

IMLS National Leadership Planning Grant

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I. Overview

The goal of “Planning the Next Generation Sheet Music Consortium” was to ascertain the needs of users of sheet music collections, the needs of sheet music repositories wishing to contribute to the service as data providers, and to develop a five-year plan for the continued development of the service. Activities included a planning meeting attended by Consortium members, subject specialists and expert advisors; a public meeting attended by collection curators, reference librarians, and others knowledgeable about user and data provider needs; and two online surveys. Both meetings were very productive, resulting in a large amount of data that informed the creation of the five-year plan. The plan includes community building activities, building a more robust and expanded data harvesting service, the development of user-contributed structured metadata services, and data provider services such as metadata downloading, mapping tools, and best practices for sheet music description.

II. Project Activities

Project activities focused around two, in-person planning meetings: an invitational one-day planning meeting for subject specialists and expert advisors; and an open meeting held in conjunction with the 2008 Music Library Association Annual Meeting to explore the needs for users and data providers. The primary meeting goals were as follows: to review the current achievements and status of the Sheet Music Consortium, to learn about the needs of both potential data providers and users of sheet music collections, and to develop a five-year plan for future development of the Consortium.

The planning meeting was hosted by Indiana University, Bloomington, and took place on January 15, 2008. A select group of approximately twenty individuals with a variety of expertise were invited to attend. These included representatives from the existing Consortium members,¹ librarians and curators with particular sheet music expertise,² researchers with sheet music expertise,³ and individuals with expertise in OAI-PMH and its application in other projects.⁴ The meeting agenda included presentations and discussions on the following topics. Items of particular interest are noted below:

- Presentation: History and current status of the Sheet Music Consortium (Davison)
- Presentation: Introduction to metadata sharing via federation and harvesting (Riley, Shreeves)
- Presentation: OAIster harvesting workflow (Hagedorn)
- Discussion: Vision for the future of the Sheet Music Consortium
 - What exactly is “sheet music”? What should the SMC harvest? Consensus is that definition should be liberal, without straying too far into other formats (e.g. folios, scores).
 - Who is the audience? Design service around known needs of user groups. E.g. important to support scholarly use, especially through subject analysis. Other important groups: general public, commercial users. Great interest in non-musical attributes: illustrations, advertisements. Need to define benefits to institutions and contributors.
 - Goals: SMC could be source for metadata sharing (“union catalog” of sorts). OCLC a possible partner. Strong agreement that SMC should help to define

¹ Stephen Davison, Gordon Theil and Peggy Alexander, UCLA; Jenn Riley, Michelle Dalmau, Jon Dunn, Stacy Kowalczyk and Elizabeth Johnson, Indiana University; David Reynolds, Johns Hopkins University; Lois Schultz, Duke University.

² Bob Kosovsky, New York Public Library; Kathleen Schweitzberger, University of Missouri, Kansas City; Jeanette Casey, University of Wisconsin, Madison. Susan Vita, Karen Lund, Joseph Bartl, Steve Lusko and Robin Rausch of the Library of Congress participated via telephone conference call.

³ Daniel Goldmark, Case Western Reserve University; Paul Wells, Center for Popular Music, Middle Tennessee State University.

⁴ Sarah Shreeves, University of Illinois; Kat Hagedorn, OAIster/University of Michigan.

- metadata standards and best practices. Possible expansion to SMC to include actual content. Link to related resources (sounds recordings, etc.).
- SMC as source of technical assistance to data providers.
- Discussion: Definition and prioritization of possible new end-user services
 - User supplied metadata: New addition to SMC services. User tagging and/or annotation. Transcription of lyrics by users (may be legal concerns). Subject analysis (textual description rather than controlled vocabularies).
 - Great interest in Zotero integration.
 - Integration of related collections; e.g. music, recordings, archival collections.
 - Reach out to Music Information Retrieval (MIR) community; query by humming services, etc.
 - Create short user services needs survey.
- Discussion: Definition and prioritization of possible data provider services
 - Need for cataloging resources. Aggregator-based metadata remediation and feed back to local repositories.
 - Need to accommodate very small repositories; set the bar for participation low enough to be as inclusive as possible, but not so low that data is not useful. Provide hosting services for small institutions. Provide OAI-PMH Static Repository services; this will expose small institutional collections to the world.
 - Develop levels of description that are tied to specific functionality.
 - Create short data provider needs survey.
- Discussion: Agenda planning for the February 24 MLA meeting
 - Meeting will include focus groups on user needs and data provider needs.
 - Diary study before the meeting.
 - Goals: be welcoming, encourage participation in SMC, gain understanding of barriers to participation.
 - Preparation for next grant application.
 - Other groups to reach out to: ARLIS, SAA Performing Arts Roundtable, RBMS, public libraries, Society for American Music, American Musicological Society, Society for Ethnomusicology, film librarians, sheet music collector societies, Ephemera Society.

Between the Bloomington planning meeting and the Newport MLA meeting volunteers were sought to participate in a diary study during the week of February 11-18. Participants answered a series of questions about their interaction with sheet music during that time, including doing research, teaching, providing reference, digitization, cataloging, personal interest, etc. The contents were analyzed for recurring themes, patterns, and issues that emerged. A total of four diaries were submitted. Information gleaned from the study included: the nature of the sheet music interaction (e.g., reference request, cataloging, etc.), consultation of online and offline resources, key aspects of the discovery process, and the general sheet music elements of interest (based on user requests, cataloging objectives, etc.). This information informed the concrete scenarios and discussion topics for the focus group sessions conducted as part of the MLA open meeting in Newport.

The second meeting was held in conjunction with the annual Music Library Association (MLA) Meeting in Newport, Rhode Island, on February 24, 2008. Invitation to attend the meeting was

spread as widely as possible among the MLA membership and potential conference attendees, with the aim of including the experience and viewpoints of as many different constituents of the sheet music community as possible. The goals of the meeting were to generate interest in the Sheet Music Consortium, to recruit additional partners and data providers, and to learn about end-user and data provider needs through focus groups. Approximately 40 people attended the meeting, representing 26 different institutions.⁵

The meeting focus was on three activities, shown here with the principal topics of conversation:

- Focus group: End user needs
 - Importance of non-musical content
 - Define key access points
 - Maintaining collectors' descriptive practices (in archival collections)
 - Discovery mechanisms
 - Subject access
 - Accompanying materials
 - Impact of copyright issues on access, use and digitization
 - Faculty/librarian partnership
 - Reference service
- Focus group: Data provider needs
 - Workflow and formats for descriptive metadata creation; authority control and subject access
 - Shared guidelines for cataloging sheet music
 - Clustering of metadata records
 - SMC assisting metadata creation, authority control, export of enhanced records back to native system
 - Priorities: cataloging or digitization
 - Technical metadata
 - Harvesting of digital content
- Discussion: Vision for the "Next Generation Sheet Music Consortium"
 - OAI-PMH Static Repository as means to broaden participation
 - Scope of materials harvested (definition of sheet music)
 - Linkages between SMC content and other systems
 - Models for incorporating user-supplied metadata (layered approach); trust certain users over others?
 - Search histories; RSS feeds for updates.
 - Metadata remediation

⁵ Institutions represented included: Alexander Street Press, Boston Public Library, Butler University, Chicago State University, Cleveland Public Library, Eastman School of Music, Free Library of Philadelphia, Harvard University, Indiana University/Bloomington, Library of Congress, McGill University, New York Public Library, Princeton University, Tufts University, University of Akron, University of Alabama, University of California/Davis, University of California/Los Angeles, University of Colorado/Boulder, University of Illinois/Urbana-Champaign, University of Maryland, University of Missouri/Kansas City, University of North Carolina/Chapel Hill, University of Oregon, University of Virginia, Washington University in St. Louis.

Each focus group was facilitated by a domain expert and guided by a script. A detailed report on the diary studies and the focus groups is attached as one of the project products.

The two final activities of the project were:

- Compilation and distribution of a User Services Needs Survey and a Data Provider Needs Survey
- Creation of a five-year plan for the Consortium

The two surveys were made available via SurveyMonkey.com and are still active. Results from the surveys will be compiled and distributed to all project participants—including all meeting attendees—early in 2009.

Using evidence gained during the planning process, a five-year plan for the further development of the Consortium and its services has been developed, and is attached in the project products section of this report.

III. Project Audience

As a planning grant, the audience for our project was intentionally broad and varied. The primary audience for the project was necessarily our planning team and current Sheet Music Consortium metadata contributors. Each of our project activities were designed to ultimately inform the future development of the Consortium service in the long term and a new IMLS National Leadership Grant proposal in the short term.

Secondary audiences for the Sheet Music Consortium Planning Grant were also targeted through various project activities. The Consortium planning meeting held in Bloomington, Indiana, in January 2008 benefited others working with metadata harvesting, by bringing together a number of specialists in this area to help advance the state of the art. This meeting also benefited researchers using sheet music, by bringing a representative set of them together and collaboratively planning online sheet music resources with them. The focus group held in conjunction with the Music Library Association annual meeting benefited potential data providers to the Sheet Music Consortium metadata portal by providing them with information they need to plan for future contributions and by allowing them to help shape the tools to assist with data contribution.

IV. Project Analysis

User studies focusing on end-user services and data provider services comprised a significant activity of the planning grant. The original methodologies proposed assumed a phased approach, with each user study building on the other: logs assessment, leading to web surveys, and finally retrospective interviews. However, after careful consideration, we pursued a different set of methodologies, still maintaining the building-block approach, but utilizing diary studies, focus groups and surveys as our primary methodologies for assessment. The methodologies originally proposed were altered in order to maximize input from as many users as possible. This shift did not have a negative impact of the goals and objectives originally defined for these user studies; both the end-user services and data provider services goals were met.

USER NEEDS ANALYSIS

Sheet music user needs were identified through the planning meeting, diary studies, the user needs focus group, and the (in-progress) user needs survey. There were three principal objectives:

- Investigate ways to support authoritative name and subject description without unnecessarily taxing institutions with limited or competing resources that would like to contribute content to the Consortium.
- Determine the level of interest in both musical and non-musical content contained in sheet music in order to devise appropriate access points and related tools for manipulating that content in meaningful ways.
- Identify additional tools and services that may be provided to the end-user to support teaching, learning and research.

The diary study participants were asked to log their daily interactions with sheet music, recording patron sheet music needs and related searches. Recurring themes were then used to inform the scripts that were created for the February 24 user needs and data provider focus groups (see attached report).

The following analysis summarizes some of the main themes explored as a result of the user needs focus group:

- Cover art is an important aspect of sheet music, of interest to a wide variety of users, including collectors, historians, musicians, and artists. Other non-musical content, such as advertisements were mentioned as important as well.
- Multiple access points are necessary, especially subject-related for instruction and research needs in particular. Problems can arise due to the various levels of description and the variety of vocabularies used.
- There is a tension between the classification and arrangement used by libraries, and the inherited organization of a collector, and how the combination of these impacts discovery for researchers.
- Discovery systems vary a great deal. Subject access is primary for research, but is poorly implemented in most collections.

- By-products of a researcher's own work (annotations, data collection, etc.) can provide descriptive foundations or enhance existing descriptions of sheet music if leveraged in a feasible manner.
- Information needs (e.g., racism reflected on cover art, patriotic songs, etc.) seem to be shared across various disciplines, therefore, ways discovery can be assisted along common information needs is worth exploring.
- There is great interest in linking resources such as SMC with repositories of related materials, e.g. sound recordings, reference works.
- The nature/definition of sheet music is varied, from printed music in general to American imprints. While the SMC needs an operational definition, the term will likely continue to be problematic.

A number of these issues are the basis of the in-progress User Needs Survey. The survey will provide us with some more quantitative measures of user needs to supplement the more qualitative information garnered from the diary study and focus group. The survey can be found below as one of the project products.

DATA PROVIDER NEEDS ANALYSIS

The data provider goals as a result of the Sheet Music Consortium planning grant were to:

- Discover how institutions currently describe their sheet music collections, including data structures and descriptive standards.
- Discover the level of technical expertise that is available to support sharing of metadata at institutions that house sheet music.

Needs of potential data providers was a topic of discussion at both project-supported meetings—the planning meeting held in Bloomington, Indiana, in January 2008 and the community meeting held in conjunction with the Music Library Association annual meeting in Newport, Rhode Island, in February 2008. From these meetings, a clear picture of widely varied descriptive practice for sheet music emerged. Many different metadata structures are used. Item-level description does not exist at all for many collections. This variety of practice apparently has emerged due to the lack of both descriptive standards and descriptive tools for sheet music, when an institution does not want to invest in full MARC cataloging for a collection. This suggests there is a strong need for descriptive guidelines for sheet music that are both tiered and not connected to MARC cataloging (such as the Music Library Association's *Cataloging Sheet Music: Guidelines for Use with AACR2 and the MARC Format*). Tiered guidelines would set a relatively low bar, making them attractive for use in more institutions and allow more contributors to the Sheet Music Consortium service. They would connect user functionality of the service directly with levels of description, providing institutions with information necessary to make an informed decision about how fully to describe their sheet music collections.

Regarding technical help, it became clear from our discussions that the smaller institutions that could be valuable contributors to the Consortium lacked the technical expertise to implement OAI-PMH, and of those that did have this expertise at the institutional level would likely have difficulty making a sheet music metadata project a priority for technical staff. This suggests that

one of the most important roles of the Sheet Music Consortium into the future should be to provide easy to use tools for sheet music metadata creation and sharing.

While we learned a great deal about data provider needs from the organic discussions at both project meetings, they were not necessarily comprehensive. The Data Provider Needs survey distributed in December 2008 (see appendix) is informed by the issues raised in both project-supported meetings and is designed to gain a more complete view of both current metadata practice and technical support available at institutions that are potential Sheet Music Consortium contributors.

V. Future Activities

FIVE-YEAR PLAN

The activities described above have informed the development of a five year plan for the Sheet Music Consortium, attached below in the Project Products section. The plan is divided into four areas of activity, all of which are important for the continued development and success of the Consortium:

1. Build Community
 - In order for the Consortium to thrive participation needs to grow. The plan outlines outreach activities, planning and operating activities, and levels of participation.
 - A sustainability plan will be developed during the first two years of the project.
2. Harvesting Service
 - During Years 1 and 2 a robust and (mostly) automated harvesting service will be put in place. In addition, a Static Repository Gateway will make participation by institutions with limited resources much easier.
 - By Year 3 of the plan we expect that there will be significant changes in the OAI-PMH environment (and related services) which may offer different types of harvesting opportunities. During this time we plan to expand into harvesting MARCXML (sheet music metadata is already available for harvesting via OAI-PMH in MARCXML from the Library of Congress), and extend the technologies for gathering data for the Consortium to include protocols such as SRU.⁶

⁶ SRU: Search and Retrieve via URL. <http://www.loc.gov/standards/sru/>.

3. Services for Data Providers

- Years 1 and 2 of the plan outline an ambitious set of metadata-related activities. These services featured prominently in both planning group and focus group discussions:
 - i. Best practices for sheet music description
 - ii. Download of structured metadata records
 - iii. Metadata mapping tools
 - iv. Online record evaluation service

4. Service Provider (End-User Interface)

- Again, Years 1 and 2 outline an ambitious agenda:
 - i. User-contributed structured metadata
 - ii. Downloading of bibliographic information to Zotero
 - iii. Implementation of OAI-ORE to describe different versions of sheet music available through the Consortium
- In Years 3-5:
 - i. Alternative methods of making structured metadata available
 - ii. Integration with value added services (e.g. Flickr).
 - iii. Expansion to include related materials (e.g. sound recordings, reference sources, etc.).

GRANT SUPPORT

As is clear from this description the plan is most ambitious during the first two years. We plan to submit an application to the IMLS for a National Leadership Grant to support this activity. During the two-year period of the grant (if granted) we would develop a sustainability plan for continuing the services of the Consortium. This may involve partnering with another organization (e.g. OCLC), obtaining commitments from Consortium members to support the service for their mutual benefit, or another model.

VI. Project Products

Attached:

1. MLA meeting focus groups (Newport, RI) final report
2. User services needs survey
3. Data provider needs survey
4. Five-year plan