Janice Kerfoot
Nov. 12, 2009
MUMT 621

Proposal: Problems and Directions in Metadata for Digital Audio Libraries

For the partial fulfilment of the requirements of MUMT 621, I propose a final paper that will explore metadata technologies used in the cataloguing of digital audio recordings. The focus will be primary on musical recordings, but other types of audio content may be considered where their omission would be artificial, as in collections of ethnographic recordings where recordings of music and speech are intermingled. This paper will be based on a review of academic and technical literature, and the examination of relevant case examples via online catalogue interfaces. An outline of the major sections of this paper follows.

1. Introduction and History

Interest in music metadata in recent history can be attributed broadly to changes in attitudes and technology. Recordings were not always taken seriously in libraries as research material nor regarded as valuable records of history in memory institutions. While recordings continue to occupy marginal positions to their textual counterparts in those contexts, their status as library and archival material has improved. Computerized information retrieval methods increase the potential capacity of collection databases exponentially, and the World Wide Web represents a colossal shift in terrain and presents new possibilities for the exchange and aggregation of metadata among commercial, academic, and user–driven databases. Key trends in recent history in the area of music metadata due to technological development (including models and standards as "technologies") will be presented to give context to the remaining discussion.

2. Problems in Metadata for Audio Recordings

Traditional metadata standards were developed with the book—both in terms of a published text and a physical object—as the prototype for all library materials. The complexity and depth of catalogue entries for music was limited by the size of cards in paper–based catalogues. This level truncation is no longer necessary since the computerization of library databases, but metadata schemes have been slow to evolve. This section will detail some of the shortcomings of metadata systems in current use, with emphasis on AACR–2. Some problems apply to music in all forms, like the inability for the basic title-author structure of (for example) AACR–2/MARC–based systems to represent intuitively relevant links between related works. Recordings introduce additional problems, such as in cases where the recording is not a commercial "release" and thus lacks the data that is typical used in a similar fashion to the publication data of books, and in cases where categories of involved persons goes beyond what can be well represented in metadata (e.g. many performers, producers, and composers contributing to one recording). Furthermore, when descriptive information about content does exist and is crucial to usability, undefined "comments" or "description" fields are often overburdened.

3. Metadata Schemes in Public and Academic Collections

In spite of the challenges, digital music collections are being enthusiastically developed in large and small libraries, archives, and museums in order to increase access, reduce physical wear analogue media, and as last–resort rescue missions for the audio content of severely degraded media. In the face of conflicting, inconclusive and scant practical advise from the MIR community, professionals must elect from among traditional but deprecating standards, novel but unstable alternatives, and idiosyncratic, *ad hoc* systems. This paper will include with a survey of the metadata standards

employed in several recent and current music digitization projects. Case examples could include all or some of the following: Library and Archives Canada's Virtual Gramophone, The British Library's Archival Sound Recordings, Indiana University's VARIATIONS project, The Arhoolie Foundation's Strachwitz Frontera Collection of Mexican and Mexican American Recordings, and any of the online digital music collections falling under the aegis of the Library of Congress American Folklife Center (e.g. The Alan Lomax Collection, The Florida Folklife Collection).

4. Metadata Schemes in Commercial Music Databases

Substantial databases of music metadata have been developed to support the commercial distribution of musical recordings. Notable examples are allmusic, Naxos and Amazon, whose systems also form the basis of various other enterprises. Commercial MIR systems are of interest to researchers developing metadata schemes for non–commercial applications because of the influence they have had on the expectations of users, and because of the potential to make use of databases accessible through the World Wide Web in cataloguing. This section will provide a summary of the metadata schemes used by several commercial music databases.

5. Directions in Research, Conclusions

Ideas explored in previous sections will be reviewed with an emphasis on current areas of research and development that are likely (or at least anticipated by researchers) to have a substantial effect on how musical recordings are catalogued in various contexts.

Tentative/Partial Bibliography

Bainbridge, D., C. Nevill–Manning, I. Witten, L. Smith, and R. McNab. 1999. Towards a digital library of popular music. In *Proceedings of the 4th ACM conference on Digital Libraries.* 161–169.

Bainbridge, D. 2000. The role of music IR in the New Zealand digital library project. In *Proceedings of the 1st International Conference on Music Information Retrieval.*

Besek, J. 2005. *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 Library of Congress.

Boyd, Alasdair. "Remain Calm! RDA, FRBR, and Music Libraries" *CAML Review* 36, no. 2-3 (2008), https://pi.library.yorku.ca/ojs/index.php/caml/article/view/19649/18362.

Brylawski, S. 2002. Preservation of digitally recorded sound. In *Building a national strategy for digital preservation: Issues in digital media archiving.* 52–66. Washington, DC: Council on Library and Information Resources and Library of Congress.

Canadian Heritage Information Network (CHIN). Metadata standards for museum cataloguing. http://www.chin.gc.ca/English/Standards/metadata_multimedia.html

Cohen, E. 2001. Preservation of audio. In *Folk heritage collections in crisis.* 20–7. Washington, DC: Council on Library and Information Resources. http://www.clir.org/pubs/reports/pub96/preservation.html

Danielson, V. 2001. Stating the obvious: Lessons learned attempting access to archival audio collections. In *Folk heritage collections in crisis.* Washington, DC: Council on Library and Information Resources.

Dunn, J., and E. Isaacson. 2002. Variations2: A digital music library system. In *Proceedings of the ACM Conference on Digital Libraries*, Portland, OR. 374.

Gorman, M., and P. Winkler. ed. 1988. *Anglo–American cataloguing rules.* 2nd ed., rev. Chicago: American Library Association.

Hartsock, R. 1994. *Notes for music cataloguers: Examples illustrating AACR2 in the online bibliographic record.* Lake Crystal, MN: Soldier Creek Press.

Hemmasi, H. 2002. Why not MARC? In *Proceedings of the 3rd International Conference on Music Information Retrieval.* http://www.dml.indiana.edu/pdf/hemmasi-ismir2002.pdf

Hunter, J. and S. Choudhury. 2004. A semi-automated digital preservation system based on semantic web services. In *Proceedings of the 4th ACM/IEEE-CS Joint Conference on Digital Libraries, Tucson, AR.* 269–278. http://doi.acm.org/10.1145/996350.996415

International Association of Sound and Audiovisual Archives (IASA), and K. Bradley. Technical Committee. 2004. *IASA–TC04 guidelines on the production and preservation of digital audio objects: Standards, recommended practices, and strategies.* Aarhus, Denmark: International Association of Sound and Audiovisual Archives, Technical Committee.

International Association of Sound and Audiovisual Archives (IASA), and M. Miliano. 1999. *The IASA cataloguing rules: A manual for the description of sound recordings and related audiovisual media.* Stockholm: International Association of Sound and Audiovisual Archives.

IFLA Study Group on the Functional requirements of Bibliographic Records. 2009. *Functional Requirements for Bibliographic Records: Final Report—Current text.* http://archive.ifla.org/VII/s13/frbr/frbr_current_toc.htm.

IFLA Study Group on the Functional Requirements for Bibliographic Records. 1998. *Functional requirements for bibliographic records: Final report.* München: K.G. Saur.

Indiana University. Variations/FRBR: Variations as a Testbed for the FRBR Conceptual Model. http://www.dlib.indiana.edu/projects/vfrbr/.

Lai, C. 2007. Metadata for phonograph records: Facilitating new forms of use and access. PhD diss., McGill University.

Lai, C., I. Fujinaga, and C. Leive. 2005. Metadata for phonograph records: Facilitating new forms of use and access to analog sound recordings. In *Proceedings of the ACM Conference on Digital Libraries*. 385.

Lai, C. and I. Fujinaga. 2006. Data dictionary: Metadata for phonograph records. In *Proceedings of the 7th International Conference on Music Information Retrieval.* 1–6.

Library and Archives Canada. 2005. The virtual gramophone: About the virtual gramophone database. http://www.collectionscanada.gc.ca/4/4/m2-5132-e.html

Library of Congress. 2005. Digital audio-visual preservation prototyping project. http://www.loc.gov/rr/mopic/avprot

Library of Congress MARC Development Office. 1976. *Music: A MARC format.* Washington, DC: Library of Congress.

Library of Congress. Traditional Music and Spoken Word Catalogue. The American Folklife Centre . http://memory.loc.gov/diglib/ihas/html/afccards/afccards-home.html.

Minibayeva, N., and J. Dunn. A digital library data model for music. In *Proceedings of the Second ACM/IEEE-CS Joint Conference on Digital Libraries*, Portland, Oregon, July 2002, 154-155.

Mudge, S., and D. Hoek. 2000. Describing jazz, blues, and popular 78 RPM sound recordings: Suggestions and guidelines. *Cataloging & Classification Quarterly* 29 (3): 21–48.

Research Libraries Group, Inc (RLG). 1980. *MARC tagging workbook: Sound recordings.* Stanford, CA: Research Libraries Group.

Riley, J. 2005. Exploiting Musical Connections: A Proposal for Support of Work Relationships in a Digital Music Library. In *Proceedings of the 6th International Conference on Music Information Retrieval.* http://ismir2005.ismir.net/proceedings/1108.pdf

Smiraglia, R. 1997. *Describing music materials: A manual for descriptive cataloguing of printed and recorded music, music videos, and archival music collections, for use with AACR–2 and*

APPM. 3rd ed. Lake Crystal, MN: Soldier Creek Press.

Smiraglia, R. 2001. Musical works as information retrieval entities: Epistemological perspectives. *Proceedings of the 2nd Annual International Symposium on Music Information Retrieval*, Bloomington, Indiana.

Smiraglia, R. 2006. *Bibliographic control of music, 1897–2000*. Comp. and ed. J. Bradford Young. Lanham, MD: Scarecrow Press.

Tillet, Barbara. *What is FRBR?: A Conceptual Model for the Bibliographic Universe.* (2004) Library of Congress Cataloguing Distribution Service: Washington, D.C.

Weitz, J. 1990. *Music coding and tagging: MARC content designation for scores and sound recordings.* Lake Crystal, MN: Soldier Creek Press.