

**University of Louisiana
at Lafayette**

College of the Arts

STEP Grant Request

Resource Center Upgrade

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Signature of Dean

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School of Music Resource Center Upgrade

ABSTRACT

An upgrade to the infrastructure of the School of Music's Resource Center will create an integrated multimedia facility to be used for classes and individual study. It consists of three components: a memory upgrade for existing computers, additional productivity and multimedia production software, and a new video editing station.

Additional memory will increase the performance of underpowered lab computers and create a file space for student work. Demonstrations in class and supervised practice will improve the quality of class instruction. Students studying on their own will be able to open two or more applications while simultaneously following tutorials on Blackboard, and be able to save their work in a centralized location that can be retrieved from any other computer.

The addition of **software** will provide students with new tools. Word processing, recording, synthesis, mixing, editing, and multimedia authoring programs will be used for homework and creative projects. Housed in an open computer lab, that presently does not exist on campus.

A new **video editing station** will provide a resource for creating student projects and instructional material. Users will be able to scan documents, import and edit digital photos, edit and author DVDs, combining video footage, audio recordings, original music productions, graphics, animation, and text. This station will leverage existing resources by facilitating multimedia production, an activity vital to the growing Music Media bachelor of music concentration, the School of Music in general, collaborations with fine art and communication departments, and UL Lafayette students in general.

Description of Proposal

The School of Music's Resource Center has ten iMac computers with music keyboards, and a G4 server. These are presently used primarily for drill software as assignments from music theory classes. In addition, there is a collection of non-circulating course reserve material, scores, magazines, books, CDs, and LP records. As the School of Music does not have a multi-station computer laboratory in which to teach, special sessions of a variety of courses are held in the Center as well in order to teach applications such as music score notation/editing, sound synthesis, digital recording, web page development, music theory drill software, and online bibliographic research.

The Resource Center has software for music theory drill programs, Internet browsers, score notation software, and audio mixing. **The computers and programs cannot be used effectively**, however, due to the limited amount of memory, which slows them down and prevents them from running more than one application simultaneously. We would like students to be able to refer to Blackboard tutorials and assignments while doing theory and notation assignments. Students are also limited by not being able to run two programs that are designed to work together. For example, students would benefit from being able to run both a sequencing program (that records which key are played on a keyboard) and a synthesis program (to create new sounds for the keyboard). The server is the only machine that can be connected to the Center's projector. Without more memory it cannot open some of the applications we need to demonstrate to students using the iMacs in class.

This year the curriculum has been revised in the School of Music in response to new state guidelines. This will reduce the number of contact hours in some courses, such as music theory, which will come to rely more on outside aids such the theory drill software in the Resource Center. **A memory upgrade will make the iMacs used for this system more reliable and responsible, increasing student satisfaction and progress by making study time more productive.** Another course, in arranging, was dropped altogether from the curriculum, and its content, required for accreditation purposes, has been temporarily moved to a conducting class. Having a more powerful laboratory will help students in that class learn computation-intensive notation software more quickly.

The Resource Center will benefit from **a centralized file system** that can be written to from any of the iMac stations. Under the current situation it is inconvenient for students to save their work on one of the computers if they wish to return another day to continue with a project, since someone else may be occupying the machine they need. Along with increasing the amount of RAM in each iMac, a new file hard drive for the Center's server will be added, creating a convenient shared file space in which students can save their work, so that it can be accessed from any computer in the Center at a later time. As an added bonus, the files will also be available through the network so that projects begun in the Resource Center can be accessed in the Recording Studio or MIDI Labs and developed using their specialized facilities, giving students with access to those spaces the opportunity to incorporate what each has to offer.

The computers are a valuable resource that is presently under-utilized due to a lack of software. A variety of new programs is proposed to do word processing, digital recording, editing, mixing, music synthesis, video editing, and DVD authoring and production.

Finally, **a new video production and DVD authoring station is planned.** A new computer and video deck will allow students and faculty to bring in digital video tapes (in mini DV format), transfer them to the computer, edit the footage, combine it with original music, and then author and burn it to DVD. The DVDs can then be used for a variety of purposes--put on reserve in the Resource Center itself, played in class (for example, in the School of Music's MIDI Lab, Recording Studio, or new "Smart Classroom"), shared with colleagues, used as demos, or submitted for publication. Following the breakthroughs of desktop publishing and desktop music production, in the last year or two the necessary technologies have come together to allow the creation of affordable desktop video production systems. The combination of falling prices in hard drive storage combined with powerful and affordable computers and digital camcorders has created a new situation that we would like to benefit from, and that we believe our music majors in general, and Music Media majors in particular need to become familiar with. We anticipate increasing development in this area over the next five years and want to accommodate present demand, as well as begin to prepare for the expected growth of interest and activity.

The School of Music owns a number of digital camcorders, which are used to record concerts, lectures, classes, special events, off campus festivals, and student groups. Video from these events have been combined with multichannel audio recordings to create surround sound DVDs in music production courses. It is important for education students and performers to get feedback on their presentations. Much effort goes into the preparation of a concert, which can be documented and reviewed by those unable to attend. We need a station dedicated to video editing where students and faculty can work. Having it in a public place will increase access and awareness of what can be done, encouraging collaboration and experimentation.

Currently **the iMacs in the Resource Center are loaded to capacity with different video files** that can be viewed only if no one is using the computer at the time. There are presently videos of concerts on which students have performed as soloists and in ensembles, master classes with visiting artists, auditions and semester juries, student teaching practice sessions, and raw materials used for music media class assignments. **There is no way to offload the projects and put on more material**, since the machines lack DVD burners, or to take the material out of the Center. This proposal will allow for the materials to be offloaded to disk, put on the Resource Center's reserve shelf, and viewed in the Center or in class. This will allow the videos that we are creating to be seen outside the Center, and to create space for new projects, thereby increasing the access and utilization of video recordings.

The video editing station will also include a scanner (needed for scanning music scores, photographs, etc.). This will be useful for multimedia productions as well as for

Blackboard materials, Powerpoint presentations, word processing documents, and web pages. The station also includes a Mbox, a basic **Pro Tools audio interface**. Pro Tools is the industry standard for digital recording, editing, and mixing. There are two more sophisticated Pro Tools systems (with surround sound audio systems) in the School of Music recording studios. A Mbox at this station will allow for preproduction before going into one of the studios, and to bring in recordings made there as resources for authoring DVDs. The Mbox will also give students inside and out of the Music Media program another opportunity to learn the software. The audio recording classes can then meet on occasion in the Center in order to project demonstrations on the screen, while students use a free limited version of the accompanying software on the Center's iMacs.

The video station will be used by music students and faculty, and anyone else on campus that wants to bring in DV tapes or a digital camcorder, or make a DVD from other materials. Those with their own firewire hard drive will be able to transfer the material, edit and author it (using computers in other places if they choose), and then burn a DVD disk in the Resource Center. There are many students and teachers in our department (and others) that would take advantage of the proposed environment. **Music Media students** (the largest concentration in the Bachelor of Music program) **will also benefit from a place to do homework**. They are in critical need for more hands-on time than the existing facilities allow, and will use a video editing station to prepare materials that can then be combined with audio recording produced in the School of Music's other studios. We currently have material for twenty **high quality DVD projects** in raw material form (i.e. multitrack audio field recordings, multiple angle video tapes, interviews, etc.—for more information see <http://ull.edu/rkw3943/dvd>) that could be developed by students in classroom and special project assignments. These projects cannot move forward due to a lack of video editing capability. There are also an equal number of proposed productions that students are interested in developing of their own work (bands, recitals, documentaries, etc.).

Person responsible for implementation, installation, maintenance, operation, and training.

Setup and maintenance to be performed by Dr. Willey, with assistance from graduate assistants, the Fine Arts department technicians, and university Help Desk staff. Other professors with expertise in particular programs (Scott Landry – Finale, Brian Taylor – Marching Band formation planning, Catherine Roche-Wallace – Practica Musica, etc.) will share information with their colleagues and student assistants.

The Resource Center is under the supervision of Dr. Willey and staffed with music graduate student assistants. They will be given a workshop in the operation and capabilities in order to help students who come in to use the Center. Another workshop will be given for faculty, to give an overview of the capabilities, some practical hands on application, and pointers to sources of additional information.

The iMac workstations will startup with an entry information web page that branches off to help files explaining general operation, linked to additional sources of help.

Budget Proposal (see attached spreadsheet)

1. Equipment (\$3709)

RAM memory upgrades –(\$880 for eleven) 256 Mb memory expansion boards, for existing ten Macintosh iMac computers and G4 server. This will allow for more than one program running at a time, which is needed for Blackboard study and music production.

Additional internal hard drive for lab server (\$145) – 120 Gb internal IDE hard drive, for existing Macintosh G4 server. Creates shared file space.

Video editing station (\$2684) – Macintosh eMac computer (\$1089), with external firewire hard drive storage (\$225), DV/S-VHS video deck (JVC SR-VS30U \$770) , Pro Tools Mbox (\$500), scanner (\$ 70), and security cable (\$30). Platform to import digital pictures, scan and process documents and photos, transfer DV and S-VHS tapes (S-VHS is necessary to realize plans for collaborating on preservation projects of existing footage, in collaboration with Milne Library and local cultural agencies), edit video, perform audio mixing and synthesis, and author and produce DVDs.

2. Software (\$1193)

Microsoft Office (5 copies - \$700) – word processing software is a basic necessity for all students. One copy of Office X for the new eMac, and four copies of Office 2001 for the existing iMacs running OS9.

Reason (1 copy - free) – software synthesis program used in all our MIDI and recording classes, integrates with Pro Tools and Digital Performer recording software. Comes bundled with Digidesign Mbox (listed under hardware).

Pro Tools LE (1 copy - free) – industry standard digital audio recording, editing, and mixing program. Comes bundled with Digidesign Mbox (listed under hardware).

Final Cut Pro 4.0 Academic (1 copy - \$299). An industry standard professional video editing program, includes multi-channel audio mixing, music composition, and non-linear video editing. Used for the preproduction of resources and compatible with the systems DVD authoring systems, and facilities in the Fine Arts department, encouraging increased collaboration between departments.

DVD Studio Pro 2 Academic (1 copy - \$149) – add many capabilities beyond the DVD software bundled with the eMac, allowing menu editing, professional encoding options, inclusion of stereo and surround sound mixes, multiple camera angles and languages, subtitles, voice overs, etc.

Photoshop Elements 2.0 (\$45) – import photos from digital cameras and other sources, process, and prepare for DVD authoring for use in slide shows and as background for menus

Total: **\$4902**

3. Supplies

Students and faculty will purchase their own blank DVD and CD disks. Those wishing their own dedicated file system may purchase firewire hard drives, which are currently costing about \$1 per Gigabyte, and getting cheaper all the time.

4. Maintenance

Under manufacturer warranty during break in and testing phase. Thereafter maintenance to be performed by existing music department professors, graduate assistants, assisted by campus technicians.

5. Personnel

Staffing of Resource Center already accomplished by hours assigned to graduate student assistants.

6. Additional Information

The video capabilities resulting from the grant will complement surround sound research and development facilities funded during the last two years by Science Equipment grants.

7. Previously funded STEP Projects

The media production capabilities of the upgraded Resource Center will be a powerful tool for the production of content to be presented in the new “Smart Classroom” next door, installed this semester under the STEP program grant to Catherine Roche-Wallace and Jonathan Kulp.

The Resource Center itself was equipped with the iMacs, music keyboards, synthesizers, theory software, and server under a grant to Catherine Roche-Wallace.

The Recording Studio and MIDI Lab have grown in part from past step grants to Garth Alper and others. Users of these facilities will benefit from the Center’s capabilities, and share resources due to the shared file system, synthesis, and Pro Tools compatibility.

8. Timeline

Length of Implementation: One year. Equipment and software will be integrated into courses as a resource during class and for homework outside of class during the first semester, as they also become available for student use.

As students use the equipment more and for a greater variety of purpose, it is expected that during the semester more students from other disciplines will become aware of the resource and learn from experienced students, Center staff, Dr. Willey and other professors,

Expected Life of Hardware and Software: Five years.