Metadata Data Dictionary for Analog Sound Recordings

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ABSTRACT
This paper introduces a new metadata data dictionary design to assist in the consistent creation of digital libraries of analog sound recording and to promote their interoperability.

Categories and Subject Descriptors
H.3.7 [Digital Libraries]: Collection and Standards

General Terms
Management, Standardization

Keywords
Digitization, Preservation, Metadata, Analog Sound Recordings

1. DATA DICTIONARY
Libraries and archives are reinventing their roles in today’s networked society, allowing them to deliver information content directly to patrons in digital form. With the advancements in digital imaging and audio technologies, institutions have initiated audio digitization programs for preservation of their unique and rare analog holdings, such as 78 rpm and long-playing (LP) phonograph records.

Digital objects are usually stored in a digital repository separately from traditional library catalog records. For audio, these repositories are more than collections of sound files; digital objects derived from analog sound recordings, such as digital images of album covers and records labels, as well as any accompanying material, can also be included. These digital objects are described and controlled by metadata, including description, administration, structure, legal rights, and technical information [1]. Such metadata permits the capture of information about the original recording, its digital representations, and its digital derivatives and assists with the presentation and management of all the related files from the repository, including audio, image, or text documents.

A data dictionary that clarifies the scope and types of metadata associated with digital objects helps to prevent duplicate handling of data, inconsistencies, and lack of integrity during metadata encoding and data management as results of interpreting data at different levels of summarization. This metadata data dictionary for analog sound recordings provides formal metadata definitions, data types, example data values, provenance, multiplicity, usage notes (e.g., recommended use of controlled vocabulary), and the representation of relationships among data. The dictionary selectively incorporates recommendations from existing metadata encoding standards and data models. For example, the data dictionary for digital still images [2] and the data model for Indiana University's Variations2 digital music library project [3] are partially incorporated depending on practicability and suitability.

The dictionary aims to disambiguate commonly used musical metadata terms. Examples include lyrics and libretto, label issue number and matrix number, or conductor and music director. It also specifies data types and example data values, such as providing guidance for encoding audio capture detail, including the tracking force used for the stylus and the equalization curves applied for the accurate playback of early LPs or 78 rpm records during digitization. Moreover, the data dictionary reinforces vocabulary control for data values. Photos and artwork on album covers of LPs, for example, reflect social context and can be described using annotation terminology. Annotating the visual components of the LPs by meaningful keywords or classifications eases and enhances the retrieval of sound recordings. Furthermore, in order to support changes in data management, semantic evolution, and new technical requirements, the data dictionary will be managed by versions to be extensible and flexible.

Creating and managing a data dictionary for metadata of digitized representations of analog sound recordings will become increasingly important in the design and construction of worldwide distributed digital music libraries and archives, which may adopt different digitization and cataloging standards. A comprehensive data dictionary such as the one described here should promote interoperability between different systems and facilitate the development of applications to validate, manage, migrate, and exchange metadata relating to analog sound recording.

2. REFERENCES