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# Search, Explore, Connect: Using OHMS to Enhance Access to Oral History

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Douglas A. Boyd

## SEARCH, EXPLORE, CONNECT: USING OHMS TO ENHANCE ACCESS TO ORAL HISTORY

*Portions of this article were published elsewhere following the original presentation and are cited appropriately in the text.*

The Nunn Center has been collecting and preserving oral history interviews since 1973 and now has an archival collection of over 10,000 interviews, which is estimated to represent over 20,000 hours of audio and video material. Although we do possess a small collection of interviews with Holocaust survivors in the United States, my primary role in this article is to discuss the archival imperative to build sustainable and affordable workflows for enhancing access to online oral history. Specifically, this paper is about the Nunn Center's use of a tool we created called OHMS (Oral History Metadata Synchronizer), an open source, free tool for enhancing access to online oral histories, and how OHMS has dramatically changed our archival workflow models, and has empowered archives all over the world to meet user expectations with regard to enhancing access to oral history.

I believe the reason we conduct oral history interviews, the reason we preserve important life stories, is to ensure that individuals can play a more prominent role in the historical record. Of course, not all interviews are meant to be publicly available in the present moment and may require temporary access restrictions. However, I do believe strongly in the hope that “recorded oral history interviews will, eventually, resonate and connect with future researchers” (Boyd 2012). I have seen too many oral history interviews and projects “hidden away” in archival obscurity.

The Internet is dramatically altering our perception of the “historical record”, and user expectations of instantaneous and efficient access are continuously rising. The acceleration of the mass digitization of archival materials

and the maturation of digital archival infrastructures are resulting in a profound increase in the discovery and accessibility of online primary sources; yet, oral histories, outside of a few select initiatives with major funding, remain relatively inaccessible and underutilized by researchers, scholars, and the general public.

Oral history as an archival format has traditionally posed numerous challenges for both curators and users, when compared to other formats such as photography and manuscript collections. Archived oral history collections are inherently presented with the significant challenges of time and the need for text. Time-based media in the archive requires time to describe, access, and comprehend. An archive would have to listen to a recording before providing useful descriptive metadata, a time-intensive commitment that few archives can maintain when faced with the accessioning of hundreds or thousands of interviews. Second, spoken word, when recorded, needs text, in the form of metadata and verbatim transcripts, in order to be discoverable and perceived as useful. Once discovered, effective and efficient use of archived oral history interviews has usually depended upon the presence of verbatim transcripts, which are prohibitively expensive to generate. Automatic speech recognition (ASR) efforts continue to struggle with poorly recorded interviews with multiple speakers using dialect. Because of the significant time commitment involved, un-transcribed interviews typically go unused.

It is valuable to underscore here that I strongly believe in the importance of encouraging the users of oral histories to engage with the audio and video recordings. Most reference requests that come into the Nunn Center are interested in obtaining only the transcript. Unfortunately, less than half of our collection has been transcribed. From a usability standpoint, transcripts have traditionally provided the most efficient methods for discovery and access to specific information. In the chapter “‘I Just Want to Click on It to Listen’: Oral History Archives, Orality and Usability,” I comment on this observation:

I watched the Nunn Center users and researchers gravitate more to collections that were transcribed. Despite our standard warnings to corroborate direct quotations with the original

audio or video interviews, I watched researchers quote and misquote from transcripts that were, often, not even verbatim representations of the text. In general, our audio and video interviews remained on the physical and virtual shelves. I do not believe that researchers generally wanted to ignore the audio and video interviews because they were lazy and uninspired by the human voices telling the stories. Time-based media in both the analog and digital realm is difficult and time consuming to use. (Boyd 2014: 91)

Content management systems and user interfaces provided by digital library and archival infrastructure have been designed to “optimize the user experience for repositories of digitized text and images, and they have generally failed in providing usable architecture for enhancing the users’ experiences with online audio and video.” (Boyd 2014: 91) There have been great advances in technology; however, from the curation perspective, oral history continues to depend primarily on unsustainable workflows and models for providing basic levels of access. With most archives facing declining budgets, the curation of oral histories can be perceived as being prohibitively expensive, and the notion of providing “enhanced” access to this resource was previously unimaginable. Digital tools and workflows have profoundly altered almost every aspect of modern life, yet we have maintained a particularly analog approach to curating and providing access to oral history. In my recent book *Oral History and Digital Humanities*, co-edited with Mary A. Larson, I declared my frustration with this observation:

I have become firmly committed to the ideal that the oral history community cannot structure our fundamental access workflows and strategies on models which require unrealistic amounts of continually escalating funding. In today’s innovative digital climate, it seems that you can do just about anything with a grant. What you cannot do, necessarily, is sustain what you created with that grant, after the grant funding runs out. (Boyd 2014: 90)

Oral History methodology is becoming very popular in the United States. At my university, more faculty and students are conducting oral history projects for their research than ever before. Community projects are becoming

even more common. The Nunn Center is now regularly accessioning between 400 and 600 interviews annually. As the volume of interviewing increases, we must accommodate this escalation by adapting our archival workflows, or we will be quickly overwhelmed.

The notion of “enhancing” access to oral history was once reserved for boutique or super-funded oral history projects. The general oral history and archival community has struggled for decades to make oral history a more easily accessible resource. “We must quicken our transition, our mindsets and paradigms, and our archival workflows and procedures to adapt and accommodate users’ expectations. When we do, our interviews will be used.” (Boyd 2014: 94).

I have worked with oral histories in an archival context for my entire professional career. I think a great deal about oral history and how to enhance access to oral history in an archival context, especially where there are limited staff and financial resources behind projects—which is typically the case. I also think a great deal about usability in a web-based archival context. Mainly because I have found, in the past, that not much attention has been paid to the topic by archivists and librarians. We think a great deal about organizing information, but our efforts often have fallen short at the point of user interaction.

Frustrated by cumbersome workflows and interfaces, I first began to abstractly envision something like OHMS (Oral History Metadata Synchronizer) very early on while managing the oral history collections at the Kentucky Historical Society. However, I began to envision OHMS in a much more concrete fashion while managing the digital program for the University of Alabama Libraries. I began to think a great deal about usability, especially within a web-development context. I began to realize that our design and usability efforts were primarily directed at the websites or repositories encompassing the oral history interviews. However, the user interface for engaging with the actual oral history interview was, for the most part, still difficult to use. OHMS was constructed to facilitate discovery and use, but more specifically, it was based on my simple observations from being an oral history archi-

ivist for nearly 15 years. Researchers and users of all kinds have three primary expectations when working with archived oral history. They want to *search*, they want to *explore*, and they want to *connect* when they work with archived interviews. I have observed that users/researchers want an easy to use, but robust search mechanism for the quick and efficient discovery of information. In addition to searchability, users/researchers of online oral history need information architecture designed for exploration, an environment that encourages serendipitous discovery of information. Finally, users/researchers want the ability to triangulate a variety of resources with the click of a mouse or a swipe of their finger and to dynamically engage oral history interviews. In a digital or e-humanities context, users want to engage material in creative and innovative ways that we might not yet imagine. Enhanced methods of discovery and use enhances the chances that we can connect users to oral history interviews that will resonate with them in meaningful ways, connecting users and researchers to more than simply words on a page—connecting them to meaningful and powerful moments.

OHMS (Oral History Metadata Synchronizer) is a system created by the Nunn Center in 2008 to address limitations in the oral history user experience by connecting a text search of a transcript/index to the corresponding moment in the audio or video. OHMS is a freely available platform that gives the user the ability to search, explore, and connect with interview content in dynamic and efficient ways. After developing, testing, and using OHMS for several years as an in-house solution, in 2011 the Nunn Center received a National Leadership Grant from the Institute of Museum and Library Services (IMLS) to make OHMS work better as an open source solution with other content management systems and repository infrastructures. Essentially, the goal of the grant was to make OHMS something that other institutions could easily adopt and implement. In 2013, OHMS became freely available and is now being used by both small and large institutions all over the world.

This would be an opportune time to take a closer look at what the OHMS system is and how it works. The OHMS system consists of two components, the OHMS Application and the OHMS Viewer. The OHMS Application is where an

archive prepares an interview for the user. The OHMS Application is a back-end, web-based application where interviews are imported and metadata is created. It is in the OHMS Application where the transcripts are time-coded and/or interviews are indexed. You do not upload digital audio or video into the OHMS Application, you simply link to the recording. The OHMS Application is not a repository and is not meant for long-term storage of records; the application is a working space for preparing records for access via the OHMS Viewer. The OHMS Application is where you import or create metadata records, upload and synchronize the transcript to the time code of the web-accessible audio or video files, and/or index the interview.

When it comes to the presentation of transcripts, the OHMS Viewer is very simple in concept. In the OHMS Application, archives can place time-coded markers at minute intervals. The OHMS Viewer takes the user from a key-

Title	Accession Number	Collection ID	Series ID	Metadata	Index	Transcript	Sync	Notes	Status	Export
Interview with James W. Martin, November 11, 1980	1980CH174 AF 114	OHAF	AF001	Metadata	Index	Upload	No T	Notes	In Process	XML CSV
Interview with Anne Evans Jeffries, June 12, 1979	1979CH223 AF 111	OHAF	AF001	Metadata	Index	Upload	No T	Notes	In Process	XML CSV
Interview with Abraham Bowling, June 13, 1979	1979CH224 AF 112	OHAF	AF001	Metadata	Index	Upload	No T	Notes	In Process	XML CSV
Interview with Thomas D. Clark, March 26, 1980	1980CH202 AF 113	OHAF	AF001	Metadata	Index	Upload	No T	Notes	In Process	XML CSV
Interview with James W. Martin, November 17, 1980	1980CH175 AF 115	OHAF	AF001	Metadata	Index	Upload	No T	Notes	In Process	XML CSV
Interview with James W. Martin, January 6, 1981	1981CH001 AF 119	OHAF	AF001	Metadata	Index	Upload	No T	Notes	In Process	XML CSV
Interview with James W. Martin, January 4, 1981	1981CH002 AF 120	OHAF	AF001	Metadata	Index	Upload	No T	Notes	In Process	XML CSV

Figure 1: OHMS Application When the transcript synchronization or index has been created, the “product” that is exported from the online OHMS Application is a very simple XML document which contains the interview-level metadata, the transcript and/or the index. Once exported from the OHMS Application, the oral history interview is made accessible via a simple hyperlink to the XML document which presents the interview to the user within the OHMS Viewer (which must be installed by the host institution on a web server).

**UK** Interview with Marshall Webb, January 16, 1986  
 Louie B. Nunn Center for Oral History, University of Kentucky Libraries  
 Arthur L. Kelly, Interviewer | 1986OH078 WW 041  
 Col. Arthur L. Kelly American Veterans Oral History Collection | World War Two Oral History Project

0:00:37 4:00:46

TRANSCRIPT INDEX

Search this Transcript  
 Italy  
 Clear

0:00 KELLY: It's January the 16th, 1986. I'm in Taylor County in the home of Mr. Marshall Webb, a veteran of World War Two, served in an infantry company, in the 85th Infantry Division; was in Africa, fought his way up through Italy on the two major -- fought battles on the two major defensive lines, the Gothic and the Gustav lines, and fought up through Austria and into Czechoslovakia, and wasn't too far from Munich when the war ended, and ended up at the concentration camp of Dachau, outside of Munich. And Marshall, let's just start right at that point and tell us what you saw at the camp and --

1:00 WEBB: Okay. As -- now, I traveled up through -- as you said, I come out of North Africa. I went all the way up through Italy into Austria, and that's -- and when we got up near this camp here, up next to the German border, up -- I'm still trying to think of the name of the camp, but I can't think of the name of the camp. But anyway, we was only there just one day, and we pulled all the way back down into Austria to a town called Merano. Merano, Austria. And that's --

KELLY: You mean from the concentration camp?

WEBB: Yeah. Umhmm. Umhmm. I did not fight for that concentration camp. I mean I wasn't in the fight.

KELLY: You wasn't in the liberation aspect of it?

2:00 WEBB: No. No. But I was there. But anyway, --

KELLY: This -- is this the one, now, that's near Munich?

WEBB: Right. Umhmm.

1. through Italy on the two major -- fought
2. through Italy into Austria, and that's --
3. in Italy. Uh-uh. Not in Italy it
4. in Italy.
5. into Italy, my comanv --
6. in Italy and Africa. I heard this
7. in Italy.
8. the Italy campaign and the Austrian
9. Mer-- Italy and Austria had a little
10. between Italy and Austria. And this is
11. about Italy and Austria.
12. Okay. Italy and Austria. Okay.
13. about Italy and Austria.
14. in Italy.
15. Italy. And then we went through
16. of Italy.
17. Italy at eleven o'clock. No --
18. in Italy on the 11th of May
19. of Italy.

Figure 2: OHMS Viewer (Transcript)

word search to the nearest minute-marker. By clicking on the timecode, the user is taken to the corresponding moment.

Indexing provides a powerful series of access points yielding a useful search and browse experience for the user. Indexing involves the mapping of natural language, as expressed in the interviews, to concepts, infusing an added value to the index that is lacking in a transcript alone. But indexing should not only be perceived as being an affordable compromise when transcription proves too expensive. For example, an interviewee may talk about living under segregation in the United States, without ever mentioning the word “segregation.” An index point could clearly state that the segment discusses living under segregation, “mapping natural language conversation to descriptive and meaningful concepts” (Boyd 2013).

The Indexing module of the OHMS Application allows the indexer to identify and create segments or stories based on the content flow of the interview. Indexed segments can contain a segment title, description, subjects, key-



words, GPS coordinates (to interface with Google Maps in the OHMS Viewer), and hyperlinks to link out from a moment to correlating online resources such as photographs, videos, or informational websites. Archives can upload controlled vocabularies, which are suggested for the keywords and subject fields as the indexer types. Users can browse index segments by examining the table of contents created by the titles. By selecting a segment, the segment accordions open to reveal the details. A search of the index will identify relevant segments. When the user clicks “play segment” they are taken from a search result in the index to the correlating moment in the audio or video. The OHMS Viewer is the user interface of the OHMS system. When an online interview is called by the content management system, the OHMS Viewer loads, calling select interview level metadata and the *intra* interview level metadata created in the OHMS Application from the corresponding XML file. As the OHMS XML file is called by a simple hyperlink, the OHMS Viewer is universally compatible with content management systems such as CONTENTdm or Omeka. OHMS was created in the spirit of sustainability, affordability, and interoperability, and utilizes:

Ubiquitous formats such as XML and CSV, both of which can be opened and manipulated using a basic spreadsheet or word processing software package. Furthermore, OHMS creates an information package that, of course, works effectively with the OHMS viewer, but will easily and seamlessly map to and integrate with future systems as well. What results from OHMS is a sustainable archival solution for providing enhanced online access to oral histories and the ability to effectively and efficiently navigate, discover and engage the orality and the content of our oral history materials in a flexible, affordable online environment. (Boyd 2014: 93–94)

By creating OHMS, we did not create a new repository or content management system; there are plenty of those in current use that are quite good. What OHMS does is work with an existing repository or content management system to improve the user experience.

OHMS has transformed the Nunn Center’s workflow, as well as the way we design and implement our projects. I want to reiterate here that not all in-

The screenshot displays the OHMS Viewer interface. At the top, a segment is selected: **21:39 - Approaching the concentration camp**. Below this, there are two columns: Play segment and Segment link. The main content area provides the following details for the selected segment:

- Partial Transcript:** After you went to that camp, where did you go to?
- Segment Synopsis:** Webb talks about coming upon the concentration camp (likely Dachau).
- Keywords:** Company E; concentration camps; liberation; platoons; rumors; squad leaders; staff sergeants; walking
- Subjects:** Austria. Concentration camps—Germany. Dachau (Concentration camp). Germany. Merano (Italy).
- GPS:** [Dachau Concentration Camp \(Dachau, Germany\)](#)
- Map Coordinates:** 48.27199,11.46481

Below the selected segment, a list of other segments is visible:

- 25:53 - Initial arrival at the concentration camp / rumors of liberation
- 31:10 - Impression of the camp from afar / finding corpses
- 35:07 - Emotional reaction to the Holocaust
- 40:19 - Traveling back to Merano / photographs taken at the concentration camp / homesickness
- 48:06 - Webb's brother / coming back from the camp

Figure 3: The OHMS Viewer (Index Module)

terviews should be online in this moment. However, there is now in place a workflow that assumes enhanced access for our interviews. Indexing interviews is much less expensive when compared to creating web-ready transcripts. In 2014, the Nunn Center spent 16,000 US Dollars on indexing over 900 hours of interviews that are now available online. Had we transcribed the same set of interviews, the cost would have been over 180,000 US Dollars. As previously mentioned, indexing involves the mapping of natural language,

as expressed in the interviews, to concepts, infusing an added value to the index that is lacking in a transcript alone. OHMS allows both to work together simultaneously. Because of the cost savings, my center is primarily indexing interviews for projects that have not received external funding.

Recently, I have begun to encourage the *interviewers* to create the index for an interview soon after the interviews are conducted. We have also had great success utilizing students and volunteers to index interviews. I was rarely able to recruit volunteers for transcribing. However, the indexing process provides a user-friendly opportunity to deeply listen to and describe an interview. We have now successfully collaborated with numerous professors who have inserted OHMS indexing into their course design. Previously, when students were using oral histories, they were merely acting as consumers. Now, when the students create the indexes, they become contributors to the process. The Nunn Center is able to fulfill our mission of getting our interviews utilized by faculty and students, and the professors are able to create a course environment where students are able to engage with primary sources in new and exciting ways. The final result is enhanced access to our online interviews.

The Nunn Center is now able to focus our efforts on providing our users an effective way to enhance access to our interviews and collections, utilizing an open-source, free resource. The users are able to search, explore, and connect with the rich content, so they can discover and engage with these interviews quickly and efficiently. Before creating and implementing OHMS, the Nunn Center used to boast about having 500 users utilize our interviews each year. Now, we are averaging over 10,000 interactions with our interviews *per month*.

Recently, we released the multi-lingual capabilities of OHMS. Archives are now able to serve up transcripts and translations, as well as create a bi-lingual index. Users can search and toggle between languages and be taken to the same corresponding moment in the audio and video. In the beginning of 2016, there were over 200 institutions using OHMS in 17 different countries. In the article “OHMS: Enhancing Access to Oral History for Free” I wrote:

The mission of OHMS has transformed from enhancing access to the Nunn Center collections to empowering institutions, both large and small, to provide an effective, user-centered discovery interface for oral history on a large scale for a fraction of the usual cost. (Boyd 2013)

Usability is an important consideration. The notion of *enhanced access* to oral history can no longer be limited to only the elite and well-funded projects. By creating and deploying OHMS, we can, now, affordably enhance access to online collections, both large and small. My hope is that with OHMS, we can begin to encourage a new perception of what is possible and affordable with regard to meeting our users’ expectations in the way we provide online access to oral history collections.

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