Audio Engineering

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Commentary on the National Recording Preservation Board's public hearing on the State of Recorded Sound Preservation in the United States.

This commentary addresses the Board's matter of Concern regarding possible creative solutions to overcome obstacles to preservation.

PREFACE

It is fairly common knowledge that there is far more recorded audio on various media in need of restoration and archival than there are resources to accomplish the task. This is a common problem that plagues everyone involved from the industry giants to the small archives as well as private collectors.

Compounding the problem is the fact that the calibration standards for the equipment used to create the recordings has all but disappeared. In 2002, Standard Testing Laboratories (STL), the largest and last remaining supplier of calibration materials for magnetic film recorders, closed its doors. In January of 2003, the Society of Motion Picture and Television Engineers (SMPTE) announced that when the magnetic film calibration stock on hand ran out, they would no longer offer it because their main supplier (STL) had closed. Audio tape is in a slightly better situation as there is still one source (Magnetic Reference Laboratory) for calibration tapes. Magnetic Reference Labs has vowed to keep its products available for as long as it is viable but it is clear that recorded analogue sound will outlast the calibration standards used to create it.

What Creative Solutions Might Overcome Obstacles to Preservation?

The Library of Congress has been preserving our nations recorded heritage for some time now. In the process, it has amassed a wealth of knowledge that can be of great value to the private sector, particularly those small under-funded archives that lack the technical expertise to properly save their collections.

What I am suggesting is that the NRPB write the functional equivalent of "Recorded Sound Preservation for Dummies" This should be a comprehensive nuts & bolts guide to preserving recorded sound available in print, on suitable digital media (for a fee if necessary) and on your web site fully hyper-linked. Hyper-linking can be especially useful for linking to the volumes of information already available from the private sector. This could be a collaborative effort

between the public and private sectors. An on-going discussion or question and answer forum could be useful. The organizations already represented on the NRPB would be a tremendous source of information for such a knowledge base.

Start at the beginning:

- 1) The history of recorded sound including a time line and description that includes all of the formats as they were introduced. This is no small undertaking as entire chapters can be dedicated to disc recording and the various formats that were introduced before and after analog tape.
- 2) A comprehensive tutorial on the calibration and maintenance of the equipment needed for playback. This should include all variations of playback equipment from disk to analog and digital tape players. There are several formats that have been orphaned by virtue of the lack of availability of equipment to play them. A handy reference of vendors in the private sector that specialize in this area would be useful.
- 3) Identification and preparation of the material (Sometimes referred to as the analog carrier or source) to be transferred. Your Publication 137 "Capturing Analog Sound for Digital Preservation" is a good start but needs elaboration. There is adequate reference material available on this subject and the Library of Congress itself may be the best source of information. Digital audio recordings need to be addressed as well. Digital recording has been around long enough now that some of the tape formulations for 4 and 8mm tapes are coming to the end of their life expectancy.
- 4) Best practices for analog to digital conversion. The Appendix authored by George Massenburg in your Publication 137 is already tailored for this subject. It could however, be elaborated on in some areas and other areas could be expressed more in layman's terms. Each of the pieces of equipment in the process should be described in detail as well as functional diagrams provided. It's worth noting that the small archive with a hundred or so interviews recorded on audio cassette would not necessarily need an elaborate jitter free transfer chain referenced to word clock, etc. These variables should be addressed.
- 5) Documentation, or the buzz word "Metadata". Most archivists will have some system already in place but this would be a good place to provide for input already received in your public hearings and possible future collaborations. At the very least, a reminder to photocopy or scan the container labels (if any) would be appropriate.
- 6) Last, but not least, a recommended best practice for storing digital audio. Besides a tutorial on IT solutions, this should include a discussion of available media and their related life expectancies which would be useful again to the smaller collections. A migration strategy needs to be addressed. A recommended best practice for vaulting the original material is perhaps a separate subject that could be discussed earlier or available as a separate document.