PROPOSAL TO THE TECHNOLOGY ADVANCEMENT COMMITTEE FOR SUPPORT FROM THE COLLEGE OF AGRICULTURE AND LIFE SCIENCES POOL OF STUDENT COMPUTER FEES

PROJECT TITLE: High Definition Digital Video Processing Station in 260 Horticulture Hall

CAC PRIORITIES THIS PROPOSAL ADDRESSES
This proposal addresses the first priority for funding.

PROPOSING UNITS:
Department of Horticulture
Department of Agricultural Education and Studies

ADMINISTRATIVE REVIEWING UNIT: College of Agriculture and Life Sciences

ADMINISTRATOR:
________________________
Dr. David Acker
Associate Dean
134 Curtiss Hall

PROJECT PARTICIPANTS:

Dr. Jeff Iles
Professor and Chair
Department of Horticulture

Dr. W. Wade Miller
Professor and Interim Chair
Department of Agricultural Education and Studies

Dr. Mike Retallick
Assistant Professor
Department of Agricultural Education and Studies

Winston Beck
Undergraduate Student
Department of Horticulture

Marcus Jones
Graduate Student
Department of Horticulture

Mark Hoffmann
Systems Support Specialist III
Department of Horticulture

PROJECT LEADER:
________________________
Dr. Nick Christians
University Professor
133 Horticulture Hall
(515) 294-0036
nchris@iastate.edu
PROJECT OVERVIEW AND EXPECTED BENEFIT

Description and Intended Purpose

Recent class assignments in HORT 330 and HORT 424/524 prompted many students to ask the System Support Specialist in the Department of Horticulture for help in processing high definition digital video content required for these assignments. There was no equipment available to process or edit their digital video, so the students went to locations that charged them fees for working on their video content.

During the past five years, the Department of Horticulture has purchased a variety of devices for student check-out and use: Canon Elura 80 camcorders, ipod nanos, and a Canon XL1 digital video camcorder are just some of the technologies available. Students have used these devices to create high definition digital video content for blogs, websites, e-portfolios, internship reports, and classroom assignments. Often, students pay to have this digital content processed by outside agencies.

The Department of Horticulture currently does not have a permanent in-house location to process all the high definition digital video content generated by students. Dozens of students (see Appendix A) have requested that a CAC grant be written to fund the purchase of a high definition digital video processing station to be located in 260 Horticulture Hall (see Appendix B). This location would allow supervised usage of the equipment at no cost to the students and house technical staff to assist with student projects.

With the proposed merger of Horticulture with Agricultural Education and Studies, students from both departments may eventually use this proposed technology. Therefore, both departments have agreed to support this proposal as they look to the future technological needs of their combined student populations. Additionally, students with majors within other departments, who take classes offered by the Department of Horticulture, will have access to this proposed technology.

This proposal is a request for funding in the amount of $16,082.00 (fully funded) or $11,055.00 (minimum budget) to purchase one Mac Pro computer integrated with either an Avid Nitris DX System (fully funded) or an AJA Io Express device (minimum budget) that would be dedicated to student high definition digital video editing and processing. We chose the Macintosh platform, due to its stability and ease of use. Commercial video editing software capable of processing high definition digital video content would be purchased by the Department of Horticulture for use on the Mac Pro computer.

Paying for this new technology out of the Department of Horticulture’s annual CAC funding is not an option, since our student fees-based funding allocations are spent down each year in the support of the many existing computer systems that are used by students or for their instruction.

General Student Benefit

“I believe that digital video processing equipment would be a valuable tool for the horticulture dept. students, faculty, and professors. Recently this semester, I have had a few projects come up in class related to videos and student interests. A partner and I needed to construct a 2 minute video highlight on what we found most interesting during our semester in Hort. 424. Much of the entire class didn’t have access to technology with regards to video recording and processing. If this technology was made available for us for free, I believe that the quality of our videos could have been greatly improved. I also believe that there are many more applications that the Horticulture Dept. could use this type of technology for. Many classes are integrating video recordings and web-based information to allow for students at a distance to also be involved and this technology would allow more students to integrate their video recordings into these types of classes. Video processing equipment could be a great tool for the Hort. Dept.”

Kenneth McCabe (undergraduate student)

“The need for proper high definition digital media processing software and supporting technologies are something that the horticulture department currently lacks, but could benefit extensively from. Having the technology available for free would allow students to complete a broader range of tasks for both coursework, as well as club-related activities. Along with having greater impact on students, many colleges or groups have produced excellent
educational videos for technical projects that sometimes just need to be seen. Having video demonstrations could prove beneficial for a number of courses in horticulture, especially landscape graphics, plant propagation, and herbaceous identification, to name a few. Conclusively, utilizing this technology has the potential to impact students in coursework, professors in a new method of presentation for things that often need to be demonstrated (and cut costs by only needing to do said demonstration once), and a potential method for video outreach, via youtube or other social networking media.” Winston Beck (undergraduate student)

“As a landscape design horticulture student, having this video editing technology provided to us students for free would be beneficial to allow us to further our education, be successful in completing class assignments, and have something unique to add to our e-portfolios to set us apart from other students as we compete for jobs in the market place.” Austin Eischeid (undergraduate student)

Innovation

“Exchanging information continues to move towards computer based technologies such as blogs and social networking outlets. One advantage of using these technologies is that content can be delivered in a quick, convenient format for the reader. My turf blog (www.iaTURF.blogspot.com) had over 18,000 visits in 2010 proving to be a valuable resource for turf grass practitioners. Video is an important component of the blog and serves as a quick and convenient method of disseminating information. I believe the availability and utilization of technologies that can deliver content in a digital format will be critical in university extension moving forward. A video processing station would provide me greater flexibility with my video capabilities.” Marcus Jones (graduate student)

Contribution to Instructional Program

Using digital video content in instruction addresses one of the education goals in Iowa State’s 2005-2006 Strategic Plan, namely to “strengthen students’ critical thinking, creative abilities, and communications skills.”

Cost Efficiency

“I have been in two classes that required the students to develop video presentations as one of the learning objectives. Although, I really enjoyed that project in both classes, I found both projects difficult and expensive to complete because of a lack of readily accessible video processing equipment and free support. I would also like to develop a video for my online e-profile, but I have found it difficult to start this project because of the lack of free video processing facilities currently available to students. I am really worried about having to spend money that I don’t have to finish editing the video for the project.

It would be nice if the students had dedicated video processing equipment to perform these tasks. It would also be nice if the equipment was in the Horticulture building and for students to use free of charge. I believe this would be a great asset to the department, and a huge benefit to students.” Brandon Carpenter (undergraduate student)

Availability to Students

The proposed digital video processing equipment would be located in 260 Horticulture Hall and would be made available to students from 8 AM to 5 PM, Monday through Friday.

Integration with Existing Facilities

The proposed digital video processing station will be located in 260 Horticulture Hall and be integrated into the existing network, printer, audio, and furniture configurations in that location.

SUPPORT AND MAINTENANCE

The Department of Horticulture’s System Support Specialist will provide ongoing maintenance and training support for the equipment. We anticipate that 10% of the Specialist’s time will be spent on support of this technology.
### Table 1. Full Itemized Budget

<table>
<thead>
<tr>
<th>Description of Item</th>
<th>Quantity</th>
<th>Unit Cost</th>
<th>College Pool</th>
<th>Horticulture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mac Pro computer (12 core/32GB/2 mirrored SSDs/27-inch display)</td>
<td>1</td>
<td>$9,686.00</td>
<td>$9,686.00</td>
<td>$0</td>
</tr>
<tr>
<td>Avid Nitris DX System (EDU)</td>
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<td>$6,396.00</td>
<td>$6,396.00</td>
<td>$0</td>
</tr>
<tr>
<td>Apple Final Cut Pro (EDU)</td>
<td>1</td>
<td>$299.00</td>
<td>$0</td>
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<tr>
<td>Adobe Creative Suite 5 Prod Premium (EDU)</td>
<td>1</td>
<td>$349.00</td>
<td>$0</td>
<td>$349.00</td>
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<tr>
<td>Apple iLife ’11 Suite (EDU)</td>
<td>1</td>
<td>$29.00</td>
<td>$0</td>
<td>$29.00</td>
</tr>
<tr>
<td>Harmon Kardon Audio Speaker System</td>
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<td>$427.00</td>
<td>$0</td>
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<tr>
<td>Furniture</td>
<td></td>
<td>$2,360.00</td>
<td>$0</td>
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<tr>
<td>Labor – System Support Specialist</td>
<td></td>
<td>$28.00</td>
<td>$0</td>
<td>$5,600.00</td>
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<tr>
<td><strong>Total Request</strong></td>
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<td><strong>$16,082.00</strong></td>
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### Table 2. Minimum Feasible Itemized Budget

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<tr>
<td>AJA Io Express Device</td>
<td>1</td>
<td>$995.00</td>
<td>$995.00</td>
<td>$0</td>
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<tr>
<td>Bella Corp: Advantage Series 2.0 Interface</td>
<td>1</td>
<td>$79.00</td>
<td>$79.00</td>
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<tr>
<td>Avid Media Composer (EDU)</td>
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APPENDIX A. Signatures of Students Supporting the Proposal

Students in the Department of Horticulture:

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Students in the Department of Agricultural Education and Studies:

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APPENDIX B. Location of Proposed Digital Video Processing Station

Horticulture Hall
Room 260

Furniture will be provided by the Department of Horticulture.