

UNIVERSITY OF LOUISIANA AT LAFAYETTE

STEP Committee

Technology Fee Application

**SMART Classroom Podium for Hamilton
Hall 226**

Title

Dr. Timothy Duex

Name of Submitter
(Faculty or Staff Only)

School of Geosciences

Organization

Title: Smart Classroom Podium for Hamilton 226 Date: 7/14/2019
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ABSTRACT (250 words or less):

The School of Geosciences is fortunate to have had access to classrooms that are equipped with SMART audio/visual (AV) projection systems or at least ceiling mounted projectors. However, after the move of the Geology Program to Hamilton Hall in 2011, several of the new classrooms lacked permanently installed AV systems. After eight years, the only room still in need for a SMART upgrade is HH 226. The current situation (portable projector on front table projects on heavily-used white board) is no longer sustainable and leads to frustration for students and instructors. In this classroom, students now receive information in the most rudimentary of presentations, or the portable projector has to be hooked up ahead of each class period. The white board used as projection screen is of low quality, has dry-eraser marks, and acts as a less-than-ideal screen replacement because of the associated glare. Geology is a very visual science, and relies heavily upon visual – as well as verbal – presentation of material. Lab courses often rely on supplemental video equipment to show thin sections, specific microfossils, and techniques for laboratory exercises. Therefore, we propose to install a permanent ceiling-mounted SMART projection system, with accompanying secured computer and direct access to the internet. This system will facilitate the transmission of knowledge to students in both visual and verbal formats, thereby promoting active learning.

3.a. Purpose of Grant and Impact to the Student Body

Hamilton 226 is a classroom and lab space that is fully scheduled during the year. Not only is this room used for courses involving geology majors (mostly mineralogy and petrology), but it is also scheduled for classes targeting or partially targeting Environmental Sciences, Elementary Education, and Engineering majors. However, there is no permanently installed projector, no screen, and no supplementary audio/video equipment in Hamilton 226. The current solution is a portable projector set up on the front table and the use of a low-quality whiteboard as the screen (Fig. 1). The whiteboard is old, has many dry-eraser marks that cannot be removed, and the associated glare makes it a poor substitute for a real screen (Fig. 1). The time involved and the poor quality of the setup often results in students not receiving quality visual images. Smaller classes can often be seen huddled around a laptop computer. We believe that students – both geology majors and non-majors – will greatly benefit from the installation of a quality ceiling-mounted SMART audio and video projection system, with an accompanying computer and a permanently installed screen. If all equipment is secured in a custom-built podium, instructors will have minimum set-up time, and students will benefit from high-quality imagery and an improved learning experience.



Figure 1. Current configuration of Hamilton Hall 226. Note the two generations of projectors (the older one mainly used as a stand for the small portable projector), the audio system, and the glare on the damaged whiteboard which doubles as projection screen.

Because Geology is a very visual science, instructors have historically relied on 35-mm slide projection

and overhead slides to present information that otherwise cannot adequately be described and discussed. With the expansion of technology capabilities in the last decades, Geology instructors now rely heavily on Powerpoint presentations that incorporate state-of-the-art textbook materials, personal supplementary materials, as well as video clips, and internet access to animations and geology-related news items. The students of today are more visual learners than those students of 25 years ago, and most students now rely on this type of presentation (e.g., Goia and Brass, 1985-86). Mayer and Anderson (1991) further confirmed the importance of combined visual and auditory instruction. However, when internet connections and projection systems are not readily available, the classroom session can often degenerate into “chalk and talk” sessions.

Geology has the further characteristic of becoming more reliant on computer technology in recent years (e.g., subsurface geology, remote sensing, field geology, petrology). An assortment of images, video clips, DVD's and websites exists or are available on the internet, that can supplement traditional instructional material. However, much of the current material is not always implemented within this classroom because instructors are not always able to incorporate the latest information in the limited technological formats available.

The addition of a SMART projection system to Hamilton 226 will ensure that University of Louisiana at Lafayette students meeting in this classroom have access to the latest information and technology. The current situation is unfavorable because of the poor projection quality, and the glare created by the use of the whiteboard as projection screen renders most viewing areas in the classroom less than optimal. A wireless internet connection currently exists in Hamilton 226, therefore, the internet can be accessed during lecture and lab activities with a secured computer system.

Benefits

Because students have a variety of learning styles, presentations that vary from the traditional lecture and engage the student promote active learning. In addition, many of the class curricula in Geology rely on internet resources, including large databases of the United States Geological Survey and NASA. With a modern AV projection system and computer set-up, these resources can be actively incorporated in the classroom. A large and diverse student population will be the beneficiary of the proposed AV expansion in Hamilton Hall.

Access

The AV projection system will be mounted on the ceiling, with amplifier, computer system, and remotes housed in a locked custom-built SMART podium. Instructors will have access to the system, but unauthorized personnel will not. Students will also be able to use the system for presentations (by bringing in their presentation on USB memory, disk, or remote access) with the approval and assistance of instructors.

3.b. Projected Lifetime of Enhancement

It is expected that the computer and other equipment included in the SMART podium will capably function without the need for repair or replacement for approximately five years. The average lifetime of the projector is also about five to ten years. However, the projector bulb may need to be replaced before

the end of the five years. Depending on the use, some of the equipment may need repair or replacement after three years.

3.c. Responsibility

The company providing the equipment, GoMedia Technologies, has installed similar systems in many other buildings on the University of Louisiana at Lafayette campus. They will be responsible for the installation of all AV equipment in Hamilton 226. The equipment will be operated by instructors and students using Hamilton 226 as a classroom. Training is not required as the operation is straightforward and many identical systems are already on campus.

Timeline

We anticipate that GoMedia Technologies will provide the equipment within 30 days of the order. We also anticipate the installation of the system to require no more than 60 days from receipt of equipment, pending availability of GoMedia Technologies personnel. Should this proposal receive funding, we expect the podium to be installed and functional for the Spring 2020 semester.

References Cited

- Gioia, D. A., and Brass, D. J. (1985-86). Teaching the TV generation: The case for observational learning. *Organizational Behavior Teaching Review*, 10, 11-18.
- Mayer, R. E., & Anderson, R. B. (1991). Animations need narrations: An experimental test of a dual-coding hypothesis. *Journal of Educational Psychology*, 83, 484-490

Budget Proposal

1.	Equipment	\$12,520.30 (SMART Podium) and \$965 (Standard Desktop)
2.	Software	\$
3.	Supplies	\$
4.	Maintenance	\$
5.	Personnel	\$
6.	Other	\$
TOTAL:		\$13,485.30

Quote for Digital Smart Classroom Medium – STEP/SMART website

Quote Number	Digital Smart Room Medium
Company:	UL Lafayette
Contact:	
Address	
City, St Zip	Lafayette, LA
Date	

Scope of Work: Custom Multimedia Classroom (Medium Install) Note: Electrical, computers and network not included.

Qty.	Part #	Manufacturer	Description	Price Each	Extension
1	PT-RW330U	Panasonic	3500 Lumen Lampless Projector	\$2,609.33	\$2,609.33
1	CMA440	Chief	Ceiling Grid Mount	\$100.00	\$100.00
1	CMS006	Chief	6" Pole	\$13.60	\$13.60
1	20877LS	Dalite	65" X 104" Contour Electrol w/LV	\$1,122.40	\$1,122.40
1	HC-1	Chief	Cable Lock	\$68.00	\$68.00
1	LCD LOC II MW	BMS	Locking Projector Mount 15" x 17" Keyed 020	\$187.81	\$187.81
1	FMJ Pad Lock	FMJ Pad lock	Universal Full Metal Jacket	\$146.67	\$146.67
1	60-600-12	Extron	MLC226IPAAP	\$1,026.67	\$1,026.67
1	60-1081-01	Extron	IN1606	\$1,593.33	\$1,593.33
1	60-844-03	Extron	MPA152 Stereo Amp	\$246.67	\$246.67
1	26-650-50	Extron	50' HDMI Cable	\$246.67	\$246.67
1	70-1045-02	Extron	Cabble Cubby 500	\$200.00	\$200.00
1	60-1384-01	Extron	Cable Cubby 500 Power	\$260.00	\$260.00
1	26-566-03	Extron	12' Micro HR Cable for Laptop Connection	\$40.00	\$40.00
1	26-650-12	Extron	12' HDMI Cable (Aux Input)	\$60.00	\$60.00
1	26-614-02	Extron	6' DVI-D to HDMI	\$33.33	\$33.33
1	60-1294-02	Extron	3 gang wedge	\$146.67	\$146.67
1	42-133-02	Extron	SM3 Wall Mounted Speakers	\$186.67	\$186.67
1	PD915R	Middle Atlantic	9 Outlet Power	\$87.33	\$87.33
1	VT3	Middle Atlantic	3 Space Vented Rack Blanks	\$16.69	\$16.69
1	VT2	Middle Atlantic	2 Space Vented Rack Blanks	\$13.65	\$13.65
1	VT1	Middle Atlantic	1 space Vented rack blank	\$11.31	\$11.31
1	Custom 26	Exact	Custom 26" Podium	\$1,532.00	\$1,532.00
50	16-2C-TTP-WHT	Liberty	Speaker Cable 23000	\$0.43	\$21.50
1	TEG-S50g/A	Trendnet	5 Port Gigabit GREENnet Switch		
				Parts	\$9,970.30
				Labor	\$2,550.00
				Shipping	\$0.00
				Project Subtotal	\$12,520.30
				Sales Tax	\$0.00
				Project Total	\$12,520.30

Quote for standard desktop

PC Depot Desktops

Desktop Standard - Dell Optiplex 3000 Series with Monitor



- Intel Core i5-8500 Processor (6 Cores/9MB/6T/up to 4.1GHz/65W)
- 8GB 1X8GB 2666MHz DDR4 UDIMM
- 256GB SATA Class 20 Solid State Drive
- 8x DVD+/-RW 9.5mm Optical Disk Drive
- 4 - USB 3.0 (2 front/2 rear), 4 - USB 2.0 (2 front/2 rear), Internal USB 2.0, RJ-45, Display Port 1.2, HDMI 1.4, 1 UAJ, 1 Line-out
- 5-year warranty
- Dell 23 Monitor with USB Soundbar
- Windows 10
- Office 2016
- Sophos Security Suite

965.00