading ultimately to Convergence refers to partnerships between libraries, archives, and museums, but applied to this context, Convergence refers to "a state in which collaboration around a specific function or idea has become so extensive, engrained and assumed that it is no longer recognized by others as a collaborative undertaking. Instead, it has matured to the level of infrastructure and becomes … a critical system."[11] Not all collaborations lead to Convergence, but the seamless integration of mutual respect and equality of input between a community and

9 Andrew Flinn, Mary Stevens, and Elizabeth Shepherd, "Whose Memories, Whose Archives? Independent Community Archives, Autonomy and the Mainstream," *Archival Science* 9 (2009): 75.
10 Irene Guijt and Meera Kaul Shah, *The Myth of Community: Gender Issues in Participatory Development*, (New Delhi: Vistaar Publications, 1998): 7.
11 https://www.oclc.org/content/dam/research/publications/library/2008/2008-05.pdf.

institution is something to aspire to.

Finally, 'description' is defined by the Society American Archivists as "the process of creating a finding aid or other access tools that allow individuals to browse a surrogate of the collection to facilitate access."[12] This is such an integral step for an archivist, especially for an audio archivist because, unlike a book, patrons cannot determine what is on a sound recording just by looking at the media in person or in an online online. Adequate metadata is essential since the ultimate end goal for any repository is for a patron to actually make use of materials in its collection. Insufficient description can result in underuse of materials, which can directly affect the institution's ability to obtain funding for any endeavors they hope to undertake in the future.

The role of archives is "to keep materials until those particular moments in the lives of individuals or the histories of communities when they might use them to create a new future for themselves … [archival collections] are potentially the tools for peoples' self-determination."[13] This notion is carried through in work by Michelle Caswell in which she expands on Arjun Appadurai's notion of the imaginary and applies it to archival studies.

> The archival imaginary is the dynamic way in which communities creatively and collectively re-envision the future through archival interventions in representations of the shared past. Through the archival imaginary, the past becomes a lens to the future; the future is rooted in that which preceded it. … by uncovering previously untold, ignored, or misrepresented histories, communities can imagine and reimagine different trajectories for the future. … In collecting archival traces of struggle and rebellion, we forge new narratives of resistance and solidarity that feed the activism of the present and fundamentally alter our vision of what will be possible.[14]

Members of the Passamaquoddy tribe are literally able to insert their own 'cultural narrative' into the song's description in the Notes section of the finding aid. It is of utmost importance to highlight the text because of the wealth of information it provides users that was previously missing from the LC finding aid, so the verbatim descriptions are below with discussion of each narrative directly after.

> **Cultural narrative for "Mihqelsuwakonutomon pihce elonukkopon" (He/She remembers what happened long ago):** There were many 'war' songs that the Passamaquoddy sang, and this English title – war song – is inadequate and

12 https://www2.archivists.org/glossary/terms/d/description.
13 Seeger, 100.
14 Michelle Caswell, "Inventing New Archival Imaginaries: Theoretical Foundations for Identity-Based Community Archives," in *Identity Palimpsests: Archiving Ethnicity in the U.S. and Canada*, eds. Dominique Daniel and Amalia S. Levi (Sacramento: Litwin Books, 2014), 49-50.

simplistic for understanding their independent complexity and diversity. There were songs in preparation for going to war, there were songs sung by those who were away at the battle and different songs for those still in the community thinking of those away. There were also songs for returning warriors, there were songs for loss and songs for honoring and remembering those warriors who were lost. There were also a range of spiritual and medicinal songs for warriors to help protect them at all stages of their journey. J. Walter Fewkes notes in his letters to Mary Hemenway in March 1890 that he recorded several war songs in his three days with the Passamaquoddy. All of these are different and because of their fragmentary nature (the wax cylinder could only record several minutes of much longer songs), it is difficult to understand them in relation to each other. In this song, Mihqelsuwakonutomon, a sadness can be heard and felt. This could mean that it was a mourning song for warriors who did not return from battle. This is translated into Passamaquoddy, Somakponossok etoli-ntakihtuwut (soldiers who are being mourned). This would be the kind of song sung on Veterans Day. Molly Neptune Parker also identified similarities in this song to contemporary Passamaquoddy funeral songs. Wayne Newell describes these songs as a "puzzle that we keep trying to put together by listening to them." All the war songs that Fewkes recorded in the 1890 trip have been identified as a whole series of songs and they have been given the name: Matonotuwi-lintuwakon which means generally 'war songs.'[15]

Cultural narrative for "Esunomawotultine:" Esunomawotultine is the Passamaquoddy name for song 2 on Fewkes' cylinder 17 (Cylinder 4260; AFC 1972/003: SR29). Esunomawotultine means "let's trade." It was sung on the cylinder by Peter Selmore, who also provided the cultural narrative. This narrative is found in Fewkes' Calais field notebook and was published in the Journal of American Folklore, 1890. The song and dance is common to Passamaquoddy, Maliseet and Mi'kmaq communities. According to Nicholas Smith, the Wabanaki had at least three different types of trading dances. "The important gift-giving trait was an element in two of them. One was the trading dance of the ceremonial prelude to the actual trading at the fur trading posts. I have called another the hunter's trading dance...The third was the misunderstood peddler dance, a dance song in which the Indian satirizes the peddler as a highly motivated businessman. They despise greedy traders. The Peddler was apparently ignorant of the importance of the gift-giving role in Indian culture." (Smith 1996) According to Smith, who interviewed Maliseet (Peter and Minnie Paul of New Brunswick) and Passamaquoddy (Sabattus Tomer of Peter Dana Point) elders about the various trading dances, the peddler dance cannot be considered a trading dance song, but it added humor at social gatherings.[16]

In these cultural narratives, community members are able to rectify and/or previously inadequate or missing metadata, like the initial English song title, which failed to convey the intended use for the song within the Passamaquoddy tribe. The elders' comments reveal the fact that there exist multiple layers of meaning in just this one song. Each tribal representative is named alongside the specific comments they wished to be included in the finding aid. This serves as reminder that, in the act of describing, they are taking control of their agency as the knowledge-

15 https://www.loc.gov/item/2015655578/.
16 Ibid.

bearers of "Mihqelsuwakonutomon"'s place in Passamaquoddy culture. Their comments are valuable insights that only members of the tribe could provide. (Note: Mary Hemenway, who is mentioned in the first cultural narrative, was Fewkes' patron.)

As shown in these insightful passages contributed by Passamaquoddy elders, Ancestral Voices goes beyond other participatory efforts that merely invite community members to contribute to an item's description via online tagging or via comments left in a box on their website. Initiatives such as those "fail to account for important cultural differences in the understandings around how information circulates within communities."[17] In this revamped finding aid is proof that "involving community members in archival arrangement and description could help acknowledge and preserve context and embedded knowledge architectures."[18]

Empowerment, however, "is more than inviting people to partake in needs assessment or a decision-making process. Offering the marginalized opportunities for consultation, without following this through with analysis about causes of oppression and feasible action to redress the causes, is unlikely to be empowering."[19] This would constitute a legitimate criticism of Ancestral Voices, but as mentioned previous, the pilot project of the "Mihqelsuwakonutomon" finding aid just officially launched last week. Moving forward, it would be ideal if the AFC, Local Contexts, and Mukurtu offered Passamaquoddy members (and other tribes they might work with in the future) forums for discussion and possibly even workshops on community archiving.

It would be interesting to see if there could be some type of collaboration between Ancestral Voices and other successful initiatives for such workshops. Examples of other projects include the Plateau Peoples' Web Portal, a collaboration between several indigenous groups (the Spokane Tribe of Indians, the Confederated Tribes of the Colville Reservation, the Confederated Tribes of the Umatilla Indian Reservation, the Coeur d'Alene Tribe of Indians, the Confederated Tribes of Warm Springs, the Confederated Tribes and Bands of the Yakama Nation, The Confederated Salish and Kootenai Tribes of the Flathead Reservation, the Nez Perce Tribe) and the Center for Digital

17 Katherine Becvar and Ramesh Srinivasan, "Indigenous Knowledge and Culturally Responsive Methods in Information Research," *Library Quarterly* 79, no. 4 (2009): 4.
18 Katie Shilton and Ramesh Srinivasan, "Participatory Appraisal and Arrangement for Multicultural Archival Collections," *Archivaria* 63 (2007): 95.
19 Guijt and Shah, 11.

Scholarship and Curation and Native American Programs at Washington State University for the tribal representatives to curate materials in the Portal themselves. There is also the Us Mob series and site, the *Raven Tales: How Raven Stole the Sun* digital animation story, and the Igloolik Isuma media production group, who released the *Atanarjuat: The Fast Runner* feature film.

Some may argue that calling a process a collaboration does not automatically make it a liberation of the previously marginalized voices. Mainstream cultural institutions may ask a community for consultation to help with arrangement, description, and classification, but does this act serve to legitimize them as the ones in power, the keeper of the artifacts, and rule-maker over the entire endeavor? In Robin Boast's discussion of the contact zone concept, previously introduced by Mary Louise Pratt and extrapolated on by James Clifford, contact zones have resulted in a "*clinical collaboration*, a *consultation* that is designed from the outset to appropriate the resources necessary for the academy and to be silent about those that were not necessary,"[20] while their actual goal is to decentralize some of the institution's control within the community to create "a space where disparate cultures or communities encounter one another while recognizing past and present asymmetries of power and voice."[21]

The contact zone can be where the fluid meaning of community can further come into play, as individual tribe members express the intersecting aspects of identity within themselves in multiple ways and in different moments. When community members employ such a tactic, it is referred to by Srinivasan as code switching.[22] Each Passamaquoddy representative brings their own notion of what it means to be a part of this tribal community, as well as their individual set of values and notions of what "Mihqelsuwakonutomon" means in their own life, to the collaboration. As every person voices his/her opinion, it adds depth to the description of the song.

In her observation of Aboriginal landowners sharing their firing strategies with environmental scientists, Helen Verran recognizes moments such as these as postcolonial, "where disparate knowledge traditions abut and abrade, enmeshed, indeed often stuck fast, in power

20 Robin Boast, "Neocolonial Collaboration: Museum as Contact Zone Revisited," *Museum Anthropology* 34, no. 1 (2011): 66.
21 Ramesh Srinivasan, *Whose Global Village? Rethinking How Technology Shapes Our World* (New York: New York University Press, 2017), 163.
22 Ibid, 164.

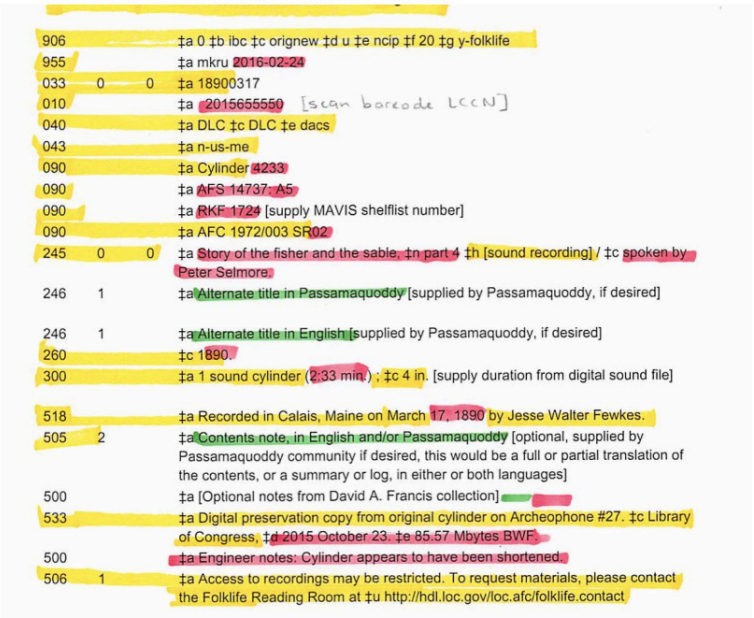
relations characteristic of colonizing, where sciences usually line up on the side of the rich and powerful. Postcolonial moments interrupt those power relations, redistributing authority in hope of transformed contexts for the exercise of power."[23] Ancestral Voices offers a postcolonial moment where the Passamaquoddy representatives are able to take position as authorities over their cultural heritage.

The project "seeks to mutually benefit both tribal members and the Library of Congress in these areas: a) digital preservation of an essential element of American and Native American heritage; b) repatriation, in digital form, of this heritage to Native American nations; c) collaboration of the Library with tribal communities in respectful presentation of this heritage; d) setting standards for future technical innovation and collaboration."[24]

The LC mentions the preservation reformatting of the original sound recordings, and it is important to remember the fragility of formats like the cylinders that Fewkes captured the Passamaquoddy on in 1890. Also, these recordings are the oldest ethnographic field recordings known to survive anywhere. Irreplaceable recordings of moments such as these, that preserve cultural experiences on legacy carriers such as cylinders, lacquer discs, or open-reel tapes, are likely to vanish or be dramatically altered by mold or temperature/humidity issues (sticky-shed syndrome, acidic exudation) in the near future if they aren't properly preserved through projects like Ancestral Voices.

With preservation efforts also arises the need for adequate description and cataloging to ensure optimal access to the items is enabled. Hence, the essential need for community-institution collaboration in describing sound recordings. To illustrate, see the MARC (MAchine-Readable Cataloging) record for the LC finding aid below, with proposed alterations to be made by the Passamaquoddy representatives as displayed by Christen, Anderson, and Shankar in a presentation, "Wax Works in the Age of Digital Reproduction: The Futures of Sharing Native/First Nations Cultural Heritage" (http://schd.ws/hosted_files/dplafest2016/2c/WaxWorks_Mukurtu_LocalContexts.pdf), at the 2016 DPLAfest.

23 Helen Verran, "A Postcolonial Moment in Science Studies: Alternative Firing Regimes of Environmental Scientists and Aboriginal Landowners," *Social Studies of Science* 35, no. 5-6 (2002): 730.
24 https://www.loc.gov/collections/ancestral-voices/about-this-collection/.



906			‡a 0 ‡b ibc ‡c orignew ‡d u ‡e ncip ‡f 20 ‡g y-folklife
955			‡a mkru 2016-02-24
033	0	0	‡a 18900317
010			‡a 2015655550 [scan barcode LCCN]
040			‡a DLC ‡c DLC ‡e dacs
043			‡a n-us-me
090			‡a Cylinder 4233
090			‡a AFS 14737: A5
090			‡a RKF 1724 [supply MAVIS shelflist number]
090			‡a AFC 1972/003 SR02
245	0	0	‡a Story of the fisher and the sable, ‡n part 4 ‡h [sound recording] / ‡c spoken by Peter Selmore.
246	1		‡a Alternate title in Passamaquoddy [supplied by Passamaquoddy, if desired]
246	1		‡a Alternate title in English [supplied by Passamaquoddy, if desired]
260			‡c 1890.
300			‡a 1 sound cylinder (2:33 min.) ; ‡c 4 in. [supply duration from digital sound file]
518			‡a Recorded in Calais, Maine on March 17, 1890 by Jesse Walter Fewkes.
505	2		‡a Contents note, in English and/or Passamaquoddy [optional, supplied by Passamaquoddy community if desired, this would be a full or partial translation of the contents, or a summary or log, in either or both languages]
500			‡a [Optional notes from David A. Francis collection]
533			‡a Digital preservation copy from original cylinder on Archeophone #27. ‡c Library of Congress, ‡d 2015 October 23. ‡e 85.57 Mbytes BWF.
500			‡a Engineer notes: Cylinder appears to have been shortened.
506	1		‡a Access to recordings may be restricted. To request materials, please contact the Folklife Reading Room at ‡u http://hdl.loc.gov/loc.afc/folklife.contact

Another component that is mandatory for successful collaboration is trust between the community and cultural memory institution. “Having researchers [archivists, partners, etc.] which the participants in the study know personally, or can relate to because of a shared cultural identity, counts for a great deal in a community with a conflicted and problematic historical relationship with outside researchers.”[25] The AFC’s partners in the Ancestral Voices project, Local Contexts and Mukurtu, have a proven track record with indigenous communities like the Passamaquoddy.

Anderson and Christen developed the Local Contexts platform in six years ago “to address specific Native and First Nation concerns about access, ownership, and control of collections.”[26] They are currently testing and implementing TK Labels with over sixteen communities and more than ten cultural institutions and universities. There exist seventeen different TK Labels, and each label is meant to be customized by the community to address a multitude of different situations. The TK labels are:

- Attribution, which tells users that sources, custodians, and owners have been wrongly attributed or missing and asks future users to help apply correct attribution.
- Community Use Only materials are usually not circulated beyond the family, clan, or community.
- Non-Commercial materials should not be used to derive economic benefits or as a commodity for purchase.
- Men Restricted – highly sensitive, gendered knowledge with restrictions of access and use based on customary law.
- Family alerts outside users that the material is usually only shared between family

25 Becvar and Srinivasan, 24.

26 http://localcontexts.mukurtu.org/wp-content/uploads/2016/12/Local-Contexts-Background-Brief.pdf.

members.

• Seasonal materials should only be used and heard at particular times of the year and/or the land and environment where they were derived from influences and impacts their meaning and significance.

• Verified tells users that the community is satisfied with how materials are being represented online or offline.

• Outreach materials are for use in educational activities outside the community.

• Culturally Sensitive materials have special sensitives around them.

• Non-Verified materials have not been appropriately vetted by the community, have mistakes, omissions, derogatory language, lack of informed consent, or its process of creation was through dishonest research which did not follow proper protocols.

• Community Voice encourages the sharing of knowledge, stories, and experiences by all community members (usually utilized in a community-based archive).

• Commercial materials can be used for future economic benefit.

• Men General should only be shared between men in the community.

• Women Restricted – highly sensitive, gendered knowledge with restrictions of access and use based on customary law.

• Secret/Sacred items are special, requiring respectful and careful treatment.

• Women General should only be shared between women in the community.

• Multiple Communities indicates several communities maintain responsibilities of custodianship and/or ownership over the material, but neither has explicit control (rights and responsibilities for use are spread across the communities through existing protocols and relationships).

TK Labels can correct or fill in missing performer attributions or provenance details, and tribal communities are able to apply them to digital materials like audio recordings, images, and documents in the Mukurtu CMS. Developed by Christen, Craig Dietrich, and Warumungu community members in 2007, Mukurtu is an open-source access platform where indigenous communities can share metadata on cultural materials using their own protocols, like TK Labels. 'Mukurtu' is the "Warumungu word for 'dilly bag' or safe-keeping place for sacred materials,"[27] which is an apt name for the system.

Initiatives like Local Contexts and Mukurtu encourage archivists to embrace what it means to be an activist archivist, and partnering with these programs allows for projects like Ancestral Voices. With the successful launch of this pilot project, the AFC has expressed hopes to expand Ancestral Voices to include other tribal groups and recordings in the future on the project's About page on the LC website. As such, it is necessary to remind archivists of their "moral obligation to step up and actively transform their practices"[28] and that

> Envisioning liberatory archival imaginaries will require us, as archivists, to be inventive. It will demand that we let go of some of our professional authority even as it underscores our commitment to the archival endeavor. It will ask

27 http://mukurtu.org/about/.

28 Gilliland, 3.

> us to interrogate many of the assumptions of mainstream Western archival practice in light of community-specific, culturally appropriate, political goals. It will challenge us to continually question our categories, motivations, and assumptions, rethink the boundaries of our archives and our communities, and own up to the ways in which power is implicated in our practices.[29]

Collaborations between mainstream institutions and communities to describe sound recordings adequately is imperative if researchers are to successfully locate the materials in repositories and if indigenous communities like the Passamaquoddy want future generations of their tribe to be able to form a connection with their cultural heritage through the recordings. Archivists are responsible for protecting the material and making it as easy to find as possible, so when researchers and tribe members seek out the materials, they will be waiting.

29 Caswell, 51.

Bibliography

Becvar, Katherine and Ramesh Srinivasan. "Indigenous Knowledge and Culturally Responsive Methods in Information Research." *Library Quarterly* 79, no. 4 (2009): 4-32.

Boast, Robin. "Neocolonial Collaboration: Museum as Contact Zone Revisited." *Museum Anthropology* 34, no. 1 (2011): 56-70.

Caswell, Michelle. "Inventing New Archival Imaginaries: Theoretical Foundations for Identity-Based Community Archives." In *Identity Palimpsests: Archiving Ethnicity in the U.S. and Canada*, edited by Dominique Daniel and Amalia S. Levi. Sacramento: Litwin Books, 2014.

Cook, Terry. "Evidence, Memory, Identity, and Community: Four Shifting Archival Paradigms." *Archival Science* 13, no. 2-3 (2012): 95-120.

Daniel, Dominique. "Documenting the Immigrant and Ethnic Experience in American Archives." *The American Archivist* 73, no. 1 (2010): 82-104.

Flinn, Andrew, Mary Stevens, and Elizabeth Shepherd. "Whose Memories, Whose Archives? Independent Community Archives, Autonomy and the Mainstream." *Archival Science* 9 (2009): 71-86.

Gilliland, Anne. "Trust Matters," unpublished: 1-18.

Guijt, Irene and Meera Kaul Shah. *The Myth of Community: Gender Issues in Participatory Development*. New Delhi: Vistaar Publications, 1998.

Seeger, Anthony. "New Technology Requires New Collaborations: Changing Ourselves to Better Shape the Future." *Musicology Australia* 27, no. 1 (2004): 94-110.

Shilton, Katie and Ramesh Srinivasan. "Participatory Appraisal and Arrangement for Multicultural Archival Collections." *Archivaria* 63 (2007): 87-101.

Srinivasan, Ramesh. *Whose Global Village? Rethinking How Technology Shapes Our World*. New York: New York University Press, 2017.

Verran, Helen. "A Postcolonial Moment in Science Studies: Alternative Firing Regimes of Environmental Scientists and Aboriginal Landowners." *Social Studies of Science* 35, no. 5-6 (2002): 729-762.

Elective Coursework – Sample 1

"What's All the Noise About?

A Guide to the Music Modernization Act for Librarians and Archivists"

Information Studies 289-3 – Intellectual Property Law for Librarians and Archivists

(Fall 2018)

Note: In addition to being "well written and based on sound scholarship," the final paper for this class had to "demonstrate more than a superficial understanding of the issue being addressed and include an emphasis on how intellectual property laws impact LAMs and, if appropriate, identify feasible solutions."

Abstract: This paper provides librarians and archivists with a basic understanding of the Orrin G. Hatch-Bob Goodlatte Music Modernization Act (MMA), H.R. 1551, while also presenting why it can be seen as a step in the right direction for copyright reform in regards to concerns that are relevant to libraries, archives and museums. The examination of the legislation is divided into four sections: the relevance of the MMA to these institutions; pertinent background information on sound recordings and copyright law; a summary of the different aspects of the MMA; and finally, an analysis of the law's possible effects on the work of librarians and archivists.

What's All the Noise About?

A Guide to the Music Modernization Act for Librarians and Archivists

On October 11, 2018, President Donald J. Trump signed the Orrin G. Hatch-Bob Goodlatte Music Modernization Act (MMA), H.R. 1551, into law. Shortly thereafter, I mentioned the new legislation to my boss at the Resources Center of the Autry Museum of the American West. She said that she had heard about the signing but had to admit that she knew very little about what the MMA will actually do. While the Autry has a significant amount of sound recordings in its collections, my supervisor is not a specialized music librarian or audio archivist, so I decided to ask the Senior Director of the Rock & Roll Hall of Fame Library and Archives for his opinion. "From what I've read about it, it sounds like it's mostly a step in the right direction for our profession, but I don't think I've seen enough information to know for sure how it will play out," he replied.

This paper provides librarians and archivists with a basic understanding of the MMA, while also presenting why it can be seen as a step in the right direction for copyright reform in regards to concerns that are relevant to libraries, archives and museums. The examination of the legislation is divided into four sections: the relevance of the MMA to these institutions; pertinent background information on sound recordings and copyright law; a summary of the different aspects of the MMA; and finally, an analysis of the law's possible effects on the work of librarians and archivists.

Relevance

Ramifications of the MMA's passing on the work that is carried out by librarians and archivists basically comes down to the two goals at the heart of any LAMs: preservation and access. Although the rise of the digital era resulted in many of the nation's sound recordings being digitized for long-term preservation, a considerable amount of valuable audio materials remain locked away in storage. "There is an ever-decreasing time window to complete the digitization process before the small pool of equipment in operable condition required for the replay of traditional formats vanishes."[1] As stewards of sound carriers that hold the country's cultural

1 Dietrich Schüller et al., introduction to *Handling and Storage of Audio Carriers (IASA-TC 05)*, eds. Dietrich Schüller and Albrecht Häfner (London: Bellsway Print, 2014), 5.

heritage, it is imperative that librarians and archivists do all they can to overcome any obstacles that could deter the preservation reformatting of analog recordings before the looming cloud of obsolescence ultimately descends. One of those barriers exists in the complicated nuances of intellectual property law.

In a 2010 study commissioned by the National Recording Preservation Board, Library of Congress, many contributors believed that "recorded sound preservation in the United States is critically affected by restrictions and limitations, as well as by the range of exclusive rights outlined in U.S. copyright law."[2] Elements of copyright law are often incompatible with best practices for digital preservation. Section 108 only allows for three preservation (for unpublished works) or replacement (for published works) copies, but more are necessary to maintain geographical separation (storing backups in at least two other locations that are separate from the master file) and to be adequately prepared for the occurrence of natural disasters. In addition, there is often confusion over federal and disparate state copyright laws leading to hesitation to provide wide access to sound recordings for fear of litigation. Due to this limiting of access, collectors could feel discouraged from donating materials to institutions, which is something all LAMs workers should want to prevent.

Background

It is important to define some of the terms that are central to a discussion of sound recordings and intellectual property (IP) law before delving any further into the MMA. Per Title 17, Section 101, sound recordings are "works that result from the fixation of a series of musical, spoken, or other sounds, but not including the sounds accompanying a motion picture or other audiovisual work, regardless of the nature of the material objects, such as disks, tapes, or other phonorecords, in which they are embodied."[3] Therefore, a sound recording can be anything from an unpublished ethnographic field recording on a wire spool to a commercially released LP record. When it comes to a recording being unpublished/noncommercial versus published/commercial, the law defines

2 Rob Bamberger and Sam Brylawski on behalf of the National Recording Preservation Board, *The State of Recorded Sound Preservation in the United States: A National Legacy at Risk in the Digital Age* (Washington, D.C.: Council on Library and Information Resources and the Library of Congress, 2010), 108.

3 https://www.copyright.gov/title17/92chap1.html.

publication as "the distribution of copies or phonorecords of a work to the public by sale or other transfer of ownership, or by rental, lease, or lending."[4] Unless they have particular relevance to an archive's mission or collection focus, commercial recordings may be of lesser value since copies tend to exist across multiple institutions, whereas noncommercial or unpublished recordings are unique or published in limited quantities.

Rights Ownership of Sound Recordings

Understanding sound recordings within the context of IP law is so daunting because of the complicated nature of rights ownership. While "authors" in other mediums typically maintain the rights over their works while they are alive, a composer and/or lyricist usually retain the copyright in the music composition but often sign over their rights in a sound recording to a record label in exchange for the company covering costs for studio time, production, and marketing. The composition effectively becomes a 'work for hire,' and the label maintains rights over the song's reproduction, distribution, and derivative works per Section 106. Public performance rights are also addressed in section 106. In order to publicly play a sound recording or host a live performance of a work, a business must purchase a license from the publisher/composer via their Performing Rights Organization representatives at BMI, ASCAP, or SESAC.

History of Sound Recording Protection

The history of recorded sound can be traced back to Thomas Edison's first tinfoil recordings on a phonograph in 1877, but the first appearance of musical recordings in case law actually involved player piano rolls. In White-Smith Music Publishing Co. v. Apollo Co. (1908), the Supreme Court ruled that record producers (or in this case piano roll producers) did not have to pay composers/publishers for the use of their music in recordings because they one could not read a piano roll like sheet music.[5] As mentioned above, copyright law distinguishes between a sound recording and its underlying musical composition (lyrics, sheet music – which is treated like text material). This in turn led to Congress' development of a compulsory license system in

4 https://www.copyright.gov/help/faq-definitions.html.

5 Peter Jaszi et al., *Protection for Pre-1972 Sound Recordings Under State Law and Its Impact on Use by Nonprofit Institutions: A 10-State Analysis*, (Washington, DC: Council on Library and Information Resources and the Library of Congress, 2009): 2.

1909 so that composers could charge other artists, producers, or record companies a fixed rate in exchange for permission to create "mechanical" reproductions of their songs. These fees are collected through an agent, such as the Harry Fox Agency, who would also handle synchronization licenses for use in film, television, or home video releases.

The next historic milestone came in the Sound Recording Amendments of 1971, which covered sound recordings fixed in a tangible medium of expression on or after February 15, 1972. This left pre-1972 recordings entangled in a complex web of state civil, criminal, and common laws, with the oldest of recordings not entering the public domain until 2067 at the earliest (i.e. 95 years after 1972). Significant cases in regards to state statutes include 1974's Goldstein v. California, in which the Supreme Court reaffirmed "states' authority to grant common law copyright protection both to writings subject to the federal copyright and to those not included within the federal act"[6]; CBS, Inc. v. Charles Garrod, et al. (622 F. Supp. 532, 1985); and Capitol Records, Inc. v. Naxos of America, Inc. (4 NY 3d 540, 2005).

The Road to the MMA

The Copyright Act of 1976 brought about the codification of the fair use defense in section 107. Defendants in cases such as Campbell v. Acuff-Rose Music and Lennon v. Premise Media argued that their use of musical works by Roy Orbison and John Lennon, respectively, was transformative enough to weigh in the favor of fair use. The act also enacted section 108's exceptions for libraries and archives and extended copyright to last for the life of the author plus 50 years (or 75 years for a work for hire). However, rights holders saw these terms become even longer (life of the author plus 70 years; 120 for works of corporate authorship) with the passage of the 1998 Copyright Term of Extension Act (aka the Sonny Bono Act). This was also the year that the Digital Millennium Copyright Act (DMCA) was signed into existence. Title Two of the DMCA, the Online Copyright Infringement Liability Limitation, released internet service providers from being held responsible for copyright infringement that was committed by their subscribers. The

6 "Goldstein V. California and the Protection of Sound Recordings: Arming the States for Battle with the Pirates," *Washington and Lee Law Review* 31, no. 3 (1974): 641, accessed November 28, 2018, https://scholarlycommons.law.wlu.edu/wlulr/vol31/ iss3/7.

provision is ultimately what gave many web users the green light to commit music piracy.

Rights became even more complicated with the passage of the Digital Performance Right in Sound Recordings Act of 1995 that dealt with interactive digital subscription services. The dawn of the digital era created an expectation for instant access to streaming or downloadable music files amongst library and archive visitors, too. As was mentioned earlier, though, section 108 only allows for the creation of three preservation and security copies of unpublished work or for a published work that is damaged, deteriorating, lost/stolen, or stored on an obsolete format; these copies must be accessed on the eligible institution's premises.

The *ARSC Guide to Audio Preservation* recommends at least three digital copies of an analog sound recording: a preservation master file that serves as a digital surrogate for the original, an access master created from the preservation master, and an access copy, which is what the user listens to within the library.[7] Due to the fact that digital preservation hardware and software are ever-evolving, these files must be migrated to updated systems to ensure longevity. This means that many copies of the original sound recording must continue to be made.

The 2005 Copyright Issues Relevant to Digital Preservation and Dissemination of Pre-1972 Commercial Sound Recordings by Libraries and Archives study addresses the need for more than three copies and calls for the reform of section 108 and proposes the need for pre-1972 sound recordings to be brought under federal law.[8] Three music-related organizations – the Association for Recorded Sound Collections, Music Library Association, and the Society for American Music – banded together to create the Historical Recording Coalition for Access and Preservation (http://recordingcopyright.org/) in 2009. It was at the urging of their united front that the Copyright Office launched that policy study that resulted in a 2011 report,[9] which ultimately echoed the recommendations of the study from 2005.

The idea for a blanket "mechanical" licensing system was mentioned by the Register of

7 William Chase, "Preservation Reformatting," in *ARSC Guide to Audio Preservation*, ed. Sam Brylawski et al. (Eugene, OR: Association for Recorded Sound Collections; Washington, DC: Council on Library and Information Resources and the Library of Congress, 2015), 111.
8 June M. Besek, *Copyright Issues Relevant to Digital Preservation and Dissemination of Pre-1972 Commercial Sound Recordings by Libraries and Archives* (Washington, DC: Council on Library and Information Resources and the Library of Congress, 2005), 65.
9 https://www.copyright.gov/docs/sound/?loclr=blogcop.

Copyright, Marybeth Peters, while testifying before Congress on the need for the modernization of music licensing laws in 2007.[10] The Copyright Office also advocated for such a system in its *Copyright and the Music Marketplace* report of 2015.[11] As these studies are being conducted, platforms like Pandora and Spotify are steadily gaining in popularity. Hence, this timeframe is when artists really started lobbying for reform in terms of how these services track the amount of times their songs are being played.

The bill that eventually turned into the MMA began as four separate pieces of legislation. The component that became muted on the road to final approval was known as Fair Play Fair Pay. It was aimed at establishing a royalties requirement that AM/FM broadcasters would have to pay to record companies and artists, but as a result of pressure from the National Association of Broadcasters, Fair Play Fair Pay was cut from the law.

Congressman Bob Goodlatte introduced H.R. 5447 in the House, while Senator Orrin Hatch presented S. 2823 to members of Senate. Hatch's bill had the same text as H.R. 5447, which was unanimously voted through on April 25, 2018. After being amended into H.R. 1551, it was unanimously passed by Senate on September 18, 2018 and signed by President Trump a few weeks later.

Summary of the MMA

H.R. 1551 is composed of three sections; the first of which addresses the compulsory license clause in Section 115.

Title I – Music Licensing Modernization sets forth a new blanket license for the interactive digital streaming and downloading of songs. The act standardizes rates for streaming services. A mechanical licensing collective is to be created to oversee a public database of sound recordings and musical works to administer the blanket licenses and distribute rights holders' royalties. Finally, the law changes how federal district court judges are selected to settle rate-setting disputes regarding performance rights organizations (ASCAP, BMI, SESAC).

10 Marybeth Peters, statement taken at the hearing on "Reforming Section 115 of the Copyright Act for the Digital Age," March 22, 2007, https://judiciary.house.gov/_files/hearings/March2007/Peters070322.pdf?loclr=twcop.

11 https://copyright.gov/docs/musiclicensingstudy/copyright-and-the-music-marketplace.pdf?loclr=blogcop .

Title II – Compensating Legacy Artists for their Songs, Service, and Important Contributions to Society is simply known as the CLASSICS Act. It attempts to close the pre-1972 loophole by preempting the myriad of state laws to bring all recordings under a unique (sui generis) federal protection, purposely not being called copyright protection.

Title III – Allocation for Music Producers (AMP) expands royalty payments to producers, mixers, and engineers. Collective rights management organization SoundExchange is going to collect and distribute royalties accordingly.

Analysis

"This is a historic day for music creators," shared Recording Academy National Advocacy Committee Co-Chair Mindi Abair in a statement after the Senate voted to unanimously pass the MMA. "We've watched for years as technology has exponentially changed the way our music is consumed. Our laws have not kept up, and today is a huge milestone toward creating a fair living wage and updating the system of how music makers in the 21st century are paid."[12] The new law has its positives for the artists, producers, engineers, and publishers, but it also benefits and drawbacks for librarian and archivist communities.

The CLASSICS law's application of federal exceptions (Section 107 and 108) for all pre-1972 recordings is great for LAMs in states where there were major inconsistencies in application. While pre-1923 recordings enter the public domain after a three-year transition period, ending December 31, 2021, recordings published after 1923 actually have a longer term than 95 years now: 100 years for 1923-1946 and 110 years for 1947-1956. Recordings from 1957-1972 will still enter the public domain in 2067 as before. This is good for any rights holders (or their heirs) who are still living, but not so great for LAMs.

A benefit of the interim rule is that the Copyright Office is asking rights owners to enter information about their pre-1972 sound recordings in an Excel spreadsheet form (The template can be found at https://www.copyright.gov/rulemaking/pre1972-soundrecordings-schedules/.) so

12 Ed Christman, "Music Modernization Act Passes in Senate with Unanimous Support," Billboard.com, September 18, 2018, https://www.billboard.com/articles/business/8475876/music-modernization-act-passes-senate-unanimous-support.

that they can be indexed into a searchable online database. This could prove to be useful when librarian-archivists are trying to locate rights holders, especially since the most recent index dates will be listed first, allowing for easy discoverability.

One of the most helpful outcomes of the new legislation for LAMs is going to be the ability to file a notice to use a pre-'72 recording for non-commercial purposes (after checking first to make sure the recording isn't in commercial use). A rightsholder will have 90 days to object, in which case the LAM can decide if they would like to make an argument that their use is fair. The fact that the response period is only 90 days could be of a LAM's advantage, since it is not that large of a window for a rights holder to become aware of the listing, let alone formulate an objection.

This database has great potential for those LAMs wanting to make use of an orphan work in their collection, but have exhausted all other leads in terms of attempting to identify or contact a rights holder. "The newly created mechanical licensing collective will be tasked with developing and maintaining a database of musical works and sound recordings, which will be publicly available and is expected to become the most comprehensive database in the music industry."[13] It will definitely be interesting to see how this database goes into effect, and if librarians and archivists are able to take make use of it.

Recommendations

After becoming acquainted with all aspects of the MMA, I have formulated two recommendations in regards to this addition to IP law. Since the legislation is so new and serves to add even more layers to the already complex area of sound recording copyright, I firmly believe that librarians and archivists at every stage of their carriers could benefit from a professional development workshop on the MMA. The curriculum for the training session could even follow the format of this paper, in that, the history and nuances of the copyright of sound recordings could be reviewed, followed by a presentation on the three different prongs of the new law.

As the International Association of Sound and Audiovisual Archives' Ambassador for the Western United States, I have added the MMA as a proposed topic for future workshops we are

13 https://www.copyright.gov/music-modernization/.

planning across the country. The aspects of the MMA with the most potential to affect LAMs, like the recordings database, can only be of use to librarians and archivists if they are aware of it and truly understand what it can be utilized for.

"Now that the bill has become law, the Copyright Office will be focused on implementing its new duties required by the Music Modernization Act and on outreach activities to help interested members of the public understand the changes that result from this new legislation," writes Regan A. Smith, General Counsel and Associate Register of Copyrights, in a blog post for the department. "In particular, these activities will include educating songwriters and others with respect to the new process by which a copyright owner may claim ownership of musical works and royalties for works."[14]

The Copyright Office's desire to reach out to the parties that the law will have an impact serves as inspiration for my second idea. I would like to see academic music libraries and public libraries build free programming around helping to educate their patrons about the MMA, particularly those who are musicians, songwriters, composers, producers, mixers, or audio engineers.

Like the continuing education training for librarians and archivists, the outreach effort could simply take the form of a classroom lecture comprised of a brief history on copyright law and sound recordings, followed by details on the overall structure of the MMA. Then, a discussion focused on step-by-step instructions on how to become a part of the mechanical licensing collective and add their works to the musical database could take place. The workshop could close out with a question-and-answer period. A librarian who has taken part in one of the training sessions I discussed in my first recommendation could deliver the lecture and lead the discussion.

14 Regan A. Smith, "The Orrin G. Hatch-Bob Goodlatte Music Modernization Act," The Library of Congress (blog), October 11, 2018, https://blogs.loc.gov/copyright/2018/10/the-orrin-g-hatch-bob-goodlatte-music-modernization-act/.

Bibliography

Bamberger, Rob and Sam Brylawski on behalf of the National Recording Preservation Board. *The State of Recorded Sound Preservation in the United States: A National Legacy at Risk in the Digital Age*. Washington, D.C.: Council on Library and Information Resources and the Library of Congress, 2010.

Besek, June M. *Copyright Issues Relevant to Digital Preservation and Dissemination of Pre-1972 Commercial Sound Recordings by Libraries and Archives*. Washington, DC: Council on Library and Information Resources and the Library of Congress, 2005.

Chase, William. "Preservation Reformatting." In *ARSC Guide to Audio Preservation*, edited by Sam Brylawski et al., 110-126. Eugene, OR: Association for Recorded Sound Collections; Washington, DC: Council on Library and Information Resources and the Library of Congress, 2015.

Christman, Ed. "Music Modernization Act Passes in Senate with Unanimous Support." Billboard.com, September 18, 2018. https://www.billboard.com/articles/business/8475876/music-modernization-act-passes-senate-unanimous-support.

"Goldstein v. California and the Protection of Sound Recordings: Arming the States for Battle with the Pirates." *Washington and Lee Law Review* 31, no. 3 (1974): 604-642. Accessed November 28, 2018, https://scholarlycommons.law.wlu.edu/wlulr/vol31/ iss3/7.

Jaszi, Peter et al. *Protection for Pre-1972 Sound Recordings Under State Law and Its Impact on Use by Nonprofit Institutions: A 10-State Analysis*. Washington, DC: Council on Library and Information Resources and the Library of Congress, 2009.

Schüller, Dietrich et al. *Introduction to Handling and Storage of Audio Carriers (IASA-TC 05)*. Edited by Dietrich Schüller and Albrecht Häfner. London: Bellsway Print, 2014.

Elective Coursework – Sample 2

"In the Groove: Edison Kinetophone Film Sound-on-Cylinder System"

Information Studies 289-3 – Moving Image Technology (Winter 2019)

Note: The purpose of this course was "to provide an historical overview of various types of audiovisual materials found in archives. Particular emphasis given to skills required to keep up with changing preservation practices in order to maintain access, exhibition, and proper contextual integrity of original material." A specific moving image media format had to serve as the center point of the final paper, and I chose to focus on a restoration project involving the Edison Kinetophone System.

Abstract: If you ask most people to name the first film with a synchronized soundtrack, they would be quick to reply with *The Jazz Singer*. While the 1927 musical drama is indeed the first feature-length motion picture to feature synchronized music, dialogue, and singing, it was not the first film ever to do so. Fourteen years before the Al Jolson feature dazzled cinema audiences using the Vitaphone sound-on-disc system, Thomas Edison utilized an earlier grooved audio format, cylinder recordings, to marry sound to moving-image media in the Kinetophone. Although film librarians, archivists, and preservationists may be familiar with Vitaphone discs, it is important for all professions working in a library, archive, or museum (LAM) setting to be able to identify Kinetophone films and their cylinder counterparts that might be accessioned into (or may already be in) their collections. This paper examines the Edison Kinetophone system by delving into a case study of a 2016 restoration project headed by George Willeman, Nitrate Film Vault Manager at the Library of Congress National Audio-Visual Conservation Center. It provides background details of the endeavor, challenges met during the film and audio digitization process, and what insights these experiences can offer to those working in LAMs.

In the Groove: Edison Kinetophone Film Sound-on-Cylinder System

> "In the year 1887, the idea occurred to me that it was possible to devise an instrument which should do for the eye what the phonograph does for the ear, and that by a combination of the two, all motion and sound could be recorded and reproduced simultaneously." –Thomas Edison[1]

If you ask most people to name the first film with a synchronized soundtrack, they would be quick to reply with *The Jazz Singer*. While the 1927 musical drama is indeed the first feature-length motion picture to feature synchronized music, dialogue, and singing, it was not the first film ever to do so. Fourteen years before the Al Jolson feature dazzled cinema audiences using the Vitaphone sound-on-disc system, Thomas Edison utilized an earlier grooved audio format, cylinder recordings, to marry sound to moving-image media in the Kinetophone. Although film librarians, archivists, and preservationists may be familiar with Vitaphone discs, it is important for all professions working in a library, archive, or museum (LAM) setting to be able to identify Kinetophone films and their cylinder counterparts that might be accessioned into (or may already be in) their collections.

This paper examines the Edison Kinetophone system by delving into a case study of a 2016 restoration project headed by George Willeman, Nitrate Film Vault Manager at the Library of Congress National Audio-Visual Conservation Center (LC NAVCC). It provides background details of the endeavor, challenges met during the film and audio digitization process, and what insights these experiences can offer to those working in LAMs. In addition, the paper seeks to answer these research questions: Why didn't the Kinetophone system succeed? What challenges does this early film sound system present to archivists today? What can an archivist do when they have a film element and want to match it with a cylinder soundtrack? What would an archivist do if a collection they just accepted contained a film and its cylinder recording, and she had no idea how to care for this item, let alone play it to find out if it really contained the sound elements for her specific film? However, before any of these questions can be investigated, a brief background of the Kinetophone system should be given.

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1 W.K.L. Dickson and Antonia Dickson, *History of the Kinetograph, Kinetoscope & Kinetophonograph* (New York: Arno Press & The New York Times, 1970), 4.

Kinetoscopes, Kinetophones, and Kinetophone Systems

The introductory quote for this paper is taken from a letter that Edison wrote to W.K.L. Dickson, his former staff photographer and his choice to develop motion picture technology in 1888. Dickson, often referred to as "the first director in the history of film," is responsible for the 35mm film standard, the use of celluloid, sprocket wheels, and four-perf film.[2] He successfully carries out the first step in Edison's grand plan when he presents the foundation for a new peep device, a Kinetoscope, to his boss in 1889. Using a Kinetoscope can be described in the following manner:

> By inserting a coin into an appropriate slot, a viewer could peer into the eyepiece and observe a brief motion picture presentation. Inside the machine approximately 56 feet of 35mm film 'circulated [at 46 frames per second] in an endless loop under a viewing lens, each frame briefly illuminated by a flash of light through a rotating shutter.'[3]

For the cost of a quarter (or less), Americans could catch these new attractions at their local Kinetoscope parlor. Though these films lacked sound, the Edison team still had their eyes locked on the ultimate prize of synching sound to film.

A short featuring two men dancing to Dickson playing the violin[4] dates from 1894 and provides evidence that the company had begun to reach that goal. Then, the first Kinetophone was delivered to an arcade in 1895. This machine was basically a Kinetoscope, but with a phonograph added to its base. A belt drive connected the two devices and insured that they would start and stop at the same time,[5] while a visitor could listen to the audio via ear tubes. The films shown in this first iteration of the Kinetophone were often of song-and-dance routines or marching band performances, and this was a strategic move on Edison's part. "Dance and band films portray people keeping time to sounds. Whereas people making sounds require exact instantaneous synchronization, dancers and marching bands easily tolerate loose synchronization."[6]

Synchronization presents a huge challenge to the Edison team, as well as all other developers of early film sound systems. The process involves "difficulties at two separate stages: first in

2 Jerry Fabris, "Edison Kinetophone Films" (presentation, Orphan Film Symposium, Culpeper, VA, April 7, 2016).
3 Harry M. Geduld, *The Birth of the Talkies: From Edison to Jolson* (Bloomington: Indiana University Press, 1975), 18-19.
4 https://www.youtube.com/watch?v=Y6b0wpBTR1s.
5 Geduld, 22.
6 Rick Altman, Silent Film Sound (New York: Columbia University Press, 2004): 78.

recording, and then in reproducing the visuals and the accompanying sound. Success at the first stage did not automatically guarantee success at the second."[7] Synchronization of film and audio is a topic that this paper digs deeper into within later sections.

When public interest in these peep devices begins to wane, so does Edison's drive to make further developments in the realm of film sound. When competing systems start to arrive on the horizon – Edward H. Amet's Audo-Moto-Photo and Leon Gaumont's Chronophone – he resumes experiments in earnest. Edison adds Daniel Higham, inventor of a mechanical friction amplifier, to the team in 1908,[8] and two years later, the company develops a method of pre-recording amplification, which enables "the phonograph to pick up sounds clearly from a distance of over twenty feet away. Kinetophones could therefore be filmed and recorded simultaneously, without the large recording horn appearing in the film."[9] Now that the Edison team possesses a technique to capture the audio for a film that could be projected in theaters versus within a Kinetoscope peep device, they just had to figure out what equipment would be needed to exhibit these works.

Rick Altman deftly summarizes the issues that the Edison team was faced with at this particular time in history.

> Early synch-sound systems suffered from divergent expectations regarding sound and image playing speeds. In order to avoid unpleasant frequency fluctuations, sound recordings require an absolutely stable speed, so a wind-up spring motor equipped with a speed governor was used for the phonograph ... Conversely, virtually all moving picture projectors were hand-cranked at speeds that varied according to shooting speed and on-screen action. Whereas variations in speed represented an aesthetic attraction for the image, they were stigmatized as a deadly fault for sound.[10]

Obviously a projector set up behind the audience's seats at the back of the theater and a phonograph positioned near the screen were essential, but this configuration conjures a demand for an apparatus to enable the two machines to be connected. A synchronizer mechanism device is created for the projector, and a hole cut into a projection booth wall in order to run a linen cord from this synch system to the phonograph. In addition, a means of communication between the projectionist and

7 Geduld, 43.

8 Fabris presentation.

9 Rosalind Rogoff, "Edison's Dream: A Brief History of the Kinetophone," Cinema Journal 15, no. 2 (Spring 1976): 61.

10 Altman, 159.

phonograph operator is also necessary.[11] A telephone transmitter is mounted to to the phonograph to facilitate technician coordination via headphones so that the projectionist could advance or slow the projector relative to the phonograph.

It has taken over twenty years for Edison's dream to be realized, but by combining two of the corporation's inventions, the Kinetoscope and Kinetophone (version 1.0) into one, the Kinetophone system is born. Edison debuts the new system at vaudeville theaters in Manhattan, Chicago, and St. Louis on February 17, 1913 to mostly positive press, but also reports of technical difficulties.[12] All seven of the Kinetophone films restored in the Library of Congress case study are released this same year.

The Restoration Project

The story of how these Kinetophone films and cylinders were brought back into the spotlight begins with the LC NAVCC's Willeman. "This has been my pet project for 25 years," he shared in 2016, the year that the project came to fruition. "When I started with the Library back in the 1980s and discovered these films on the shelf and realized what they were, I thought, 'Wouldn't it be great if someday we could see them with their soundtracks put back on?'"[13] Willeman teams with two sound experts, Jerry Fabris (Museum Curator, Thomas Edison National Historical Park (TENHP)) and Bryan Hoffa (Audio Preservation Specialist at the NAVCC), who help him do just that. [Note: This paper includes comments from all three of these professionals, as told to the author via email correspondence, as well as details culled from conference presentation papers and slides that they shared with the author.]

As Willeman tells, the film elements were being housed at the NAVCC, but the cylinders were not. Head of the Moving Image Section at the LC Mike Mashon decided to reach out to the TENHP to see if the museum had any in its collection. Fabris replied by sending the Library an inventory of the 43 Kinetophone cylinders that are preserved at his institution, and Willeman

11 *The Kinetophone: A Fact! A Reality!*, directed by Ben Model and George Willeman (New York: Undercrank Productions, 2018), DVD.
12 Fabris presentation.
13 Will McKinley, "The First Talking Pictures Regain Their Voice," Cinematically Insane (blog), November 11, 2016, https://willmckinley.wordpress.com/2016/11/21/the-first-talking-pictures-regain-their-voice/.

compared this list of cylinders to LC's inventory of films.[14]

The restored Kinetophones were originally captured on 35mm nitrate film, two wax cylinder masters, and eleven blue celluloid cylinders on plastic cores, and all of the items were actually kept together at the Edison Laboratory until the early 1960s. These legacy formats come with inherent deterioration issues due to their physical composition, and preservation concerns are a primary reason why they became separated. As the cellulose nitrate in film ages, it releases nitric oxide, nitrous oxide, and nitrous dioxide. If these gases combine with atmospheric moisture, they form nitric acid, which causes further decomposition to the film and sometimes to its storage container.[15] Conversely, if nitrate is stored in overly dry conditions, the film can start to contract or shrink. Aside from being susceptible to mold growth and humidity,[16] cylinder sound recordings are very fragile, especially when they are exposed to drastic changes temperature.

When the National Park Service (NPS) acquired the Edison Laboratory in 1956, TENHP was aware of the aforementioned deterioration risks, and as the film began exhibiting signs of shrinkage and decomposition, decisions had to be made about the continued storage of the nitrate holdings. After Superintendent Melvin Weig expressed these concerns to the Librarian of Congress, an agreement was reached in 1965. "The Park Service agreed to pay the cost of the first printing copy (negative from positive, or positive from negative), and the Library agreed to pay for a projection print and to store the negatives and make them available at any time to the Park Service for future prints."[17] This is how fourteen Kinetophone film reels came to be stored at the NAVCC, while any cylinders that were gifted to the NPS by Edison Inc. / McGraw-Edison remained under the care of the TENHP.

Over fifty years later, Willeman compared the list of cylinders being stored at TENHP to

14 Jerry Fabris, email message to Yuri Shimoda, March 7, 2019.

15 Monique Fischer, "A Short Guide to Film Base Photographic Materials: Identification, Care, and Duplication," Northeast Document Conservation Center, accessed March 20, 2019, https://www.nedcc.org/free-resources/preservation-leaflets/5.-photographs/5.1-a-short-guide-to-film-base-photographic-materials-identification,-care,-and-duplication.

16 Harrison Behl, "Audio Formats: Characteristics and Deterioration," in *ARSC Guide to Audio Preservation*, ed. Sam Brylawski, et al. (Eugene: Association for Recorded Sound Collections; Washington, D.C.: Council on Library and Information Resources and the Library of Congress, 2015), 16.

17 Cormac Donnelly, "The Dickson Experimental Sound Film," DesigningSound.org, accessed March 8, 2019, http://designingsound.org/2014/05/07/the-dickson-experimental-sound-film/.

the LC inventory of Kinetephone films. Cylinder matches were found for seven of these films. These include: "Musical Blacksmiths," "Nursery Favorites," "The Deaf Mute," "The Edison Minstrels," "The Five Bachelors," "The Old Guard," "Jack's Joke," and also the three-minute long "The Edison Kinetophone" lecture on the system given by Allan Ramsey, who directed the other seven films restored in the project. The original nitrate elements were scanned at 2K on the Lasergraphics ScanStation at the NAVCC, which created fabulous results, even in cases when the film had experienced shrinkage.

I was able to watch all seven of the restored Kinetophone films via the Undercrank Productions DVD release, *The Kinetophone: A Fact! A Reality!*, (2018). The films that were transferred from original camera negatives – "The Edison Minstrels," "The Old Guard," and "Jack's Joke" look especially beautiful. Overall, I really only noticed some signs of nitrate deterioration on "The Edison Kinetophone" and some minor base scratches during "Musical Blacksmiths."

In terms of the audio elements, Fabris carried out the digitization of the corresponding cylinders on an Archeophone cylinder playback machine at the TENHP Recorded Sound Preservation Transfer Facility. He sent thirteen WAV files back to the NAVCC, along with a spreadsheet full of rich technical metadata (playback equipment specifications, preamp settings, general playback notes, etc.). Of particular note to engineer Hoffa were any mentions of pops, wow (pitch variation), surface noise, and pre-echo that he could attempt to eliminate in his audio lab. Hoffa utilized CEDAR Audio's system and iZotope RX noise reduction and audio repair software to bring out the performers' voices and reduce any playback noise and audio artifacts. When asked if he had any particular challenges during the restoration process, Hoffa replied, "I remember having a difficult time with 'The Old Guard.' In that one, the speech was so low, it made it very difficult to reduce hiss without affecting the voice. I didn't dig in quite as hard, choosing to leave some noise over a very unnatural sound."[18]

Next, Willeman combined the moving image and sound elements together using Final Cut Pro. With FCP, he was able to slow down the picture to match the sound. Event at 16 fps, the film

18 Bryan Hoffa, email message to Yuri Shimoda, March 21, 2019.

and audio would drop out of synch, and he would have to cut, bring them back into synch, press play, and then repeat the process with two or three more 2-3 cuts. Some of the films, like "The Edison Kinetophone" required more cutting and pasting.

The most difficult re-synching job was "The Edison Minstrels" because Willeman realized that they had the British version of the audio and the American version of the picture. During the "So Amazingly Perfect They Are Really Weird: The History and Restoration of Edison Kinetophone Films" documentary included on the *The Kinetophone: A Fact! A Reality! DVD*,[19] he admits that this specific film took lots of editing, "but because the performers and conductor were so time conscious, synching was easier." The challenges presented by the different versions of the "Minstrels" sound and picture were unique, but Willeman's remark brings us back to the biggest challenge that faced the Edison Kinetophone system – and ultimately, one of a few reasons why it failed – synchronization of the visual and the audio.

The Rise and Fall of the Edison Kinetophone System

Upon its February 19, 1913 debut, the Kinetophone system enjoyed initial success. North American rights for the device were sold to the American Talking Picture Company, Inc., which was backed by prominent vaudeville organizations. Vaudeville theaters were eager to show Kinetophone films because they were different from the pictures being shown in regular movie houses. Moreover, the system was applauded by critics upon its debut. "The Kinetophone business boomed into the summer of 1913, but audiences then lost interest. Each reel of film was only six minutes long, and pictures usually depicted mediocre vaudeville acts or scenes from plays."[20] It was not possible for the films to exceed six minutes because the size of the cylinders dictated the length of the soundtrack and the moving image that went with it.

As soon as the phonograph began recording on set, the camera operator released the crank on the projector, and recording began. "The film goes at a pace dictated or set by the phonograph. The speech has the right of way, and the picture must follow. In this way, perfect accord is secured,

19 *The Kinetophone: A Fact! A Reality!* DVD.
20 Charles Musser, *Thomas A. Edison and His Kinetographic Motion Pictures* (New Brunswick, NJ: Rutgers University Press, 1995), 52.

and there can be no runaway dialogue."[21] There could also be no editing of sound or picture. There was a moment in "Musical Blacksmiths" when the little girl is perched upon one of the smith's shoulders. When she slips off his shoulder a bit, she lets out a giggle, yet no laughter can be heard. This is one instance where the lack of film editing capabilities is evidenced.

In addition, during the filming of Edison's Kinetophones, there were no soundproof stages. "Shooting and recording were often done at night when there was less noise in the neighborhood. But ... microphones unavoidably picked up the sputter of the arc lights, whose heat also softened the wax coatings on the cylinders and sometimes blurred the recordings."[22] Aside from these audible gaffes, Willeman points out several visible mistakes in the films they restored during the *Kinetophone: A Fact! A Reality!* DVD. Since the phonograph was perched above the on-camera action in the rafters during filming, the device's shadow can be seen on the ground in a scene from "The Deaf Mute," due to the fact that the film was shot outdoors on a sunny day. The bottom edge of a phonograph horn that was sitting in the rafters is spotted at the top of a fram of "The Old Guard."

These details were in all likelihood missed by most movie-going crowds in 1913, but that isn't to say that the novelty of these talking pictures didn't rapidly wear off. However, it was both audience-member and theater-operator frustration with synchronization that was the true nail in the coffin for the Kinetophone system. While a small strip of celluloid (1/16 of an inch wide and 1/2 inch long) was removed from each cylinder to act as a visual cueing mark for the phonograph technician,[23] there were extenuating circumstances beyond human control (e.g. rats eating through the linen cord connecting the projector pulley and phonograph) that thwarted the synch system.

"A further problem lay in inventors' regular recourse to electricity to stabilize speeds and to synchronize image and sound machines. ... electricity – was during the 1900s – still in its infancy. Some American cities employed direct current, while others used alternating current;

21 Harry M. Geduld, The Birth of the Talkies: From Edison to Jolson (Bloomington: Indiana University Press, 1975), 66.
22 Geduld, 68.
23 George A. Blacker, "You Ain't Heard Nothing Yet? Some Comments on the 'Pre-Jolson' Edison Talkies," *The Antique Phonograph Monthly* 6, no. 10 (1981): 5.

voltages varied widely.[24] Issues posed by the new phenomenon of electricity were hardly the most challenging for Edison, though.

In the *A Fact! A Reality!* DVD, Willeman describes the maneuvering a projectionist had to perform whenever a Kinetophone would fall out of synch, and it is no easy process. Since New York state had mandated that motorized projectors were illegal to deter projectionists from leaving their posts of monitoring the flammable nitrate film, they had to simultaneously listen for directions from the phonograph operator, keep an eye on the film, and then reach between the projector head and hot lamp housing to grab the knob and crank the film until it synched to the sound. Moreover, "poorly trained or careless operators forgot to synchronise; the belt jammed or broke; the film itself broke in the projector (as often happened with all films screened at the time), and being shortened during repair went out of synchronisation with the recordings; the recordings themselves broke ... Given these conditions, it is easy to see why spectators and exhibitors quickly abandoned this invention."[25]

The Edison Lab knew that this operator-dependent system was problematic, and the team tried everything to get the projector and phonograph to work together. Even though Americans were turning to other modes of entertainment, overseas interest in the Kinetophone remained strong. That is, until the onset of World War I. When a fire destroyed Edison Phonograph Works in December 1914, the Kinetophone studio was not affected. When the audio facility was rebuilt, though, "Edison discontinued production of all Kinetophone films and equipment."[26]

Observations and Future Considerations

Even though the Edison Kinetophone system ultimately suffered from forced obsolescence, its impact on the development of cinema is important. Scholars and other researchers should be able to watch the films and their soundtracks, but providing access to their contents inevitably means digitizing the legacy formats. As is the case with the LC/TENHP project, LAM professionals are unable to set up a Kinetophone system so that users can watch the films as they were seen by

24 Altman, 159.

25 Martin Barnier, "The Controversy Over the 'Invention of the Talking Picture,'" *Film History* 11, no. 4. (1999): 482.

26 Fabris presentation.

audiences in 1913. The equipment is not easy to come by, and even if it were, as this paper has shown, the system was not simple to operate. Instead, restoration is more akin to what Edison intended over a century ago, digitally marrying the images and audio. In doing so, what makes the Kinetophone system so special (presenting film sound on cylinder) is lost; the media's context is no longer discernible.

The *A Fact! A Reality!* DVD presents a bonus Kinetophone film, "The Politician," which is still missing it's sound cylinder. On the DVD, Willeman shares that the Library would love to locate the audio element for yet another film, "Votes for Women," featuring scenes from the suffragette movement. During my research, I came across a list of twenty Kinetophone films, all of which appear to have been produced, that was published in 1976. In her article, the author states that

> The most difficult items to find were the films, themselves. In 1972, nine kinetophones were available for screening at the Library of Congress in Washington, D.C.; however, only two had sound tracks. Because these films could not be played back on their original equipment, judgments of how they sounded at the time of release had to be based on newspaper and magazine reviews of the day.[27]

I also found a "Kinetophone Cylindrography" published in a 1981 issue of *The Antique Phonograph Monthly*, but it only contained five titles.[28] This list was updated to include over 75 Kinetophone cylinders in a later issue (volume 7, no. 2), with a plea from the writer, Art Shifrin, to contact him with any information of their corresponding films. Establishing some kind of a central database, akin to Ron Hutchinson's Vitaphone Project (http://www.vitaphoneproject.com/), that displays Kinetophone film and cylinder holdings in collections worldwide would be a great step in reuniting separated elements.

The Edison Kinetophone restoration project was driven by the dedication of a passionate and enthusiastic individual, who had the resources of the LC NAVCC and TENHP at his disposal. It took modern technology – the Lasergraphics ScanStation, the Archeophone, Final Cut Pro, CEDAR, and iZotope – to reformat and restore the images and sound. Not all LAM professionals have access to a digital audio workstation (DAW) or a machine like the French Archeophone if

27 Rogoff, 59.
28 Blacker, 3.

they needed to listen to a cylinder that they think might be a Kinetophone element.

Rare cylinders like the Kinetophone soundtracks should not be played back, let alone transferred, using old phonographs. There are two other modern cylinder playback systems: one being utilized by the UCSB Cylinder Audio Archive (John Levin's CPS1, http://www.cps1.net/), the other by the NAVCC and Indiana University's Media Digitization and Preservation Initiative (Nicholas Bergh's Endpoint Cylinder Transfer Machine, https://www.endpointaudio.com/), these machines are too expensive for a LAM to purchase if they only have a few cylinders to digitize. Collaboration efforts across institutions or among different departments within a large institution are ideal for instances such as these.

The creation of the aforementioned Kinetophone online database could provide a foundation for LAMs to form relationships and build a network to partner on grant applications for restoration projects. Until then, using listservs run by organizations like the International Association of Sound and Audiovisual Archives (IASA), the Association of Moving Image Archivists (AMIA), and the Association for Recorded Sound Collections (ARSC) to establish connections is an option. I will be part of a panel presentation at the Joint Technical Symposium in Amsterdam this fall that calls for the creation of a network for smaller LAMs to become a part of in order to seek assistance with audiovisual and sound carriers within their collections. I believe that such a network can help provide all archivists, librarians, and conservationists with training to be able to identify and handle legacy formats, like Kinetophone films and their soundtracks.

Conclusion

> Never in the course of human history has the sound environment changed as fast or in as wide-ranging a manner as it did during the latter half of the nineteenth century in American cities. … Early film accompaniment offers maddeningly incomplete evidence. Sound was held in such low esteem that it is never even mentioned in most reviews. Even more problematic, cinema's early years were a period of exceptions. Everything was a novelty, and thus received special treatment. Remaining evidence often relates to inaugural presentations of new projection systems, gala release of new films, or special introductions of new devices.[29]

Thomas Edison's dream of moving images synchronized to sound came to fruition in the Kinetophone system, although, it met a quick demise. Examining restoration projects like the

29 Altman, 27 and 77.

2016 Edison Kinetophone collaboration between the Library of Congress National Audio-Visual Conservation Center and the Thomas Edison National Historic Park provides valuable insights to all professionals within libraries, archives, and museums who steward audiovisual and sound materials within their collections.

Bibliography

Altman, Rick. Silent Film Sound. New York: Columbia University Press, 2004.

Barnier, Martin. "The Controversy Over the 'Invention of the Talking Picture.'" *Film History* 11, no. 4. (1999): 477-484.

Behl, Harrison. "Audio Formats: Characteristics and Deterioration." In A*RSC Guide to Audio Preservation*, edited by Sam Brylawski, et al., 14-36. Eugene: Association for Recorded Sound Collections; Washington, D.C.: Council on Library and Information Resources and the Library of Congress, 2015.

Blacker, George A. "You Ain't Heard Nothing Yet? Some Comments on the 'Pre-Jolson' Edison Talkies." *The Antique Phonograph Monthly* 6, no. 10 (1981): 3-7.

Dickson, W.K.L. and Antonia Dickson. *History of the Kinetograph, Kinetoscope & Kinetophonograph*. New York: Arno Press & The New York Times, 1970.

Donnelly, Cormac. "The Dickson Experimental Sound Film." DesigningSound.org. http://designingsound.org/2014/05/07/the-dickson-experimental-sound-film/ (accessed March 8, 2019).

Fabris, Jerry. "Edison Kinetophone Films." Presentation, Orphan Film Symposium, Culpeper, VA, April 7, 2016.

Fischer, Monique. "A Short Guide to Film Base Photographic Materials: Identification, Care, and Duplication." Northeast Document Conservation Center. https://www.nedcc.org/free-resources/preservation-leaflets/5.-photographs/5.1-a-short-guide-to-film-base-photographic-materials-identification,-care,-and-duplication (accessed March 20, 2019).

Geduld, Harry M. *The Birth of the Talkies: From Edison to Jolson*. Bloomington: Indiana University Press, 1975.

Model, Ben and George Willeman. *The Kinetophone: A Fact! A Reality!*. New York: Undercrank Productions, 2018. DVD, 76 min.

Musser, Charles. *Thomas A. Edison and His Kinetographic Motion Pictures*. New Brunswick, NJ: Rutgers University Press, 1995.

Rogoff, Rosalind. "Edison's Dream: A Brief History of the Kinetophone." *Cinema Journal* 15, no. 2 (Spring 1976): 58-68.

Curation of *Out of the Shadows: Building Community Through the Arts*
Photo exhibit on view April 5-May 30, 2019 at 341 FSN in Little Tokyo

Since October 2018, I have been working as an Andrew Mellon Foundation-funded UCLA/ Community Archives intern at Visual Communications (VC), the nation's premier Asian American and Pacific Islander media arts center. VC commemorates its 50th anniversary in 2020, and the year ahead is full of special events to build anticipation for the big celebration. Materials from the VC Archives are being showcased in several of these programs, so the organization, digitization, and description of the thousands of 35mm color slides and special collection 35mm black-and white negatives within the center's collections are of the utmost importance. These activities make up the majority of my day-to-day work at VC.

I was also tasked with activating images from the archives in an exhibit that is part of Centering the Masses, a 9-week series of free pop-up events and programs, addressing the fact that the area has been and continues to be a crossroads of shifting racial, generational, and economic conditions. I titled the exhibit Out of the Shadows: Building Community Through the Arts because the archival images I have chosen celebrate VC's use of media arts to engage with Angelenos living in and around Little Tokyo, as well as area visitors. Faces from VC's first five decades are brought to light for the first time in decades, as they create film, music, dance, theater, culinary, and graphic art works in these pictures. The exhibit opened on April 5, 2019, and a few days later, I presented a Curator's Talk on the preservation and curation process, followed by a discussion with one of the photographers whose work is highlighted in the exhibit, Ed Ikuta. To follow are some images from the event taken by my internship site supervisor, Abe Ferrer.

List of Courses Taken

Fall 2017

Information Studies 211 – Artifacts and Cultures

Information Studies 260 – Description and Access

Information Studies 423 – Public Libraries

Winter 2018

Information Studies 270 – Systems and Infrastructures

Information Studies 480 – Introduction to Media Archiving and Preservation

Ethnomusicology C200 – Audiovisual Archiving in the 21st Century

Spring 2018

Information Studies 212 – Values and Communities in Information Professions

Information Studies 281 – Historical Methodology of Information Studies

Information Studies 433 – Community-Based Archiving

Fall 2018

Information Studies 289-3 – Intellectual Property

Information Studies 289-5 –Sound Technologies & Society

Information Studies 498 – Internship

Winter 2019

Information Studies 481 – Moving Image Technology

Information Studies 461 – Descriptive Cataloging

Information Studies 497 – Fieldwork

Spring 2019

Information Studies 462 – Subject Cataloging

Information Studies 464 – Metadata

Information Studies 498 – Internship

Advising History

Fall 2017

I was originally assigned to Professor Christine Borgman as my faculty advisor, and met with her and her other student advisees from my cohort for the first time at Fall Convocation. That afternoon, she expressed that she intended to cease advising at the end of the academic year, so we would most likely need to switch to another advisor at some point in the near future. Luckily I had already began to build a rapport with Professor Shawn VanCour, as he was assisting me in establishing a student chapter of a professional organization to which we both belonged. The fact that some of our research interests – media archives, media archeology, and sound studies and audio culture – aligned also made it a natural transition to make in October of fall quarter. The following month, I met with Professor VanCour to discuss my winter course selections. Even though two of the classes I hoped to take overlapped each other by thirty minutes, he encouraged me to ask the instructors if accordances could be made, and I was able to take both courses.

Winter 2018

Professor VanCour was helpful in my pursuit of summer internships and a conference travel grant by providing guidance and recommendation letters throughout this quarter. In February, we met to go over the classes I had picked for spring. During this advisory session, he tried to assist me in determining if any Music or Music Industry classes could fulfill my desire to acquire more experience digitizing analog audio formats. We were not successful in finding one, but I appreciated his help.

Spring 2018

Since I had to be on the east coast to begin my summer internship the day after Memorial Day, I had my final advisory meeting with Professor VanCour on May 24, 2018. During the session, we spoke about strategies for a successful second year. I was still deciding if I wanted to do a portfolio or thesis, and he set a deadline for the end of summer for me to choose between the two options. I notified him via email at the end of July that I had decided to do a portfolio and had selected a topic for my issue paper.

Fall 2018

On September 24, I consulted with Professor VanCour about my fall course list. After reviewing the projected courses for the year in the new Student Handbook, I began to worry about my ability to produce a major paper from the classes being offered. I asked him what steps I needed to pursue if I wanted to file a petition request for a paper I had written outside of the department to fulfill the major paper requirement with the Professional Programs Committee (PPC). His assistance in the entire process was key. During this time, I also began to prepare for a winter Fieldwork assignment by asking Professor VanCour if he would be my faculty supervisor for the project and submitted all of the preliminary paperwork that he required. Professor VanCour required all of his advisees submit a first draft of their issue paper and professional development statement by the end of winter quarter. We had a Zoom meeting on December 10 so he could provide feedback and go over the courses I had selected for winter.

Winter 2019
On January 29, I had a second portfolio advisory session with Professor VanCour, during which he offered feedback on the second drafts of the issue paper and professional development statement, as well as signing off on my 50-Word Issue Statement. Spring quarter advising took place on February 5, and I was able to go over my latest issue paper draft with him on February 26.

Spring 2019
I do not anticipate needing any additional advisory meetings with Professor VanCour this academic year.

Additional Advising

It was after hearing Professor Michelle Caswell speak at an information night that I made the decision to apply to UCLA. She has been a constant source of inspiration throughout my time in the MLIS program, both in the classroom and beyond. Although she is on sabbatical this year, I am fortunate to continue to benefit from her guidance and leadership as a Mellon Community Archives intern.

Last spring, I was also able to forge a bond with Maya Lerman, who is my audio archivist hero and a Library of Congress American Folklife Center archivist. She continues to share priceless advice with me and remains someone I look up to immensely. I am very grateful to my supervisors at the UCLA Music Library, Matthew Vest and Callie Holmes, the librarian-archivists of the UCLA Ethnomusicology Archive (Aaron Bittel and Maureen Russell), and my boss at the Autry Museum of the American West, UCLA MLIS alum Liza Posas, for the opportunities they have given me, the continued faith they have shown in me, and their mentorship and friendship.

Accessibility Statement for yurishimoda.com

As I built my digital portfolio, I referred to Web Content Accessibility Guidelines (WCAG) 2.1 requirements (https://www.w3.org/WAI/standards-guidelines/wcag/) in addition to the knowledge I have gained from years of maintaining websites for publications, which afforded me insight into the many ways people access the Internet and how to produce a site that is clear and simple to navigate for all users. WCAG 2 defines three levels of conformance: level A, level AA, and level AAA. My site partially conforms to WCAG 2.1 level AA, meaning some parts of its content does not fully conform to the standard.

I ensured that there is no time limit to any content, none of the pages contain flashing material or animations that would induce physical reactions from users, and that all pages possess titles or headings to describe their content. A user's location on the site is clearly identifiable via text indications, and when it comes to the many different sections of my MLIS portfolio, there is more than one way to locate a page within this distinct set of pages (via the main 'MLIS Portfolio' page and the drop-down menu that is accessible in the header of the entire site).

I utilized the Wix cloud-based web development platform to create my website. The site builder enabled me to tailor the aesthetics of my site to be adaptable to the needs of users whether they are accessing the site from a mobile device or through a traditional PC browser. Using Wix allowed me to save time and money, but it also constrained the amount of flexibility I had when it came to providing maximum accessibility. In terms of maximizing the ways in which users can perceive information and user-interface components, I supplied text alternatives to images displayed throughout the site, and images of text were used purely for decoration.

I paid particular attention to the spacing in between lines (at least 1.5 times the font size) and paragraphs (at least 2 times font size). Throughout the construction process, I put a lot of thought into the types of fonts I was using and that their colors maintained a standard rate of contrast (3:1) against adjacent colors, but there were certain areas in which Wix did not allow for any customization. If I had more financial resources to put into the site, I would implement more features to prevent accessibility challenges. I would love to have included an audio player that

could read page content to users, for example.

I welcome your feedback on the accessibility of my site. Please let me know if you encounter any accessibility barriers by contacting yurishimoda@gmail.com.