Final Performance Report
Federal Award ID Number (FAIN): PW-234763-16

Ethical Access to “Music Time in Africa”

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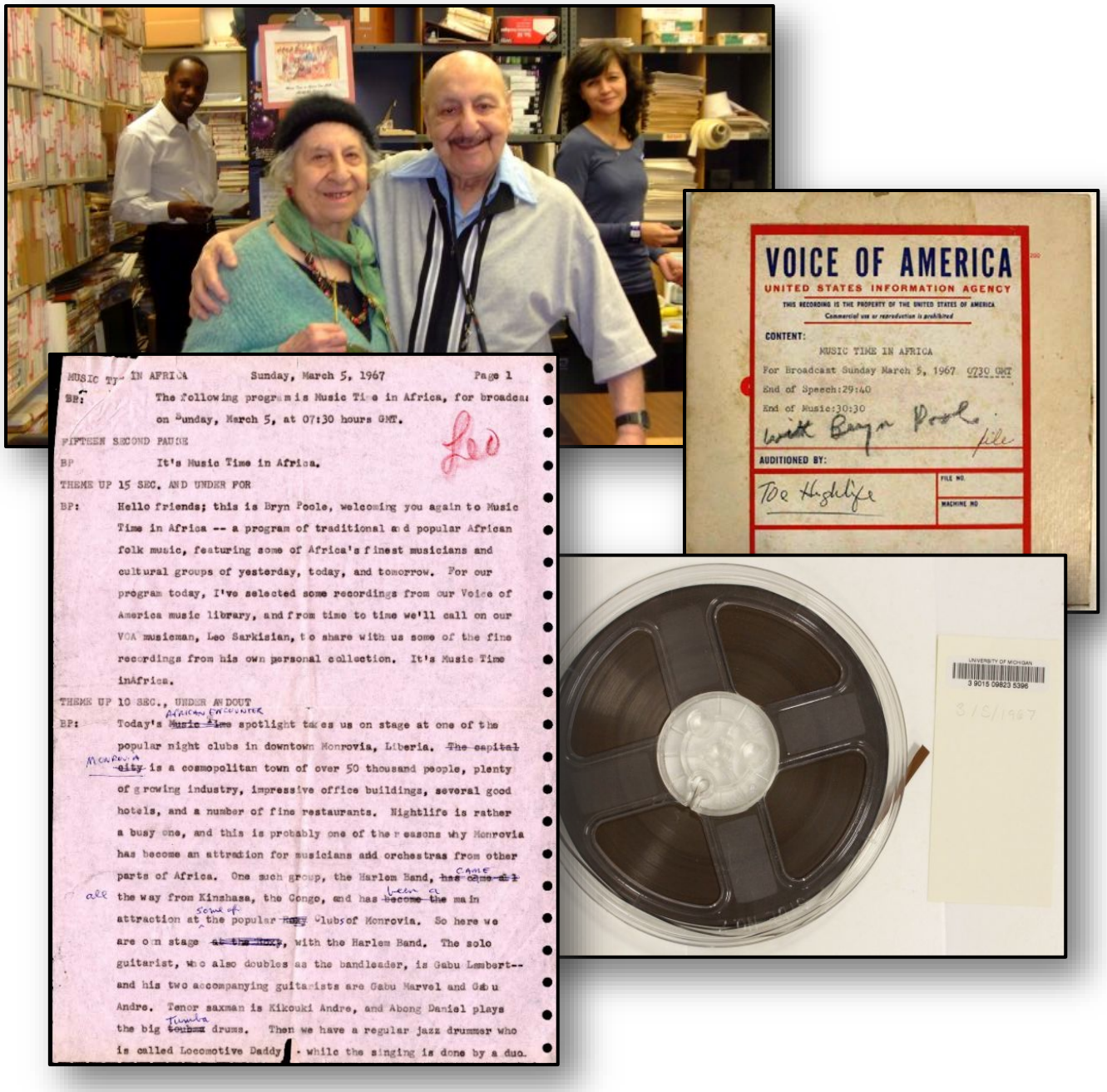
August 31, 2018



Ethical Access to *Music Time in Africa*

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1 June 2016 to 31 May 2018

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Overview

Ethical Access to *Music Time in Africa* is a project designed to identify, digitize, assign appropriate descriptive metadata, preserve, and make available forty years of radio programs created under the auspices of the Voice of America. This report describes the origins, content, and materiality of the *Music Time in Africa* radio program, describes and assesses the project's major accomplishments, provides information on project's personnel and products, and summarizes some of the ways that the project continues to thrive after NEH support has ended. Our assessment of these accomplishments concludes that the project exceeded our expected outcomes for transforming the radio programs from analog to digital and providing for the long term preservation of and access to the digital recordings. The project fell short of its goal to create what we claimed would likely be a new "model for culturally sensitive online distribution of digitized musical recordings." We describe the reasons for this shortcoming, along with a variety alternatives that we considered along the way.

Music Time in Africa

Music Time in Africa (MTiA) is the oldest and longest-running radio program broadcast by the Voice of America (VOA), the official broadcast agency of the US government. Ethnomusicologist Leo Sarkisian created the weekly program in the 1960s at the invitation of famed journalist Edward R. Murrow. Leo (as he was universally and affectionately known) recorded hundreds of hours of original field recordings in over thirty-eight newly decolonized African nations. From these recordings and his extensive library of contemporary and sometimes rare commercial recordings on LP and 45 rpm disks, Leo selected tracks for weekly or twice-weekly thirty-minute broadcasts. He chose the musical excerpts and scripted the broadcasts based on his first-hand knowledge of musical genres and cultures of the African continent.

Leo worked with a series of charismatic hosts whose voices became a familiar on-air presence and inspired an outpouring of fan mail for the program, for the hosts, and for Leo Sarkisian. Here are the names of the hosts for *Music Time in Africa* since its beginning to the present time.

- Bryn Poole (1965-69), spouse of a VOA station officer in Monrovia, Liberia;
- Susan Moran (1969–1978), VOA staff broadcaster in Washington, DC;
- Rita Rochelle (1978–2004), experienced radio host hired and further trained by Leo;
- Matthew Lavoie (2004–2012), ethnomusicology graduate student of Kelly Askew;
- Heather Maxwell (2012–present), ethnomusicologist trained by Kelly Askew.

The project covers the work of Poole, Moran, and Rochelle.

Music Time in Africa was first broadcast in May 1965. Production for MTiA began in Liberia's VOA Program Center in Monrovia, then relocated permanently to the VOA headquarters in Washington, DC, by 1969 when Leo was appointed the Music Director of the Africa Division. He continued to travel regularly to Africa for field recording through 1985. He also promoted the program by developing marketing strategies, responding in person and in writing to fans, and keeping in contact with musical artists and their communities. Over a forty year period, Leo accumulated in the VOA headquarters in Washington DC an extensive music library associated exclusively with the production of the *Music Time in Africa* radio programs.

The long-term loan of these materials to the University of Michigan redefined a music library into the Leo Sarkisian Archive, housed by UM Library in large archival storage boxes. Under terms of a 2014

Memorandum of Understanding (MoU), the University accepted the vast majority of the original Leo Sarkisian Library with the provision that the University could pursue funding or allocate its own funds to support the use of the Sarkisian materials for research and teaching. Support from NEH has enabled the University to digitize and make available a small portion of the overall collection. In 2018, the University Library established the Leo and Mary Sarkisian Collection to provide for the long term care and access to the materials that Leo has donated to the University over the years.

The MTiA recordings chosen for inclusion in the NEH project consist of ¼" magnet tape wound on 5"or 7" plastic reels or 10" aluminum reels. Recordings made from 1963 to 1977 (ca. 10% of total) are generally on acetate tape; recordings made after 1977 are on polyester tape. There is evidence of light sticky shed syndrome on the earlier tapes, pack inconsistencies, and curling. None of these issues were significant enough to prohibit playback for purposes of digitization. All tapes are housed in individual containers with typed or handwritten labels affixed. All of the information noted on the box was recorded on an internal processing spreadsheet for inventory control and cataloging.

Selection of materials for inclusion in the project reflects an overall goal of representing the broadcast of the MTiA programs as fully and completely as possible. In striving for comprehensive coverage, the MTiA project digitized, preserved, and is making available for research and scholarship all of the program scripts from 1966–2004, along with all extant recordings of radio broadcasts. If a given script lacks a full broadcast recording, the associated reel of musical "inserts" has been substituted. In some cases the project includes scripts for which there are no identifiable recordings.

During the course of the project, we worked with VOA staff to identify hundreds of additional *Music Time in Africa* radio programs created after Leo Sarkisian retired by Matthew Lavoie and Heather Maxwell. These additional digital programs are being transferred to the University of Michigan and will be included in the overall access and delivery system described below.

Project Activities and Accomplishments

1. Identify Magnetic Tapes for Digital Conversion

Audio tape processing: The project team identified and processed 930 sound recordings to the digitization vendor, using shipping protocols established by the vendor. Audio recordings are on either 7" or 10" reels of ¼ inch magnetic tape. The team developed an inventory control and shipping manifest system to support processing of tapes to and from the vendor and follow-up quality control processes. The project team assigned each audio recording one of the following five codes, indicating the completeness of the analog components of the radio program:

1. **Platinum**: an audio recording of a full 25 to 30 minute radio broadcast [including the voice of the announcer] and the associated dated script.
2. **Gold**: an audio recording of a full radio broadcast without a printed script.
3. **Silver**: the musical cuts for a radio broadcast and the associated dated script [without the voice of the announcer]
4. **Bronze**: incomplete broadcast recordings or scripts.
5. **Script Only**: a full, dated script of a broadcast without an associated sound recording

Appendix 1 is a graphic representation of the distribution of the programs in terms of completeness across broadcast dates. The curve in the graphic reflects the tendency to cannibalize earlier program content for later broadcast and the prevalence of re-broadcasting of previous programs at later dates. **Appendix 2** is a list of the programs digitized, organized in chronological order of broadcast. Among the ten variables listed for each program are the completeness coding (full program, script, musical cuts) and notes compiles during processing.

2. Digitize Sound Recordings and Scripts

Audio recording digitization: The MediaPreserve, an audiovisual laboratory in Cranberry Township, Pennsylvania, was the vendor selected to digitize the 900+ radio program tapes. Project staff processed the tape recordings to MediaPreserve in batches of roughly 100 tapes, using containers and shipping arrangements provided by the vendor. Each physical recording was associated with a unique University of Michigan Library barcode, which the vendor used for inventory control and the project team used for file management, including naming conventions in the preservation repository. MediaPreserve provided the following: 1) proper levels of customized services needed to obtain preservation quality master files; 2) production files identical to master files except for normalization and noise reduction processing; and 3) appropriate access derivatives (MP3); 4) technical metadata for each digital file, with all files for a given batch wrapped in a master METS record. **Appendix 3** is a summary of the digitization work done by MediaPreserve.

Figure 1 is a table of the structure of the digital files delivered by the vendor for each digitized radio program. The files include an archival master (WAV), normalized access master (WAV), streaming file (MP3), bitmap images of the reel box cover and magnetic tape reel (JPG), and checksum calculations for the preservation, access, and streaming files (MD5).

```
 Directory of F:\Audio_Deliverables\39015098237145

10/26/2016  11:37 AM    <DIR>          .
10/26/2016  11:37 AM    <DIR>          ..
10/25/2016  03:09 PM            38,819 39015098237145.xml
09/29/2016  04:40 PM       465,435,184 39015098237145_access.wav
09/30/2016  12:56 AM                62 39015098237145_access.wav.md5
09/14/2016  10:59 AM         2,051,448 39015098237145_BoxSide.JPG
09/29/2016  04:39 PM       465,435,182 39015098237145_preservation.wav
09/30/2016  12:56 AM                68 39015098237145_preservation.wav.md5
09/14/2016  10:59 AM         1,771,686 39015098237145_ReelFront.JPG
09/29/2016  04:43 PM        38,786,821 39015098237145_streaming.mp3
09/30/2016  12:56 AM                65 39015098237145_streaming.mp3.md5
               9 File(s)    973,519,335 bytes
```

Figure 1. Table of digital files delivered for each radio program recording

Preservation master and normalized (access) files conform to the highest standards recommended by the International Association of Sound and Audiovisual Archives (IASA TC-04), the accepted international standard for audio digitization.[1] In this project, MediaPreserve provided the technical metadata for each digital file, with all files for a given batch wrapped in a master METS record. For more information about MediaPreserve, see: http://ptlp.com/en/mediapreserve/overview/about-us/

Project staff digitized the best version of a script associated with a program recording. In most cases, staff found the script folded and placed inside a tape recording box. An additional 85 stand-alone scripts, not matched with a recording, were identified among boxes of loose papers sent to Michigan from the Sarkisian library in Washington. Staff experimented with the scanning parameters that would best represent the scripts visually while also supporting the production of full text from the scripts via Optical Character Recognition (OCR) processing. We settled on 300 dpi / 24 bit depth full color bitmapping, with the preservation master created in a TIFF format and derivatives for web display in the JPEG format.

[1] International Association of Sound and Audiovisual Archives. IASA Technical Committee, *Guidelines on the Production and Preservation of Digital Audio Objects*, ed. by Kevin Bradley. Second edition 2009. (IASA-TC 04). www.iasa-web.org/tc04/audio-preservation.

These specifications conform to the recommended standards promulgated by the Federal Agencies Digital Guidelines Initiative.[2]

Processing Manual: Project staff developed, tested, and revised a comprehensive and detailed manual to support the processing of radio programs, including the handling of digital audio files received from the vendor, the digitization of program scripts, the use of ResCarta to create MODS metadata records, and quality assurance activities. **Appendix 4** is the final version of the full manual. The manual is also published on the project website.

3. Assign Metadata to MTIA recordings and scripts

The grant proposal had suggested that the project would adopt the PBCore metadata schema. After completing a detailed comparison of Metadata Object Description Schema (MODS) and PBCore, the project team decided that the MODS model was most appropriate for the material in hand; in addition, the MODS model was a much closer fit to the metadata scheme of the access delivery system supported by the University of Michigan (see below). Utilizing the PBCore scheme would have required custom programming in the access system and a very time-consuming cataloging effort. Software applications supporting PBCore are not readily available, in comparison to MODS.

Metadata model: The project team developed, tested and implemented a customized metadata model for the combination of radio program recording and associated script. The model is an adaptation of the Metadata Object Description Schema, which is a widely recognized metadata standard maintained by the Library of Congress. The MODS record for each radio program contains the following twelve data fields, all of which conform to the MODS standard for format and content.

a. Title [Music Time in Africa date]
b. Proper Names [all named individuals, plus program director and host]
c. Role(s) (of person(s) named) [e.g., host, performer, producer]
d. Type of Resource [audio recording]
e. Genre [script]
f. Publisher Name [Voice of America]
g. Place of Publication [Washington, DC}
h. Publication Date [date of radio program broadcast]
i. Capture Date [digital capture: 2016 or 2017]
j. Languages [English + other languages identified in script]
k. Subject [Geographic coding]
l. Note
    i. OCR text (script/audio) [extracted from ResCarta file]
    ii. Duration [hh:mm:ss]
    iii. Completeness of program [recording + script]
    iv. Notes [anomalies]
    v. Barcode control number [link to source media and digital files]

The project made optimal use of the open-source ResCarta Toolkit to create MODS/METS records for each radio program, including descriptive and technical metadata ResCarta also enabled the project to create a full text version of the program script. Information on the ResCarta Toolkit can be found here: http://www.rescarta.org/. In October 2016, the head of the ResCarta Foundation, John Sarnowski,

[2] FADGI. Still Image Working Group. *Technical Guidelines for Digitizing Cultural Heritage Materials*. September 2016. http://www.digitizationguidelines.gov/guidelines/digitize-technical.html

visited with the project team, provided specialized training on the Toolkit for project staff, and presented a workshop/lecture in a graduate course at the University of Michigan School of Information.

Appendix 5 displays version 1.1 of the metadata fields that are likely to be displayed to the end user.

OCR testing and evaluation: The *Music Time in Africa* scripts and the full audio programs provide a wealth of valuable metadata and information that we wished to extract and use to describe the program and support end-user search and discovery. The project team conducted systematic experiments to determine the extent to which the printed script or the audio program could provide the best source of a text transcript (and also to understand the complexities of correcting "dirty OCR" from the audio transcription process).From the results of these experiments, we decided that creating searchable text from the paper-based script was the most accurate and cost effective approach. **Appendix 6** is an executive summary of a more comprehensive report that is published to the project website.

Figure 2 is a summary of the MTiA broadcasts processed in the project.

Music Time in Africa Broadcasts Processed

Material Characteristics	**Count**	**Proportion**
Full Program Recording	636	66.3%
Music Inserts	225	23.4%
Scripts	850	88.5%
Completeness of Broadcast Record	**Count**	**Proportion**
Platinum (Full Program + Script)	531	55.3%
Gold (Full Program Only)	106	11.0%
Silver (Music Inserts + Script)	218	22.7%
Bronze (Incomplete Recording or Script)	20	2.1%
Scripts Only (No Recording Found)	85	8.9%
Total Broadcasts Processed	**960**	

Fig.2. Music Time in Africa Broadcasts

4. Preserve Original Source Material and Digital Surrogates

The Leo Sarkisian Archive tapes are now housed in archival-quality boxes on library shelving in a preservation-quality University storage facility. The facility holds limited circulation library materials, features 24-hour security, and has delivery on demand services to campus libraries. According to the terms of the Memo of Understanding with the Voice of America, the University has authority to undertake archival processing, to identify and separate duplicates, and to rehouse and reorder the collection as necessary for access and digital reproduction. VOA retains the right to determine the disposition of duplicates and may request that physical tape recordings be returned following preservation-quality digitization.

Package model: The project team developed a model specifying the elements of a complex package representing the concept of "radio program" from *Music Time in Africa*. The model was an important touchstone for managing the material components of the project and assuring that each component found its appropriate home in a variety of University of Michigan Systems. The elements include the analog audio recording for a given date and its associated script (if available), along with multiple digital surrogates of audio program and script, all of which are tied together by descriptive and technical metadata. Some elements of the package are preserved in a digital repository, while other elements of the package are integrated into the access system. **Appendix 7** is a summary of the package model.

Preservation of archival master digital files: All of the digital files of sound recordings received from the vendor (BWF formatted preservation and access masters, MP3 access derivatives, and JPG raster images of box front and reel + barcode) have been uploaded into the University of Michigan's "dimly lit" digital preservation repository. Each digital file includes a checksum to facilitate the periodic monitoring of the files for possible corruption. Master For more information on MiStorage services, see: http://services.it.umich.edu/mistorage

5. Provide Persistent Access to Digitized Radio Programs

Over the course of the two-year grant project, project staff explored options for providing long-term and well-supported access to the digitized radio programs on the University of Michigan campus as well as through the Internet. Providing persistent campus access turns on placing the copyrighted content behind a university administered authentication system (Kerberos). Providing open access to a wider public requires creative approaches to the legal and cultural rights of the creators of the source music included in the radio programs. One of our most important findings of the project is the possibility of separating these two issues (persistent access versus open access) conceptually as well as technologically.

To support persistent access to MTIA audio and script files for the University of Michigan campus, the MTiA project is utilizing the MiVideo audio and video content management and delivery system. The underlying content management platform, Kaltura, enables the MTiA project to establish a distinctive portal (MediaSpace) for digitized sound recordings and digitized program scripts and to integrate this portal with other enterprise campus systems, particularly the university's course management system, Canvas. The system has a robust built-in set of metrics and can also interpret Google analytics on local use. Kaltura is optimized for video content, and so does not have an appropriate interface for juxtaposing the audio and script files. Additionally, its search and browsing functions are not particularly well suited for discovery across a combination of full text and structured metadata. These weaknesses necessitated the development of a prototype discovery and delivery system.

The provision of a robust access and delivery system is a centerpiece of the project. The MTiA delivery system will support search and discovery of radio programs by full text of the script as well as faceted search and browse by a number of criteria, including date of broadcast, geographic topic, musical genre, instrumentation, musician name, and song title, where available. Much of the information for searching will be extracted from the scripts, which are such a rich source of information on a given program. The underlying tools for search, sound file streaming, and image/text display will support a dynamic web interface. The budget for the grant provided for the technical consulting needed to integrate the audio content (radio programs and live field recordings) with image and text content (scripts) behind an elegant dynamic web interface. **Appendix 8** is screen captures of the prototype system, which is presently restricted to University of Michigan users.

6. Explore Options for Open Delivery of Digitized Radio Programs

In our proposal to NEH for the *Music Time in Africa* project, we set an ambitious goal for outreach to the communities of performers represented on the radio program musical cuts. Our proposal stated: "A significant portion of the intellectual and physical effort … is focused on connecting the access/delivery system to those performers represented on 1965-89 *MTiA* radio broadcasts and the Sarkisian live field recordings." We also stated that our proposed strategy for accomplishing this goal would be to place the digitized radio programs into a digital delivery system that would be accessible to communities in Africa and then establish a conversation with these communities utilizing social media.

Both the goal and the strategy proved elusive, for the following three reasons:

- First, the technical processing of the materials was more complex and time consuming than expected, particularly the assignment of appropriate descriptive metadata. We spent all but

three months of the two year project deeply immersed in metadata creation activities. Until we digitized and cataloged the programs, we could not fully assess the scope of the musical selections.

- Second, upon listening to the radio programs and reading the scripts found in the tape boxes, it became apparent that the musical selections presented more complex intellectual property challenges than we had anticipated. To our surprise, a typical *Music Time in Africa* program included two selections from commercial recordings (for a typical program of 5 - 7 cuts) – one at the start and one at the end. Leo Sarkisian and the host both claimed that the strategy of bracketing live field recordings and other heritage resources with popular African music of the time was the best way to capture and keep listeners for the 30 minute program. The net result for our project was to introduce international music copyright into what we thought would be a project mostly focused on field recordings.
- Third, the assumption of delivering digitized recordings to an African audience turned on the availability of an appropriate delivery system at the University of Michigan and obtaining permission to use that system for the purposes we envisioned. This assumption proved faulty largely because permission to use University digital delivery systems is conflated with the copyright status of the materials to be delivered. We were not able to resolve this vicious circle of interlocking constraints in the time allotted.

Recognizing these limitations led us down a path of considering alternative access strategies and laying the groundwork for an access system negotiated between the Voice of America and the University of Michigan. These considerations involved developing a range of options and discussing these options with legal experts at VOA and the University of Michigan. Here is what we know, followed by the four options for open access that we are considering.

The content of the radio programs (and associated scripts) consists of two categories of intellectual property. Because these conceptual categories co-exist in a single complex object that we have labeled a "radio program," it is necessary to consider holistically the categories of property.

- Government Records in the Public Domain
    - The physical tape recordings on loan to UM are the property of federal government agency Voice of America, which is part of the Board of Broadcasting Governors (BBG) – an independent federal government agency.
    - Radio Program Scripts: Physical paper copies of scripts for MTiA and digitized script images. This content was exclusively produced by a federal agency.
    - Recorded voice of the radio hosts [VOA employees]
- Potentially Copyrighted Material
    - Excerpts from field recordings of live musical performances made by Leo Sarkisian [VOA employee] in various African countries. The original recorder/producer may or may not have obtained written permission from performers. Limited evidence suggests that permission to record for VOA broadcast was explicit.
    - Tracks or parts of tracks from commercially released music recordings on 45s or LP records. Our research suggests that a large portion of this material is exceedingly rare, orphaned, or some combination.
    - Excerpts from other musical recordings (commercial, non-commercial or live field recordings) sent to Leo Sarkisian by other radio broadcasters in Africa and fans of Music Time in Africa. Origins and copyright status unknown and unknowable.
    - Spoken voices of the very occasional person interviewed [non-VOA employees] for the radio program. Permissions likely explicit, but no documentation exists.

In conversation with multiple stakeholders, we identified the following four options.

1. Voice of America provides for streaming of those digital files for full radio programs through their existing streaming platform for programs created since 2013.
    a. Pro: MTIA is an archival record of VOA; robust delivery platform; established worldwide social media networks; ability (if not the capacity) to handle feedback
    b. Con: Uncertainty over 2013 enabling literature regarding historical broadcasts; removes access management from UM (possibly non-exclusive); risk absorbed fully by VOA
2. Rebroadcast openly through UM delivery channels with permission from VOA
    a. Pro: UM has established delivery platform (Kaltura) that can manage access by IP address (e.g., country); retains access management by UM to digital files; risk shared by VOA and UM
    b. Con: Copyright management not addressed; administrative complexity in the case of complaints; risk shared by VOA and UM
3. Rebroadcast internationally only as an experiment in community outreach
    a. Pro: skirts VOA legislative restrictions on US broadcast;
    b. Con: limits US usage to the University of Michigan; high expectations for communication channels to and from international listeners; technical and administrative complexity
4. Rebroadcast openly with liberal takedown policies in place at Michigan
    a. Pro: Limited risk to VOA; maximum exposure nationally and internationally; low administrative overhead; avoids song-level copyright clearance
    b. Con: UM absorbs risk; administrative complexity regarding complaints and averting possible legal action

It is likely that the fourth option will prove to be the most viable one for open, international access to the sound recordings. In the interim, all of the digital files are now and will continue to be available to anyone on the University of Michigan campus through the MiVideo streaming service, based on the Kaltura content management service.

Project Personnel

Beyond the skills and knowledge that the PI and co-PI brought to the project, we benefitted greatly from two staff of UM Library who participated in the project from the start. Additionally, the project was able to employ graduate students from the University of Michigan School of Information who had a deep interest in the subject matter of the recordings, in the preservation challenges of at-risk media, and in the complexities of digitization, metadata creation, and access system development.

- **Principal Investigator:** Paul Conway (Associate Professor, UMSI). His principal responsibilities were to oversee digitization, post-processing, and metadata activities, supervise graduate students, lead the design of the delivery system, and report on the project in writing and public presentations.
- **Co-Principal Investigator:** Kelly M. Askew (Professor, Anthropology, Afroamerican and African Studies). She provided deep domain expertise in African music and culture, identified programs for the initial pilot of the access system and access portal, handled media relations, kept Leo and Mary Sarkisian appraised of project progress, and co-produced presentations, publications, and reports on the project.
- **UM Library Liaison:** Shannon Zachary (Head of Preservation and Conservation, UM Library) provided an essential administrative and professional link between the Principal Investigator the Library. She arranged for the Library to make space available in a Library building for the project team, loaned computer workstations for use by student staff, and arranged for the physical storage of the Leo Sarkisian Archive.

- **UM Library Technical Support:** Rob McIntyre (Coordinator of Digital Asset Management Systems, UM Library) provided essential technical advice and services. He established a dedicated partition on the Kaltura access system, trained project staff in the use of Kaltura, configured the distinctive metadata scheme that the project staff developed, and ingested the completed access derivatives, script images, and XML metadata record into Kaltura. He also served as technical liaison to the UM Information Technology Services group that made space available in the university's preservation repository.
- **Student staff:** NEH funding supported graduate students to work on various aspects of the project. During the two-year the PI recruited and trained the following UMSI graduate students:
    - *Summer 2016:*
        - Kayla Carucci (tape processing)
        - Leigh Gialanella (finding aid; website development)
        - Jacob Kidd (audio tape processing)
        - Stephanie Zang (website development)
    - *Academic Year 2016-17:*
        - Jacob Kidd (project coordination; user interface design; access system configuration)
        - Leigh Gialanella (files processing and metadata creation)
        - Kaitlyn Sisk (metadata creation; OCR experiments)
    - Summer 2017
        - Molly Szymanski (project coordination; radio program processing; ResCarta metadata creation; primary quality assurance; project documentation)
        - Randall McCombs (script scanning; OCR processing and cleanup; ResCarta metadata creation; quality assurance)
    - Academic Year 2017-18
        - Molly Szymanski (project coordination; liaison for access system development radio program processing; ResCarta quality assurance; research on international music copyright rules; primary quality assurance; project documentation;)
        - Claire Marshall (radio program processing; ResCarta metadata creation;
- **System Design Consultant:** Walker Boyle (Software Developer, Thoughtworks in Chicago, IL) was involved with the Leo Sarkisian Archive as a graduate student at the University of Michigan School of Information. Walker built a small demonstration access system that we included in our proposal to NEH. As a consultant for the NEH project, Walker rebuilt and expanded the capabilities of the demo site into a prototype on University of Michigan servers. His work was essential to the implementation of a viable access model for MTiA.
- **Digitization Vendor:** MediaPreserve of Cranberry Township, Pennsylvania, provided digitization services for the project under contract to the University of Michigan. MediaPreserve was well equipped and highly experienced in dealing with Voice of America recordings on magnetic tape. Their work on the project was excellent and timely. Communication with the project team was flawless.
- **Advisory Board** Eight experts agreed to serve on an Advisory Board. The project benefitted greatly from consultations with most of the individual members of the Board.
    - Jolene M. Beiser, Archivist, Pacifica Radio Archives, North Hollywood, CA. Jolene provide essential information to help us sort out the use of PBCore for metadata.
    - Rachelle V. Browne, Associate General Counsel, Smithsonian Institution, Washington, DC. We did not engage Rachelle for the project.

- Alan R. Burdette, Director, Archives of Traditional Music, Indiana University, Bloomington, IN. Alan provided very useful information on related music collections at Indiana University.
- Peter Hirtle, Senior Policy Advisor, Cornell University and Fellow of Berkman Center for Internet & Society, Harvard University. Peter provided excellent information on the complexities of US intellectual property laws as they do and do not apply to foreign broadcasts and music created outside the US.
- Melissa Levine, Lead Copyright Officer, University of Michigan Library, Ann Arbor, MI. Melissa provided essential information on the University of Michigan access and copyright policies and will provide continuing support for making the MTIA programs available to a wider public after the project has ended.
- Heather Maxwell, Producer and Host, *Music Time in Africa*, Voice of America, Washington, DC. Heather provided important liaison services with Voice of America, helped identify additional Music Time in Africa programs created after 2004, and helped us understand the production process for MTIA programs.
- Lester Monts, Arthur F. Thurnau Professor, School of Music, Theater and Dance, University of Michigan, Ann Arbor, MI. Lester provided important insights into the Liberian-oriented MTIA programs and advised us on the cultural complexities of music reuse.
- Derek Vaillant, Associate Professor, Department of Communication Studies, University of Michigan. Derek provided important introductions to scholars who are studying the history of international radio.

Self-Assessment of Lessons Learned

As we progressed over the two-years of the project, the project team met regularly to assess the challenges we faced and developed a running list of lessons learned. These are the highlights of our deliberations:

Pleasant Surprises

- We identified and were able to digitize many more complete radio programs than we had anticipated. Of the 960 program-dates that we identified and cataloged, 636 (66.2%) have recordings of full program from date stamp and intro to final closing.
- In preparing the proposal, we anticipated that roughly half of the tape boxes would include a script. Instead we found 850 unique scripts representing 88.5% of the program dates. As a result, processing scripts assumed a very prominent place in our overall work. We developed routines to extract full text from the scripts and build this data into our metadata model.
- The presence of so many scripts also allowed us to conceive of a search and delivery system for representing the aural and textual richness of *Music Time in Africa*. With the support of NEH we were able to redirect resources from travel and one Advisory Board meeting to contracting with a software developer to produce a prototype access portal.
- The timing of the post-digitization processing was favorable for bringing metadata work and quality assurance activities into the graduate student classroom. The Principal Investigator featured the Voice of America materials in SI 678 Preserving Sound and Motion during the Fall 2016 and Winter 2018 terms.
- The establishment of the Leo and Mary Sarkisian Collection in the University Library is a valuable outcome of the project. This action by the university represents a commitment to maintain the physical and digital components and continue the project into the future.

Unanticipated Challenges

- The project lacked a dedicated project manager, in part due to the necessary reduction of resources from our original request. As a result the PI spent a larger portion of his time on training and supervising students than originally anticipated. The net result was less attention paid to the Advisory Board and a late start on developing intellectual property options.
- Assigning metadata to the programs proved to be more complex and time consuming than we had anticipated. We developed a distinctive metadata model for a program that allowed for integrated cataloging of the sound recording, its associated script, and the full text extracted from the script.
- The Kaltura platform proved quite inadequate for the delivery of a radio program whose essential elements included the juxtaposition of a sound recording and a printed script. It took some time to work through the administrative implications, but in the end resulted in intellectual clarity between the concepts of "persistent access" and "discovery." Arrangements are being made with VOA to acquire the full set of LPs from the Leo Sarkisian Library.
- Intellectual property complexities of the set of musical selections in any given program recording proved daunting. Leo Sarkisian clearly drew upon his extensive personal collection of LPs and 45s in his VOA Library. Most of these recordings were not shipped to the University of Michigan as part of the transfer of the Sarkisian materials.

Shortfalls

- The field recordings made by Leo Sarkisian and digitized by the University of Michigan are not yet available to a wider public. Access to these materials turns on the implementation of our overall strategy for open access to *Music Time in Africa*.
- As described above, overall open access to the *Music Time in Africa* broadcasts is not yet available. We anticipate to resolve access issues by the end of calendar year 2018.
- The Advisory Board was not convened as a whole. We communicated with the board via email and provided progress reports. But we found that the administrative costs of convening the Board outweighed the benefits of a full meeting in Ann Arbor. Instead, we requested to redirect grant resources to support the development of the access portal.

Products Produced

Access Portal (Appendix 8): Music Time in Africa. http://mtia.labs.si.umich.edu/ [requires UM authentication]

***Project Website (Appendix 9)*:** Music Time in Africa. http://mtia.sites.uofmhosting.net/

Conference Presentations:

Kelly Askew and Paul Conway. "From Working Library to Digital Archive: Field Recordings and Radio Broadcasts in the Leo Sarkisian Library at the University of Michigan." *Society for Ethnomusicology* Annual Meeting, Washington DC, 12 Nov 2016.

Paul Conway. "Reshaping a Radio Archive for a New Worldwide Audience." *Kings College London*, 16 May 2017.

Paul Conway and Kelly Askew. "Reshaping a Radio Archive for a New Worldwide Audience." *International Association for Sound and Audiovisual Archives*, Berlin, 20 Sept 2017.

Kelly Askew and Paul Conway. "In the Realm of the (Digital) Senses: Eyes and Ears: Music Time in Africa. *DePaul University*, Chicago, IL, 22 May 2018.

Published Article **(Appendix 10):**

Conway, Paul and Kelly Askew. "From International Shortwave to Digital Rebroadcast: Transforming Music Time in Africa for a New Worldwide Audience." *IASA Journal Issue* 48 (Feb. 2018): 31-48.

Continuation of the Project

With the end of NEH funding, we have made provisions to continue the work of the project in several specific ways.

- The University Library has created a Leo and Mary Sarkisian Collection within the Special Collections Research Center (SCRC). The Sarkisian Collection will serve as an administrative umbrella that allows for the ongoing management of the physical collections donated by the Sarkisians to the university as well as the digital surrogates of MTIA programs (created with NEH support) and Leo Sarkisian's field recordings (created with UM support). The SCRC has also agreed to assist in creating catalog records at the series level for the Sarkisian materials and to assist in creating and publishing proper finding aids to the major components of the Sarkisian collection.
- The Leo Sarkisian Library, on long-term loan from the Voice of America, is a rich source of archival materials for the teaching of digitization and metadata best practices as well as the archival management of audiovisual collections. The Principal Investigator has built into his graduate level courses at the University of Michigan projects and assignments for students that will make continuing use of the Sarkisian materials and, as a convenient byproduct, result in further archival processing and digitization of parts of the collection.
- The Principal Investigator is also the recipient of a grant from the Andrew W. Mellon Foundation to support the development of teaching resources for standards-based digitization of audiovisual collections. The Sarkisian Collection and the digital files created with the support of NEH are a useful case study for this new project.

Postscript

Leo Sarkisian passed away on June 8, 2018 at the age of 97, just a week after this project ended. Leo created *Music Time in Africa* and was intimately involved in all aspects of the production of the radio programs. We kept him informed of our progress, shared with him what we were learning, and drew knowledge from him about his work for Voice of America. He inspired us to do our best work with his life's work. We miss him already.

Respectfully submitted,

Paul Conway, Principal Investigator

Kelly Askew, co-Principal Investigator

31 August 2018