1. Literature review of DL usability findings

Timeline: September 2000 to January 2001

Activity: We need to determine the state of the art in the domain of music and related instruction with hypermedia and associated digital library tools. Specifically we will assess the evidence to date of the impact on learners and instructors in terms of learning outcome and instructional style with particular emphasis on usability issues in the design and successful exploitation of such tools.

Output: The output of this work will be a technical report to be submitted for publication to a peer-reviewed education or DL journal. The report initially to be made available on the web at the due date.

Deliverable date: Jan 30th 2000

2. Baseline usability study of VARIATIONS

Timeline: November 2000-February 2001

Activity: Establishing a baseline of usability with the existing technology will provide benchmarks for effectiveness, efficiency and satisfaction as well as enabling us to gauge user reactions to the new system. We envisage employing a field-based methodology on a representative sample of student and faculty users.

Output: Usability report of the current VARIATIONS system. The report to be made available on the web.

Deliverable date: March 31st 2001

3. Set up participation groups for design process

Timeline: October 2000- April 2001

Activity: It is important for the success of the project that we have regular interaction and testing sessions with all stakeholders. To that end we envisage forming groups of representative users (students, faculty and related technical staff) whom we will call on to provide feedback and input at all stages of the design process.
Output: Listing of willing participants grouped by knowledge, tasks and experience. A mailing list to be developed and maintained for communication purposes. Group membership will change over the course of the project.

Deliverable date: April 30th 2001

4. User and task analysis for relevant stakeholders

Timeline: Jan -May 2001

Activity: In order to support the initial design of the new applications it is important that we gain clear information about the users (their abilities, preferences, habits, experience, knowledge etc.) and their tasks (frequency, duration, complexity etc.). Since the new technology will likely create new tasks, this process will be ongoing over several stages of the design process. For this first year we will perform contextual analyses of both in-class and out of class tasks to be supported by the DML with students, faculty and library staff using case analysis methods wherever possible to support the project's object-oriented development process. This work will also complement the needs analysis and user testing of the lesson authoring and lesson prototypes ongoing in the School of Music.

Output: Technical reports on the context of use of the new tool containing recommendations for design and future usability testing will be made available as the data emerges. Interim reports will be used to support ongoing project activities. The final report will be made available on the web and, if suitable, submitted for publication in a peer-reviewed journal.

Deliverable date: An interim report will be issued March 1st 2001. The final report will be due May 31st 2001.

Summer 2001

5. DML Interface features design and evaluation

Timeline: June 1-Aug 31

Activity: The user interface for the DML will contain many features for searching, manipulating and navigating through data. To ensure usability, we will need to consider the best possible combination of features that will support users with varying levels of skill and experience. We will initially determine the typical interface feature sets of the nearest equivalent technologies, review the test findings of such features in the HCI literature, and, as required, perform usability tests on prototype designs. This work will complement the user testing on lesson prototypes in the School of Music.

Output: Technical reports of the results will be made available to the project team. These will contain details of the interface features that are most usable for the tasks and users the DML will support. Results from all user studies will be included
Deliverable date: An interim report will be issued by Aug 31st 2001.

**Academic Year 01-02**

6. **Interface features design and evaluation (cont.)**

Timeline: Sept 1-Dec 31\textsuperscript{st} 2001

Activity: Interface features design and evaluation (cont.)

Output: As above, a technical report incorporating findings and recommendations will be delivered to the project team.

Deliverable date: Final report by January 10\textsuperscript{th} 2002.

7. **Ongoing user testing and participation**

Timeline: January 1-May 31\textsuperscript{st} 2002

Activity: As the design begins to emerge, we will allow the stakeholders to engage in a range of informal trials. From these we will gauge the likely acceptability of the design and use the comments and critiques as inputs to further design.

Output: User feedback report with recommendations for design.

Deliverable date: Final report by June 15\textsuperscript{th} 2002

**Summer 2002**

8. **Lab-based user testing of DML**

Timeline: June 1\textsuperscript{st} – August 31\textsuperscript{st} 2002

Activity: The emerging design will be submitted to a lab-based summative evaluation of usability by a sample of the intended user population.

Output: Usability test report.

Deliverable date: August 31\textsuperscript{st} 2002.

**Academic Year 02-03**

Details to be added.