

# Academic Resources and Computing Committee

## *Proposal for Funding*

Due Thursday, April 1, 2004 (4:30 p.m.)

**Project Title:** **Complete Multimedia Projection System**

**Project Director:** **James Peters**

**Department(s):** **Mathematics**

**College(s):** **Science**

**E-Mail:** **jepeters@weber.edu**                      **Extension:** **626-7961**

**Other Members of the Project Team:** **Eric Jacobson**

### **Instructions:**

1. Please complete each section in the space provided. The justification section should not exceed two single-spaced typed pages. (An addendum may be attached describing details of specific hardware and/or software that are requested with this proposal.)
2. You are required to obtain the signature of an ARCC representative for your college, indicating that she/he is familiar with the proposal, and can speak to it during funding deliberations.
3. Your department chair's signature is also required, indicating that she/he supports the proposal, and that the proposal is in keeping with departmental goals related to information technology and its applications to the academic mission of the institution. Your Chair's signature also indicates her/his commitment to help support the project financially if so indicated on the budget page.
4. Your dean's signature is also required, indicating that she/he has read and supports the project. Your dean's signature also indicates her/his commitment to help support the project financially if so indicated on the budget page.
5. Your college's computer committee must rank the proposal, and the committee chair's signature is required.
6. For certain projects an IT expert's signature is required. You must contact the appropriate individual if you are implementing a wireless network, multimedia classroom, software/hardware purchase that will require use of a campus server or work with online course software like WebCT Vista or ChiTester. You must give time before the deadline - the recommendation is 3 weeks - for that person to do an evaluation.
7. Submit one copy of the proposal, together with all relevant signatures, by 4:30 p.m., Thursday, April 1, 2004. NOTE: the ARCC no longer requires seventeen copies.
8. You must both email a soft copy and mail a hard copy of the proposal to the chair, David Ferro, MC 2401.

**ARCC Representative:**

I have read the proposal and discussed it with the Project Director.

\_\_\_\_\_  
ARCC Representative

Comments:

**Department Chair:**

The Department has reviewed this project within the context of overall information technology planning within the Department. If the budget page indicates financial support from the Department, I agree to commit those funds to this project.

\_\_\_\_\_  
Department Chair

Comments:

**College Dean:**

I have reviewed this project. If the budget page indicates financial support from the College, I agree to commit those funds to this project.

\_\_\_\_\_  
College Dean

Comments:

**College Computer Committee Chair:**

This proposed project has been reviewed and discussed by our college's computer committee. It is the consensus of the committee that this proposed project is consistent with information technology goals within the college. Furthermore, after ranking all of the proposals submitted by our college, we rank this proposal in priority as

\_\_\_\_\_ out of a total of \_\_\_\_\_ proposals submitted this year.\*

\*Note: Each proposal must be given a separate ranking; no two proposals may receive the same rank.

\_\_\_\_\_  
College Computer Committee Chair

Comments:

**IT Representative:**

For certain projects an IT expert's signature is required. You must contact the appropriate individual if you are implementing a

**WIRELESS NETWORK** (contact **Brook Chase** at [bhchase@weber.edu](mailto:bhchase@weber.edu) or x7192),

**MULTIMEDIA CLASSROOM** (contact **Bob King** at [rking@weber.edu](mailto:rking@weber.edu) or x6865),

**CERTAIN SOFTWARE/HARDWARE** purchases that will require use of a campus server or work with online course software like WebCT Vista or ChiTester (contact **Ted McGrath** at [tmcgrath@weber.edu](mailto:tmcgrath@weber.edu) or x7196).

I have read the proposal and discussed it with the Project Director.

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IT Representative (printed and signed)

Comments (including status):

# Justification

Your proposed project should be described as clearly and succinctly as possible in the spaces provided below. Be sure to review the "Criteria for Funding" document. *The entire justification section should not exceed two single-spaced pages.*

## Abstract (project summary):

With the advent of Mathematica and the Internet, as well as the hosts of other softwares and technologies now available, doing mathematics, and therefore teaching mathematics, is no longer an exercise for paper and pencil and chalk alone. We are asking the ARCC to fund a complete multimedia projection system for the Mathematics Department. By this, we mean a computer projection device and computer to run it, a desk top camera and cabinetry to keep it all safe. In addition, funding is requested to upgrade the computer for our mobile system in order to provide maximum flexibility in meeting the demands placed on it.

## Objectives and goals of this project:

The recent replacement of the multimedia projection devices in the Mathematics Department, although crucial to our continued commitment to the effective use of technology, has simply brought us back to the capability that we had six years ago with our original multimedia project. Ever since the inception of the original project in 1997, more and more faculty have incorporated multimedia use into their classes. The devices that we have presently are not adequate in satisfying the current demand, let alone the increase in demand that is projected to occur. Our present systems are incomplete and inadequate for our needs.

Because of budget constraints, the desk top cameras that would have completed our previous multimedia systems were dropped from our most recent proposal. Interest in acquiring these devices has been growing steadily since their uses and benefits have been explored and developed by our faculty teaching in the Mathematics Education classroom (room B4539) and in the classrooms at the Davis Center. They have been found to be invaluable in many ways. Showing the intricacies of the geometries of three dimensional objects, working with mathematical manipulatives, and exploring common student errors in actual homework papers are but a few of these uses. However, at present, no classroom in which a non-Math-Ed. mathematics course is taught is presently equipped with a desk top camera.

One of the projection devices presently in the department is being underutilized. This is not due to a lack of demand but to the intrinsic inadequacy of the system. When we originally acquired this projection device, we dropped the accompanying computer from the proposal as a budget-cutting measure. Unfortunately, there is no longer an operational computer in the department that is able to be dedicated to this purpose that is capable of running the necessary software efficiently. We are presently requesting funding for a laptop computer to accompany this device in order to provide even more capability and flexibility to the Department. This projection device was always designated to be a portable system on a cart to be moved as needed. With a laptop computer to accompany it, not only would it be more easily portable to classrooms in building 4, it would also be available for transport to classrooms in other buildings as well as for off-campus presentations, a capability we presently do not have. In addition, the laptop computer would be available for faculty to check-out during non-classtime periods for a whole myriad of purposes. This is also a capability that we presently do not have.

At the present time, we are planning to use fixed, hard-wired system. Such systems require installation, wiring and cabinetry. However, we continue to research the possibilities for a wireless projection system. A wireless system would not only provide greater flexibility but also might offer cost savings as well. With the permission of the Committee, we would like to be allowed the option of pursuing such a system if it were

discovered to be feasible and more economical. In the end, the main goal of this project is simply to provide to our faculty the tools that they require to be most effective.

**Identify specific courses and/or programs that will directly benefit from this project:**

(You may also want to describe how specific courses may be enhanced by this project.)

The courses and/or programs that will directly benefit from this project are virtually all the courses and programs that we offer. Several years ago, the Mathematics Department decided that it was important that our students develop a working knowledge of Mathematica while at Weber State. At that time, we implemented the Math 1100 course and made familiarity with a computer algebra system like Mathematica a requirement of all of our students at the level of Calculus I and above. This represents over 1000 students per year. Most faculty who teach courses at these levels regularly incorporate Mathematica demonstrations into these courses and require a computer projection system to accomplish this.

Many faculty who teach Statistics classes, whether Calculus-based or not, incorporate Minitab and/or Mathematica into their courses as tools for data analysis. Also, the Internet is a very useful resource, not only for data sets, statistical analysis examples and simulation applets but also for a wide range of other reference materials. Faculty who use Minitab and the Internet in their classes require a computer projection system to accomplish this.

With the acquisition of our projection systems six years ago, a few faculty have even based their entire classroom presentation on the computer using programs like PowerPoint. This strategy obviously requires a computer projection system.

At least one of our faculty in the remedial program, John Thaeler, bases all of his classroom presentations on the computer. Thus, the remedial program would directly benefit. The Mathematics Education program would greatly benefit from this project also through both the capability to use computer projection devices in those classes and the ability to train teachers in their appropriate use.

**If applicable, describe how this project will help to increase faculty productivity or enhance competency in some area of information technology.**

(Please note that ARCC does not support faculty desktop or laptop computers.)

When the Mathematics Department instituted the policy mentioned above regarding Mathematica, it was meant to enhance the competency of our students. Surely implementing this policy by means of a multimedia projection system enhances the competency of our faculty both in Mathematica and in the technology of information presentation. Also, allowing Mathematica to work quickly and easily through complicated routine computations makes students and faculty alike more productive.

**Describe how the success of this project will be evaluated.**

(If reports or publications are anticipated from this project, please indicate such.)

The success of this project will be evident mainly in the improvements in classroom instruction that are achieved. Although no reports or publications are likely to result, this does not detract from the value or the necessity of this project. On the other hand, faculty who are proficient with multimedia projection systems in the classroom are much more likely to do a better job with a professional presentation when that need does arise.

(If funded, when will this project be implemented?)

## Timeline:

The multimedia projection devices would be installed and ready for Departmental use as soon as funding is allocated.

## Budget

Note: Please be as specific as possible regarding requested hardware, software, or other resources (you may include an addendum to describe the hardware). If funds are being committed from other resources, please so indicate.

	<b>ARCC</b>	<b>Department</b>	<b>College</b>	<b>Other</b>
<b>Hardware:</b>	(Requested)	(Committed)	(Committed)	(Committed)
Panasonic PT-LC56U Projector	\$1000			
laptop pc	\$ 600		\$ 1000	
campus standard pc's	\$ 100	\$1000		
CanonRE-450x desk top camera	\$1450			
projector mount	\$ 290			
installation	\$ 190			
3-way RGB switch	\$ 150			
console (installed)	\$2000			
<b>Hardware Subtotals:</b>	\$ 5780	\$ 1000	\$ 1000	
	<b>ARCC</b>	<b>Department</b>	<b>College</b>	<b>Other</b>
<b>Other:</b>	(Requested)	(Committed)	(Committed)	(Committed)
<b>Other Subtotals:</b>				
<b>Grand Totals:</b>	\$ 5780	\$ 1000	\$ 1000	
<b>TOTAL FOR PROJECT:</b>	<b><u>\$7780</u></b>	(Sum of all columns)		

## **Additional Resources**

**Please describe what other resources will be required to implement this project:**

(Additional resources may include needs such as Academic Computing technical support or hardware installation through Electronic Services.)