DVD Postproduction Studio
Science Equipment Proposal

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Current situation

DVD is quickly penetrating the market. We anticipate a great demand over the next two years by all areas of the School of Music to produce DVD's. Last year the College of the Arts funded a science equipment grant proposal to equip a DVD research and production project. Due to lack of space, this equipment was temporarily installed in a corner of the School of Music's Recording Studio until a better location could be found. Now we have a rare opportunity to move into a new dedicated space. We would like to create **a first class audio and video post production studio** in order to serve the needs of Music Media students, and the School of Music in general.

Under current conditions (with the DVD project squeezed into the Recording Studio), production and research progress in spatialization, video processing, and surround sound mixing has been limited due to the following factors:

- **Two groups of students are in competition for studio time**. The Media Program advertises "extensive hands on training" in our promotional brochure. Given the current availability of studios, Media majors do not have enough access time to develop necessary skills. Students in the Live Sound and Digital Editing class (Music 422) need to use the DVD equipment, while those taking the Recording Techniques class (Music 376) need access to the Recording Studio equipment (but not the DVD equipment). Both groups of students need to use the studio for homework projects. The studio is in the orchestra room, which reduces the number of hours available for student access due to ensemble rehearsals and other classes. There is no evening or weekend access. In order to accommodate this schedule, students work in pairs and are given one hour a week of lab time.

- **The Recording Studio's control room is not deep enough** to set up an appropriate surround sound environment for surround sound monitoring. In a normal stereo configuration, an engineer sits in front of a pair of speakers. This configuration is already tight in our control room. With surround sound the

listener(s) should be in the center of a circle. There is no room for this.

- **DVD burning ties up the system for long periods of time**. Once a set of resources (i.e. surround and stereo audio mix files, video files, Photoshop graphics, etc.) have been created on the studio's Macintosh G4, it can take hours to create a disc image (compressing video, Dolby-encoding audio, etc.) and burn it to DVD. While one project is being copied to disk the machine is tied up, and the next user cannot work.

With the construction of the new percussion wing, an **opportunity has come to move the DVD lab** into an office vacated by Jeff Prosperie, the percussion teacher. The School of Music has recognized the need to create a better environment for the DVD lab and to create more studio space for media studios. Prosperie will move out of his downstairs office to the new building in January. After one or two more faculty office exchanges, an isolated upstairs office will become open to create a new DVD lab near the current MIDI Lab and Willey/Alper's offices. This room will be available through a keypad 24 hours a day, a great improvement over the limited access to the orchestra room. It will also be big enough to set up the speakers correctly and to teach classes. Under this proposal the facility will become a student computer lab with two stations. The equipment there will be used for teaching Music 376, 377 (Recording Techniques I & II), 422 (Live Sound and Digital Editing), 438, and 439 (Film Scoring I & II), for homework assignments, and for media productions.

This proposal creates a **first class post production studio**. Multitrack recording will continue to be done in the Recording Studio downstairs. Two compatible multitrack recorders (supplied courtesy of the Alesis Corporation) will be used upstairs, making transportation of projects between the two studios easy.

The office space is large enough, but the acoustics are not good. To transform a cinderblock-walled office (with leaking noise from nearby lessons and practicing) into a critical listening environment, the following steps are necessary:

- Purchase of a specialty workstation desk to accommodate the mixer and house the computer in a sound proofed, ventilated enclosure.

- Purchase of an acoustic foam sound treatment kit to absorb, diffuse, trap bass frequencies, and provide isolation.

- Purchase of a set of 5 powered monitors and stands.

- Purchase of a television and low price DVD player for evaluation and quality assurance of studio productions. A finished disk will play differently than a simulation on the computer during authoring. If it plays on a cheap player it should work on better systems.

- Purchase of a Windows PC with software to do final editing and burning of DVD's.

- Addition of significant file storage capacity.

- Addition of DV video cameras and editing deck.

The project has three phases. We are most interested at this time in getting funding for the first phase, but of course would welcome any support for the other two. This is the third attempt we have made to upgrade the facility, and more grants will be written. In our productions of music from south Louisiana we see the potential to tie in with the cultural mission of KRVS, the department of Modern Languages, other local agencies, in expanding our role in documenting regional festivals. We are participating in the plans of the Center for Culture and Eco-Tourism to create a folk roots label and see them as a natural outlet for our productions. Our source recordings will be archived there in the library as well.

Phase One – create the infrastructure and improve the acoustic properties of the space dedicated for a DVD postproduction lab. Phase One will create a space to be used for student projects and teaching small classes. It will create the best listening space in the College of the Arts.

Goals:

- Create critical listening stereo and surround sound facility to enable and inspire professional work.

- Provide 24 hours access for students and faculty

- Support research in spatialization and video processing

- Increase DVD production

Phase One equipment needs:

- Workstation table for mixer. The MIDI Lab got an upgrade of this type last year and has made the room better for teaching, and much more inspiring to work in. The students appreciate the transformation into a professional environment in which to study and create.

- Isolation cabinet for computer(s). The computers are noisy and make critical listening difficult.

- 5 monitor speakers. We saved money in the equipping of the DVD project last year by substituting a Bose home theater system in place of studio

monitors. The home theater system will continue to be important for quality assurance and simulation of consumer listening environments, but a professional monitor system is needed for mixing source material.

- Sound treatment kit for walls. This will provide absorption (decrease reflection), diffusion (reduce hot spots and nulls), bass traps (bass buildup in corners), and isolation. We will look for a baffle system or whisper booth later to provide a corner to record overdubs and voiceovers.

- Terabyte file storage. More capacity is needed for postproduction of concerts, combining numerous high fidelity audio tracks with large video files. We would like to be able to store several hours of multitrack audio and video from two or more video cameras.

- A PC (Windows XP) for additional editing and authoring of content, and for burning DVD's once files have been created on present Macintosh G4.

- Software: **PC**: PC Maclan 8.1 (connection software for integrating PC into Mac network), Sound Forge, Vegas, and DVD Architect for editing, authoring, and DVD burning on the PC. **Macintosh:** Updated version of Final Cut Pro software.

- Ethernet hub and two ethernet crossover cables, to connect present G4 and (donated) Alesis HD24 multitrack recorder with new PC

Phase Two – Add capability to capture and integrate video into new DVD lab

In the last six months the recording and editing classes have made multitrack digital recordings of three regional music festivals and a number of smaller shows and interviews (http://www.louisiana.edu/~rkw3943/dvd). This work has been done in collaboration with Festival International de Louisiane, Southwest Louisiana Zydeco Music Festival, Festival Acadiens, KRVS, Modern Languages, and the Center for Culture and Eco-Tourism. We are well on the way to having enough material to produce compilation DVD's of music from south Louisiana. We will try to get funding through future STEP grants, local business community and arts supporters, and from national foundations such as the National Endowment for the Humanities. We see a great opportunity to showcase Louisiana culture. No one else presently has the staff or facilities to create documentary material.

Discussions have begun with the Art and Communications departments to set up an interdisciplinary student production pool from which advanced students could be drawn to collaborate on multimedia productions. While we would like our students to have some experience with computer graphics and video, we realize that they are already occupied with their studies of music and music media. It is hoped that video and

graphics teams can be drawn from this production pool, communications and art classes, the Acadiana Open Channel (AOC), and community people to record and edit video which can then be combined with our audio and produced into DVD's. We also need the capability and freedom to record our events that are of interest only to ourselves, both inside and outside the department.

Phase Two goals:

- Add video capture capability to record public events, both inside and outside the School of Music.

- Improve audio editing capabilities created by Phase One, to prepare material that can be combined with stereo and surround sound mixes for DVD production.

Phase Two equipment needs:

- 2 mini DV video cameras, tripods, and camera bags. We presently have to borrow a camera from the Center for Culture and Eco-Tourism, or wait for someone from AOC to volunteer. We would like to be able to do our own 2- and 3-camera shoots.

- 2 flat panel computer monitors, one larger than the other. Used for video editing.

- Mini DV deck for transferring video tapes, so that we can edit videos without tying up and wearing out the cameras.

- 2 lavalier microphones for interviews, along with a wireless receiver for camera.

- Case of mini DV tapes for festival recording and group class projects.

Phase Three – Return Pro Tools capability to Recording Studio.

Both Phase Two and Phase Three are important, though not necessarily prioritized in this order. They can be pursued simultaneously from different funding sources.

The recording classes have benefited this semester from having the DVD project and its Pro Tools equipment in the Recording Studio. Next semester, once that equipment has been moved to a more appropriate space (for use by the live sound and editing class, research), we will be taking a step back in the Recording Studio's capabilities, returning to recording our multitrack music performances on video tape. We

need to modernize the system around hard disk recording to allow for nonlinear editing and digital signal processing. Pro Tools is the industry standard, and having a compatible system with the DVD Postproduction Lab will make it easy to transfer projects and skills between the studios. We would like to make Pro Tools an integral part of the program and we need more workstations for student study and projects.

In the short run we would like to purchase additional MIDI and Pro Tools (digital audio) workstations to put in the MIDI lab and resource center. Dr. Willey is going to take an intensive Pro Tools training course at the end of fall semester with a Digidesign trainer and will become a certified Pro Tools instructor. We would like to offer a path for our students to become certified Pro Tools studio operators.

Phase Three goals:

- Update Recording Studio for multitrack digital hard drive recording, processing, mixing, and editing.

Phase Three equipment needs:

- Macintosh G5 computer

- Digidesign Digi 002 interface