

DML Satellite Site Kick-Off

April 24, 2001

It's time for the long-awaited kickoff of satellite site participation in the IU Digital Music Library Project (DML). This note is the first in a series of update and organizational communications... and it's rather long-winded - I apologize for that! Subsequent communications will be held to high standards of brevity, I promise.

An outline of the intent of this note is as follows:

1. Review the project research areas.
2. Summarize project work to-date.
3. Lay groundwork for defining individual satellite site project contributions and request site interests and commitments.
4. Request contact information.
5. Describe plans for on-going project communications.
6. Mention the satellite site BOF at the JCDL 2001 DL conference.
7. Summarize the action items.

1. Review the project research areas.

The DML Research Areas are as follows:

Music Theory Instruction - This project will produce software tools and applications to support music teaching, learning, and research. Using these new tools, students will be able to experiment, try alternatives, and work collaboratively with colleagues who have access to the same resources. Faculty with modest computer skills will be able to create lessons efficiently and provide students with highly interactive learning experiences in music.

Metadata - This project will create metadata elements to enable discovery, identification, and navigation of digital content in a digital music library. It will contribute a set of proposed standards and practices that others in the digital library community may adopt; the standards may also be useful for those working with other time-based media.

Usability - This project will study how students, faculty, and library patrons use digital music resources--and learn how technology can be used or adapted to help this process.

Music Instruction / Ocourse - This project will incorporate digital music library collections and applications in a "music for the listener" course, designed for the non-major and offered as a general education credit. Assessments will compare the effectiveness of a lecture-based class supplemented with digital content with one fully online. Digital music library resources will be incorporated into these classes using Ocourse, an online teaching and learning environment developed at IU.

Copyright - This project will study and document the complex restrictions in the field of music, identify when works may be used with the limits of fair use or other copyright exceptions, and help specify how technology may be used to satisfy the requirements of copyright restrictions or exceptions.

System Design - The digital music library system architecture will provide for storage and delivery of music in formats beyond audio: score images, music notation files, and MIDI files. Mechanisms will be added for authentication, authorization, and access control, as well as storage, search, and retrieval of enhanced administrative and technical metadata.

Networking - This project will provide investigators with network connectivity and network engineering services to support the research and testbed development goals of the DML.

An essential goal of IU's DLI2 proposal is to greatly expand access to the DML testbed, by demonstrating that users at other colleges and universities can have the same access to and interaction with the DML content and applications as will be available to students, teachers and scholars at Indiana University. Satellite sites committed to the project include, in the United States: University of Illinois at Urbana-Champaign, University of Massachusetts at Amherst and Northwestern University; in the United Kingdom: Kings College - London, Loughborough University, and University of Oxford; and in Japan, Waseda University.

2) Summarize project work to-date.

Metadata (Mary Wallace Davidson and Harriette Hemmasi): Conducted interviews to determine the depth of information users may require for searching/retrieval purposes. Investigators also discussed the proposed plan for establishing metadata elements and choice/creation of metadata schema with SLIS professor, Elin Jacob. Based on these discussions, drafted a preliminary set of metadata elements and have asked that a test set of 100 MARC records from the Variations project be extracted and made available for testing the proposed metadata elements. Reviewed the US MARC bibliographic record to determine what fields might be considered as potential metadata in the DML environment. Another goal of this review is to identify fields that could be automatically transferred to the newly selected/created metadata scheme.

Usability (Andrew Dillon): Work near completion on the review of findings to date on digital libraries in education and learning. Preliminary work begun with stakeholder group to determine full use-case scenarios and user types. Preliminary work also begun to conduct usability study of current Variations digital music library system, to provide baseline data for future evaluation of the Digital Music Library testbed system.

Music Theory and Music Instruction (Eric Isaacson): Work on this project will lead to the development of the Multimedia Music Theory Teaching tool. This will require work in three areas: (1) design of the MMTT system (which subsumes things like conducting needs analysis, development and testing of prototypes, etc.), (2) research into music representation schemes suitable for the project, and (3) design of an algorithm to match points in a digitally encoded score and a digital audio file. Preliminary work has started on (1) and (3) in particular, with both to see substantial attention in the coming months. Item (2) is slated for work beginning in the summer.

Music Instruction - Music for the Listener (Jay Fern and Roberta Lindsay): The development of a delivery mechanism for DML products to the non-musician will be realized in 2 versions of a "Music for the Listener" course - web enhanced classroom-based and web-only distributed model. In addition to DML team collaboration for the continued development of processes, investigators have developed a list of music to be digitized for use in the music appreciation (M174) distance classroom and researched pedagogy-based theory for the best practice of web-based instruction. Additional research into the authentication models necessary to use DML materials with Oncourse (web-based course management system).

Intellectual Property (Kenny Crews, Kristine Brancolini, Mary Davidson): Primary activity has been to prepare foundational materials for later, more substantive studies later in the project. To that end, investigators developed a comprehensive outline of copyright issues and drafts of bibliographies of relevant literature. Work also began developing use-case scenarios to assist in copyright analysis. The document outlining copyright issues is available on the project web-site <dml.indiana.edu>.

Testbed System Development (Jon Dunn): A major area of work is development of the Digital Music Library testbed system. This includes design and implementation of a system architecture to support storage and retrieval of music in a wide variety of formats, including audio, images, notation, MIDI, and an object oriented component-based application architecture to allow innovative applications to be developed utilizing content and services from the Digital Music Library. One major focus of activity has been in recruiting programming staff; two staff joined the project in January. Major effort spent developing a detailed development schedule to coordinate the work of the programming team and other project investigators. Also produced a system concept document to provide a summary of the testbed system for developers and other project team members.

Overall Project Management: Detailed work plans for each major area of the project have been developed by the responsible investigators and are posted on the project web site <dml.indiana.edu>. An all-hands meeting of investigators, senior personnel, graduate

assistants, and staff was held on November 30, 2000. Project plans were presented by all investigators, a communications and management plan was presented and discussed, and a preliminary prototype system was demonstrated to illustrate various possible features of the digital music library system.

3) Lay groundwork for defining individual satellite site project contributions and request site interests and commitments.

We're looking to match individual satellite site research interests to the DML research areas, and to develop project contribution plans for each site. The objectives for satellite site participation are described in the DLI2 proposal as: demonstration of interoperability; performance evaluation of network services; tests of usability; and expert evaluation of applications for music instruction and music library services. The fundamentals of satellite site contributions take the form of implementing, using and evaluating the DML applications. These objectives serve merely as a guide and are not intended to limit - we welcome creative ideas for participation!

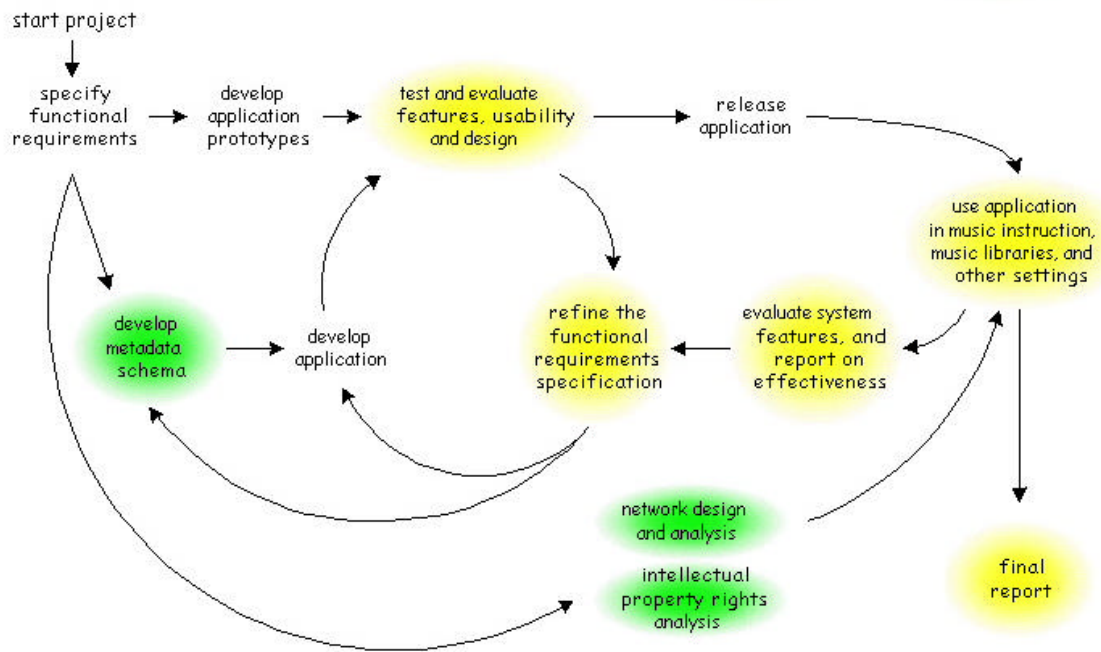
The diagram below gives a sketch of project activities with relation to the research areas. Activities that are primary areas for satellite site participation are highlighted yellow. Secondary areas are highlighted green. An individual site may contribute to one or more of the areas. Each area on the diagram has multiple unique sub-areas for contribution. For instance, in the area "test and evaluate features, usability and design", an individual site may choose to focus efforts solely on usability. In the area "use application in music instruction, music libraries and other settings", an individual site may focus on instruction, library or other application.

DML Satellite Sites - Areas for Contribution:

primary areas for contribution

and

secondary areas



Using the diagram to describe a rough project timeline:

- We're currently in the first three steps, "specify functional requirements", "develop metadata schema" and "develop application prototypes". Application prototyping is now just in the rough initial phase.
- The "test and evaluate features, usability and design" step will begin with release of functional prototype of the DML applications, beginning in June 2001.
- The "use application (music library)..." step will begin with the first software release, scheduled for late December. Use of the DML in library applications can be targeted for January 2002.
- The "use application (music instruction)..." step begins with the release of version 2 of the DML software, scheduled for April 2002. Use of the DML in instruction could begin either summer or fall terms.

I'm requesting that each site provide a draft of the site's plan and commitments for participation in the DML - specifically detailing the areas of activity and research interests for the site. The draft will serve as a starting point to refine and develop a final plan for each site's participation. I would propose that the participation plan draft should be e-mailed to the individual site listserv (see #5 below) by May 10. IU project investigators Jon Dunn, Gerry Bernbom and Doug Pearson are available via the site listserv to help deliberate plans and activities.

After all satellite site participation plans are in and assembled, the IU project team will work with each site to refine and develop the plans to a commitment. I would propose to finalize participation commitments by June 1.

It's important for each site to identify a site coordinator and pull together a formalized site team soon. The composition of satellite site teams will vary according to the activities a particular site chooses to undertake. A music librarian and/or faculty members in music theory and music appreciation may be appropriate according to a site's activities. At minimum, a site team needs to have an applications and networking technologist and one individual must be designated as the site coordinator.

4) Request contact information

Please provide contact information (name, title and e-mail address) for individuals in the following team roles. Every role is not required to be filled at each site. The roles are filled in accordance with a site's DML activities. One individual may serve multiple roles. At minimum, each site needs to identify a site coordinator and an applications/networking technologist.

- site coordinator
- technologist, applications
- technologist, networking
- music librarian
- faculty member in music theory
- faculty member in music appreciation
- others according your creative ideas...

5) Describe plans for on-going project communications.

Project update and organizational communications such as this will occur biweekly (remember I promised future brevity!) as satellite sites become established in their activities. The frequency of updates will be adjusted according to project phases.

An INDIVIDUAL listserv for each satellite site has been created. IU members of the listserv include the overall project lead investigators Gerry Bernbom and Jon Dunn; and Doug Pearson, the satellite site and networking investigator. Listserv members from your site currently include all of the people addressed in this e-mail's salutation. Additional contacts provided in response to #4 will be added to the listserv. This e-mail was addressed to the listserv.

A listserv including ALL satellite sites and the same list of IU folks as above has been created as: dml-sat-1@listserv.indiana.edu.

The DML project web site, <http://www.dml.indiana.edu/>, has a satellite site page linked at <http://www.dml.indiana.edu/satellite/index.html>. Of interest on the satellite site page is the document, "Indiana University Digital Music Library (DML) Project: Satellite Sites - Outline of Roles and Responsibilities".

6) Mention the satellite site BOF at the JCDL 2001 DL conference.

The ACM Digital Libraries & IEEE CS Advances in Digital Libraries Conferences will be brought together as the ACM+IEEE Joint Conference on Digital Libraries, to be held June 24-28 in Roanoke, VA. The DML project will be discussed in panel session, Digital Music Libraries – Research and Development. A birds-of-a-feather session will be held for satellite sites. More information is forthcoming.

7) Summarize the action items.

For the satellite sites:

- a. Identify a site coordinator.

- b. Pull together the site team.
- c. Send team member contact information to the site listserv.
- d. Develop a draft participation plan. Rely on the individual site listserv and Jon, Gerry and Doug to help deliberate. Send the completed draft plan to the individual site listserv by proposed deadline, May 10.

For Indiana University:

- a. Assist site to develop participation plans.
- b. Ongoing project communications.
- c. More information about the BOF at JCDL 2001.
- d. Assemble all site participation plans and work with each site to develop a participation commitment by proposed deadline, June 1.
- e. Brevity :)

That's it for now. We look forward to hearing from you.

Regards,

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