

**Sound Directions**  
**Digital Preservation and Access for Global Audio Heritage**

*Statement for the National Recording Preservation Board*  
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*Submitted by:*

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By way of introduction to Harvard University's participation in the *Sound Directions* project, The Archive of World Music and its technological partner, Harvard College Library Audio Preservation Services, are both units of the Loeb Music Library which is a component of the Harvard College Library that serves the Faculty of Arts and Sciences and is led by Archive Curator and Richard F. French Librarian, Virginia Danielson, co-Principal Investigator for *Sound Directions*. The Archive of World Music was established in 1976. It is devoted to the acquisition of archival field recordings of musics world-wide as well as commercial sound recordings, videos, and DVDs of ethnomusicological interest. Among its holdings are: the James Rubin Collection of Indian Classical Music, the Kay Kaufman Shelemay Collection of Ethiopic Musics, the Sema Vakf Collection of Turkish Classical Music, and the Laura Boulton Collection of Byzantine and Eastern Orthodox Chant.

The Archive developed the Harvard College Library Audio Preservation Services (HCL APS) as a state-of-the-art facility conceived and managed by an internationally known engineer and Chair of an Audio Engineering Society sub-committee developing technical metadata standards, David Ackerman. Over the past seven years HCL APS has moved toward joining its counterpart, the HCL DIG (Harvard College Library Digital Imaging Group) in providing top quality service and advice for digitizing media. Both work closely with the Harvard University Library Office for Information Systems on matters of building robust infrastructure and sustainable tools for creating and preserving digital objects via the Digital Repository Service. Led by Dale Flecker and Tracey Robinson, OIS is home to nationally recognized experts such as *Sound Directions* advisors Stephen Abrams, Digital Library Program Manager and Robin Wendler, Metadata Analyst.

I serve as audio engineer for *Sound Directions* at Harvard. Rather than echo the comments of our colleague Mike Casey, of *Sound Directions* at Indiana University's Archive of Traditional Music, we invite you to consider his report (submitted separately), and we limit this discussion to additional, supportive points and issues where our experiences diverge.

We are concerned with people. There are only two major manufacturers in existence producing open reel tape recorder-reproducers. We will be increasingly dependent on the

used market for playback devices with which to transfer analog recordings. Although the majority of tape collections may be transferred within the next generation, we cannot rule out the possibility that previously-undiscovered collections requiring transfer may continue to surface for many generations to come. In addition, analog tape is still being used today, mainly for its pleasing characteristics in musical recordings and production. Therefore our dependence on the mere handful of engineers highly-skilled-enough to design, build, redesign, re-build and maintain open reel analog tape machines will increase as people leave the profession. To guard against this eventuality, we would suggest conferring upon such deserving craftspeople the equivalent of “national treasure” status along with a stipend in exchange for their participation in an apprentice program to encourage interested individuals into this niche.

Our concern for smaller, under-funded archives and our commitment to engineer-attended-and monitored transfers has led us to develop a suite of software tools, as part of the *Sound Directions* project, which will be made available to the archiving community. These open-source tools will automate such processes as metadata collection, sample rate conversion and the creation of deliverables. This will allow audio engineers to apply their skills most effectively, with less fatigue, thereby reducing the potential for human error.

We also recognize the potential benefits of public-private solutions for smaller, under-funded archives. This sort of collaboration has indeed begun in Norway with the Norwegian Institute of Recorded Sound and Memnon, SA in Belgium and may be within the realm of possibility in the U.S. We encourage more study into the benefits and pitfalls of such an alliance in this country.<sup>1</sup>

Finally, the persistent problem of R-DAT recordings concerns us greatly. We find them the most difficult tape format to transfer reliably. The question of error rates, error correction and interpolation needs addressing. At what number of errors are we no longer truly reproducing the performance? We would also welcome study on the retrieval of recordings from damaged tapes and tapes with record-transport-induced variations.

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<sup>1</sup> An article about the NIRS-Memnon SA joint venture is available on the NIRS website at: [http://www.recordedsound.no/what\\_we\\_do/MemNorArticle.htm](http://www.recordedsound.no/what_we_do/MemNorArticle.htm)