

2005-2006 Learning Technologies Grants Proposal
(COVER PAGE)

Project Information

Digital Versatile Disc (DVD) authoring, encoding, burning, and distribution for the University of Georgia Hugh Hodgson School of Music Dancz Center for New Music
Project Title

Leonard V. Ball, Jr.
Project Director

School of Music
Requesting Department

\$41,753
Amount Requested Year 1

0
Amount Requested Year 2

Project Director's Signature

Proposal Endorsement Signatures

Department Head

Dean

Proposal Abstract (100-word maximum)

The intent of this proposal is to establish a DVD editing/authoring environment in Dancz Center for New Music. The requested equipment will provide the opportunity for School of Music students and interested students university-wide to study and use the latest digital audio and video software and hardware. Two dedicated Digidesign Pro Tools HD2 professional digital audio workstations and an Apple-based Final Cut Pro Studio DVD-authoring station will provide support DVD-audio projects and a pilot-study involving archiving of student recitals to DVD. A second year's allocation is requested to provide a final Pro Tools Station for the DVD-authoring station.

Section I. Project Description

• **Nature of the Innovation:** There are moments in history where separate, yet distinctly interrelated, events combine to generate interesting and vital new directions for creative research. At this time such a moment exists for the University of Georgia Hugh Hodgson School of Music. Four trends, one from the commercial environment and three from within the School, itself, currently dictate the next development in technology instruction within the unit.

1) The next level in digital creative research and production involves Digital Versatile Disk (DVD) based audio and video. Even though the standards are still not finalized, we are in the midst of a transition from standard analog to high definition signals in broadcast television. The direction is clear and the outcome inevitable. Digital Versatile Disc technology is here and needs to be addressed by serious audio facilities. The sooner educational institutions that provide instruction in audio and video equipment used in the commercial world recognize and prepare for the move, the better.

2) The University of Georgia Hugh Hodgson School of Music presents over three hundred recitals a year. Most of these recitals are recorded to digital audio tape (DAT) and compact disc (CD), and students, faculty, and visiting artists usually receive a CD immediately after each performance. This capability was envisioned and developed by the operational team headed by the Doug Moore, Director of Operations and Recording Services for the school. While the delivery of a performance CD immediately after a concert is admirable and far ahead of most comparable institutions, it is still focused on current specifications and techniques that will soon be overtaken by DVD. A DVD containing a video and audio representation of an individual's performance would present an encompassing display of the talent of the performer, to include stage presence and interaction with the audience.

3) The University of Georgia Roger and Phyllis Dancz Center for New Music has, for over nine years, been dedicated to providing training in the latest hardware and software for digital audio. The facility's capabilities currently include mixing and performance playback in quadraphonic digital audio at up to a 24-bit depth and 192KHz levels. Currently, as with the rest of the HH School of Music, the Center's main means of production involves Compact Discs. A move to the 24 bit, 96 KHz or 192 KHz, multi-channel High Density-DVD standard is required to provided optimum training for our students.

4) In recent years students have expressed increasing interest in a) including more video in creative research projects; b) supporting and working with audio for film creation; c) working in surround sound six-channel (5.1), seven-channel (6.1), and eight-channel (7.1) formats; and d) creating their own extended CD, or DVD discs, for distribution.

This proposal, if funded, will provide a High Definition Digital Versatile Disk authoring, encoding, burning, and duplicating station for DVD-Audio and Video. The station will be located in the Dancz Center for New Music. The proposed budget will also provide a studio station capable of recording and editing high-definition audio and video. The

complete set-up would initially be used to support the University of Georgia Hugh Hodgson School of Music Dancz Center for New Music. Eventually, after a pilot study which would focus on student archiving of student recitals during the Spring 2006 semester, support would expand to the HHSOM and the UGA campus. The authoring and burning station and its satellite station will serve a three-fold purpose. First, they will be used to train music majors and other interested university students in the current and ongoing development of this evolving creative-research medium. Second, the station will also provide the opportunity within the Dancz Center for New Music for creative research using the developing DVD-Audio standard, providing students with the opportunity to create 5.1 multi-channel, high definition works. Finally, a Dancz Center pilot program for recording and producing DVD discs of student recitals will be conducted with the support and assistance of the Hugh Hodgson School of Music Recording Services area. The resulting DVD discs will be distributed to student composers, and an archived copy will remain in the Hugh Hodgson School of Music for historical purposes.

- **Need/Rational:** The increasing level of sampling and quantization rates for audio to achieve high-definition sound, the students' expressed desire to work in and develop a more diverse, multimedia approach in their creative research, the need to provide applied students (those who are majoring in performance on an instrument) with an audio and video archive of their creative research, and the undeniable need for a DVD workstation that will support the high-definition environment on the University of Georgia campus and especially in the Hugh Hodgson School of Music, all categorize this proposal as a timely and innovative move to the next level of productive creativity.

- **Relevance of the project to unit and University priorities:** In its current five-year plan, The University of Georgia Hugh Hodgson School of Music states its desire to become a leader in innovative use of technology. "Innovative use of technology" is part of the Franklin College of Arts and Sciences Strategic Plan's goals in achieving national recognition of its undergraduate programs. The University has also announced its intention to apply and explore the innovative use of technology in the education of its students. This project meets and furthers the aims of the unit, Franklin College, and the University as a whole.

- **Specific courses benefiting from the project:** Potentially MUSI: 3910 (all junior recitals), 4910 (all senior recitals), 7810 (masters level recitals), 8810 (doctorate level recitals), 4814 (senior electronic composition), 5730/7730 (Electronic Composition II), Additionally, it may be determined that a new course focusing specifically on DVD production is warranted,

- **Number of students served:** Potentially every music major, music minor, and university student studying an applied instrument or taking a technology course in the Hugh Hodgson School of Music could benefit from this innovative project. Estimated potential number, to include performance ensemble members: 500 students per year.

Section II. Budget

• **Technology, facilities, and other resources requested:** an Apple Final Cut Pro Studio HD Professional Authoring software/hardware system for video/audio DVD production; a Digital Linear Tape drive to archive compiled DVD files for replication at a production facility; a DVD duplicating and printing station to produce finalized DVD products that do not require replication; and a professional, 3-chip, camera that will be used to record the video from student performances. The second year's budget finishes the installation of a complete DVD station, provides an additional camera to allow comprehensive video coverage of recitals, and a video mixer and 5-1 installation in the remaining digital studio of Dancz Center for creation of DVD audio. This proposal also provides appropriate storage and archiving enhancements for HD-video and audio.

• **Total Proposed Budget:** \$ 84,481 (\$41,753 from LTG; \$ 42,728 by HHSOM)

Item Requested	Qty	Unit Cost	Total Cost	Requested from LTG	Provided by Other Sources
Digidesign D-Command PT Control Surface	1	\$ 16,000	\$ 16,000	0	\$ 16,000
Pro Tools HD 2 System	2	6,995	13,990	0	13,990
Digidesign 192 I/O	2	2,395	4,790	0	\$ 4,790
Digidesign 192 AD Expansion Card	1	1,295	1,295	1,295	0
Digidesign 96 I/O	1	2,200	2,200	2,200	0
Digidesign DigiLink Cable (50')	2	150	300	0	300
Digidesign MIDI I/O (for D-Command control)	2	700	1,400	0	1,400
Digidesign Sync I/O	1	2,500	2,500	2,500	0
SCSI 128 Kit from Digidesign, Inc.	2	700	1,400	0	1,400
MediaDrive rS73/320 LVD – 73 GB	6	880	5,280	3,520 (4)	1,760 (2)
68p- HD – 68p HD LVD Cable 15	6	45	270	180 (4)	90 (2)
Tannoy System 1200 Speaker	2	2,000	4,000	2,000	2,000
PS350B Tannoy Active Sub-woofer (shielded)	1	758	758	758	0
Pelco TV Mount w/suspension HW	1	350	350	350	0

Est. Cost to Hang one Pelco Mounts and Tannoy Speakers	1	2,500	2,500	2,500	0
Center/Rear Channel Amplifier	1	1,000	1,000	1,000	0
Canon XL-2 3CCD MDV Camera w/acc	1	5,500	5,500	5,500	0
Horita BSG-50RM Blackburst Generator	1	450	450	450	0
DLT Drive and media (20 data tapes and one cleaning tape)	1	2,500	2,500	2,500	0
Apple Computers for Digital Production (Dancz Main and Author station)	2	6,000	12,000	12,000	0
Apple FC Pro HD Studio	2	499	998	0	998
Neumann U89i (nickel)	2	2,500	5,000	5,000	0
		Totals:	\$ 84,481	\$ 41,753	\$ 42,728

• **Budget justification narration:** The HHSOM Dancz Center for New Music has , over the last two years, already purchased a considerable amount of equipment to support this creative initiative. The cost, to date, is reflected in the “Provided by Other Sources” column in the budget table, above. This proposal’s equipment request, which will take the Center to the next level digital audio editing and archiving, will allow students and faculty to work with DVD from the initial sampling of video and audio to the final stage of producing a master for mass production. The original request projected the inclusion of both of the Center’s digital labs into the DVD workflow, and provided a two-year time line for that mission to be accomplished. The restricted LTG budget has forced a streamlining of the original two-year proposal and requires a reduction to one “DVD-capable” workspace within the HHSCOM Dancz Center. The addition, last September, of a Digidesign D-Command Control Surface to Dancz Center’s Studio Main, with its emphasized capability of surround editing, designates Studio Main as the lab to move to DVD sampling, editing, and production. The requested equipment covers the production of HD-DVD involving high-density video. The equipment also provides, for the first time, the ability to sample, edit, and produce high-density audio using the newly established DVD-audio standard. This project, as indicated above, is part of an on-going initiative to explore the DVD standard, and an analysis of the reaction to this first stage will assist us in requesting equipment for the next stage in succeeding years.

• **Projected Timeline:**

Date (mm/yy)	Objective	Person (s) Responsible
12/05	Depending on award announcement, all equipment and software ordered.	Leonard Ball
01/06	Again, depending on award announcement, essential sampling and editing equipment purchased and installed.	Leonard Ball
01/06	Begin training students on equipment and software. First projects initiated.	Leonard Ball, GA
04/06	Final stage equipment and software installed (mastering, archiving).	Leonard Ball, GA
03-05/06	First concert filming/ recording initiated.	Leonard Ball; Doug Moore
06/06	Initial DVD production from the pilot project in Dancz Hall.	Leonard Ball, GA
07/06	Student Assessment Sheets evaluated to determine the feasibility of a new course and the effectiveness of the pilot project.	Leonard Ball; Doug Moore
09/07	Equipment/software request for the next stage.	Leonard Ball
09-12/07	DVD-Audio student projects continued.	Leonard Ball
12/07	First year DVD-Audio projects submitted and evaluated.	Leonard Ball Doug Moore Composition Faculty

Section III. Learning Outcomes

- **Learning outcomes and how resources will be used to achieve these outcomes:** It is expected that students using the specified equipment will become proficient in:
 - Planning and initiating a Digital Versatile Disk project.
 - Employing the software and hardware to develop and produce DVD-Audio and DVD-Video (with audio) specific works.
 - Planning and producing unique, innovative disc labels and duplicating DVD projects for distribution to end users, replication facilities, and departmental archives.
 - The use of High Definition Audio in projects that are completed for live performance.

- **Methods for evaluating the project and learning outcomes (subsequent reports on successful grants will be judged in part on the evaluation criteria presented in the proposal):**
 - Course projects will be evaluated by the instructor and Graduate Teaching Assistant. The Director of Operations and Recording Services for the Hugh Hodgson School of Music will be invited to comment on the projects involving live student performances.
 - DVD-Audio projects by student composers will be evaluated each semester by the composition faculty of the Hugh Hodgson School of Music in juries held during exam week
 - Archiving projects will also be evaluated through a written questionnaire to determine quality and usefulness. The questionnaire will be completed by applied faculty and students after each project is delivered and examined.
- **Potential applications in other academic areas:** As stated earlier, the facility is always available to support other academic units within the Hugh Hodgson School of Music and the University of Georgia. Past projects have included works for the athletic department, the Dance Department, the Drama Department, and faculty and students in the Hugh Hodgson School of Music. DVD technology is the future of audio and video, and its potential for use by the various units in the University of Georgia is limitless.

Section IV. Support Plan

Staffing and resources to be used to continue the initiative following LTG funding:

- The staff and equipment of the Hugh Hodgson School of Music Roger and Phyllis Dancz Center for New Music will support the technology requested in this grant.
- Based on student assessments and faculty review, it is possible that a new course would be initiated to further develop the initiative started by this proposal.

