



Student Technology Fee – University of Washington

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Funding Proposal

Cover Page

Proposal Title: Advanced Arts Project Support

Proposal Abstract

School/College/Unit: Center for Advance Research Technology in the Arts and Humanities

Date: 11/4/99

	Primary Contact	Approved By	Budget Coordinator	Concurrence
Name	Richard Karpen			
Title	Director	Dean/Vice President		
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By entering information above, it is assumed support for this request has been given; signatures are not required

Please answer the following questions

- What is the total amount of funds being requested? \$ 139,000
- How many UW students does your campus unit serve?
 - All Undergraduate Students
 - All Graduate/Professional Students
- Is this your first application for funding?
 - Yes No
- How will students other than the ones you directly serve access these resources if funded?
 - No Restrictions
 - Campus unit students get priority
 - By Appointment only
 - No access
- Where will proposed resources be located? 35 Thomson Hall and Music 12



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6. Is this funding proposal student-initiated?

Yes No



Please describe your proposal using the following guidelines. Limit your discussion to 6 pages, including budget. Feel free to contact the STFC with any questions (techfee@u.washington.edu).

Background

Discuss the context for the proposed project. Describe the population of students in your School/College/Unit and how they currently use technology to achieve their educational, teaching, and research goals.

CARTAH is a unique resource on campus, providing a wide range of advanced technology and technical support to individual students from all departments. CARTAH serves all undergraduate and graduate students attending the University of Washington, with priority access given to students in the arts and humanities. CARTAH is a projects based lab. Students come to us with a research idea that requires equipment and expertise that is otherwise often only found in restricted labs, if it can be found at all. CARTAH provides sophisticated video and audio production facilities, multimedia authoring, digital publishing and digital imaging tools, and expertise in formulating and completing complex student based projects. Over the years, students have engaged in a wide variety of projects, with subjects ranging from developing personal Web pages to the creation of internationally recognized audio and video works. We encourage an open and friendly environment for students to pursue their work. Students work along side student, professors, and other researchers from a wide range of backgrounds and disciplines, often sharing knowledge and expertise with these other researchers.

Benefits to Students

Discuss how students will benefit from this proposal. This might include how this proposal will increase students’ marketability for future careers; how this proposal will meet computing needs not currently met by existing resources; how this proposal will enhance students’ education, teaching, and research activities.

Over the past year CARTAH has seen a steady increase in the number of student projects, and a dramatic increase in the sophistication of these projects. This has meant that demand for key resources at CARTAH has far outstripped supply. This year has also seen the increased integration of the Computer Music Studios into CARTAH. This has allowed CARTAH to give students access to state-of-the-art facilities for high-end computer music generation and digital sound post-production work, which was previously only available to students in the School of Music graduate programs. Currently access is somewhat limited because of limited equipment. Funding from the STF would allow us to open access to all student projects at CARTAH. This proposal has three goals; to substantially enhance and expand the servers used for student based projects, to provide full access to students who wish to pursue advanced audio and music projects, and to provide students with the ability to do post-production video work and virtual



reality modeling. The proposal is divided into three sections; Server and Storage enhancements, Computer Music Studio Enhancement, and a Post Production Video/VR Station.

Server and Storage Enhancements: Video and audio projects often require enormous amounts of disk storage. Ongoing video and audio projects typically require from 5GB to 25GB of storage each. With over 100 student video and audio projects in two locations, this has meant many projects have had to delay or scale back work, with new projects being turned away due to lack of storage space. This has also created a more troubling problem. CARTAH encourages students to pursue long-term projects. In the past students have been able to leave large amounts of data on the servers for as long as the student required. This has allowed students to work on projects at their own pace, and as their schedule permits. Because of chronic space shortages, we can no longer do this. This makes it far more difficult for students to work on the very projects that are most valuable for academic growth and real world experience. There are four elements to this sub-proposal, given in order of importance to CARTAH.

- 1) A 200GB RAID Storage for student video capture and production which will help alleviate ongoing storage problems in 35 Thomson Hall, that students are now experiencing
- 2) A server and 300GB RAID which will support the Computer Music Studio in 12 Music Building, allowing greatly enhanced access for students pursuing CARTAH projects.
- 3) An additional 200GB RAID to support student post-production video work in 35 Thomson Hall, that would also help ensure enough storage capacity for the near future.
- 4) A 650GB/1.2TB Digital Linear Tape Library system capable of backing up current storage devices, as well as anticipated additions. It would also allow for the long term storage of student projects that are on hiatus, relieving storage space on the disk arrays.

Computer Music Studio Enhancements: The Computer Music Studio serves students from many departments. The lab supports a mix of class assigned and individual projects. No single department - not even Music - claims a majority of students using the facilities. This grant would greatly expand student access by replacing aging workstations, and adding much needed new workstations and recording equipment. Current and former students from the computer music program have won numerous international computer music awards. Projects in the computer music studios have included creating films and animations scores, interactive and online media, as well as art installations and computer-assisted live performance applications. CARTAH is the only facility on campus providing student access to high-end audio production and post-production, advanced software synthesis systems, professional music notation software,



and Red Book audio CD-R mastering. There are three elements to this project, given in order of importance to CARTAH.

1) Multi-channel audio workstation, which will give students access to equipment previously available only to graduate students in Music. This includes multi-channel input, recording, and output equipment as well as specialized software that enable 4 and 8 channel audio work. This equipment attaches to an existing or STF purchased Macintosh workstation.

2) Four Macintosh G4 workstations, which will be used to replace older machines, as well as expand current capacity. These computers will be available to students to generate and edit computer based audio using industry standard software tools.

3) Four Dell Xeon workstations, which will be used to create a network of Linux based audio stations capable of creating and manipulating complex computer generated audio

Post Production Video/VR Station: As the number and sophistication of video based projects has increased, the need for a computer that can provide dedicated post-production capabilities has become more important. A computer that is geared specifically to post-production tasks such as the titling, special graphical effects, and computer animation would mean many processor intensive and time consuming tasks that are currently being done by the already oversubscribed video capture and editing stations can be completed on a separate machine. This will help streamline video work and increase access to current video capabilities by eliminating many production bottlenecks. This workstation will also be used for virtual reality modeling.

There are two elements to this proposal, given in order of importance to CARTAH.

1) A Macintosh G4 Workstation with post-production software suite, which will provide the core of the post-production capability. It will also enable students to create virtual reality models useful for video, multi-media, and Web based projects.

2) A Macintosh Cinema Display 24" 'letterbox' flat screen monitor, which will help with video and animation construction by providing a larger visual canvas on which the students can work.

Access

Describe who will be using or will have access to the resources being proposed. If this is not a general access resource (i.e. available to any registered student), discuss what restrictions will be placed on resource use. Include hours of availability. Note that the Tech Fee Committee strongly encourages proposals to include a mechanism to allow all students access.

Access to CARTAH is available to all students, faculty and staff of the University of Washington who submit a structured research proposal. This can be done simply from CARTAH's web site.



Students are offered help in constructing cogent research proposals, and virtually all student research proposals are accepted. CARTAH is open from 8:30 to 4:30 every weekday.

Resources

Discuss currently available financial, personnel, and space resources devoted to technology and level of support. Include dollar amounts if possible. Describe how these resources will leverage this proposal if funded.

With the new addition of the Computer Music Studio, CARTAH now consists of a three working labs in three buildings, 35 Thomson Hall, B015/B025 Communications, and 12 Music Building. CARTAH provides three permanent technical support staff, a permanent office support person, three Graduate Student Assistants, and four workstudy students, all available to advise students and support the labs, as well as a permanent supplies budget. These labs already have extensive video, graphics, audio, and animation facilities funded through industry grants, CARTAH and University funds, as well as previous STF grants. New equipment would be integrated into these labs, and would enhance an already successful program of independent student research.

Timeline

Provide a time-line showing how the proposed project can be completed during the support period. Note that the STFC is flexible regarding implementation delays due to issues such as space renovation.

CARTAH proposes to acquire the items listed as soon as funds become available, and to make the new resources available as soon as it arrives, with all equipment available by Fall, 2000.



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Budget

Present a detailed budget for the requested funds showing items, quantities, and prices of required material. Please be aware that the STFC does not fund furniture, ongoing costs including paper and toner, or maintenance. The STFC does fund maintenance contracts on machines purchased in advance and does fund software. The STFC will fund servers and related services but will not fund ongoing costs related to them.

Hardware			
Item (specs)	Cost Per Item	Quantity	Subtotal
Macintosh G4 500MHz Workstation	5310	5	\$26,550.00
Dell 410 Xeon 500MHz Workstation	5320	4	\$21,280.00
MOTU 2408 Audio System for Macintosh	1000	1	\$1,000.00
Alesis ADAT XT20 Recorder	2500	1	\$2,500.00
Dell PowerEdge Server	3490	1	\$3,490.00
300GB RAID	11950	1	\$11,950.00
200GB RAID	9700	2	\$19,400.00
650GB/1.2TB DLT Tape Library	26500	1	\$26,500.00
Macintosh 24" Cinema Display	4000	1	\$4,000.00
Subtotal: Hardware			\$116,670.00
Software			
Item (specs)	Cost per item	Quantity	Subtotal
Asarte Jam Audio Software	390	1	\$390.00
Sibelius Audio Software	300	1	\$300.00
QuickTime VR Authoring Studio	400	1	\$400.00
VR Toolbox	300	1	\$300.00
Poser 4.0 Figure Animator	250	1	\$250.00
Bryce 4.0 Landscape Constructor	200	1	\$200.00
Kai's Power Tools for Photoshop	130	1	\$910.00
Director 7.0	500	1	\$500.00
Flash 4.0	300	1	\$300.00
Aftereffects 4.1 Production	1000	1	\$1,000.00
Subtotal: Software			\$4,550.00
Miscellaneous			
Item (specs)	Cost per item	Quantity	Subtotal
35/70 DLT Tapes	80	72	\$5,760.00
Subtotal: Miscellaneous			\$5,760.00
Subtotal			\$126,980.00
Tax			\$10,920.28
Shipping			\$1,100.00
Total			\$139,000.28



You may use the table above, or insert your own spreadsheet.

Include justification for any specialized items below. Indicate the source and amount of any supplemental or matching funds to be obtained for this proposal. It is assumed that actual hardware purchased may differ in order to take advantage of price drops and that educational discounts will be utilized where possible.

Endorsements: Departmental

List all participating units and include the endorsements of the supporting deans and/or vice-presidents who will serve as the co-leaders of the proposed initiative. The STFC supports efforts to provide partial funding or external support for projects. Please describe any efforts in this area.

Enter Departmental Endorsements section here



Endorsements: Student

Add student-derived data supporting student need. This might include testimonials, polls, data regarding current use of services or student preferences. Discuss the choice of computing platforms (UNIX, MacOS, Windows) and relation to student needs.

Total student initiated projects conducted during the 1998-99 school year: 202. Student video projects: 52. Student animation projects: 8. Student audio projects: 68.

It should be noted that many of these projects involve more than one student, and that CARTAH also has another 100 or so projects that are faculty initiated but have strong student participation. It should also be noted that most CARTAH projects, especially video and audio projects, take many hours to complete. It is not unusual for a project to take hundreds of work hours to complete.

Below are a sample of recent projects that would be greatly enhanced by the equipment requested in this proposal. All CARTAH projects can be found on our web site at <http://www.washington.edu/cartah/projects>

Peter Bill, Art Graduate: Snipers Alley, A Walking Tour. A QuicktimeVR interactive tour of Sarejevo's Marshall Titka street, otherwise Know as snipers alley. The walk down a street lined by mosques, orthodox churches, and Catholic Cathedrals, is a mirror to history. It also presented an ideal line of fire to the snipers occupying the hills around

Aaron Montoya, Gordon Potter, Cody Strauss, Comparative History of Ideas undergraduates. South Africa Documentary. We are creating a 20 minute documentary that features the Comparative History of Ideas Study Abroad Program in South Africa during winter quarter 1999. The documentary focuses on student's individual research projects and how their experiences affected their personal and intellectual development. We will be working from twenty hours of logged footage that we shot in South Africa and Seattle.

Concurrence

Please list contact information for faculty and students supporting this proposal. Signatures are not required. It is assumed that the individuals listed below are aware of and support this proposal.

Name	Affiliation	Mailstop	E-Mail	Telephone



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Thank you. When you are ready to submit your proposal, please go to the STF website (<http://depts.washington.edu/techfee>) for further instructions. Do not mail this proposal in hardcopy form.

The STFC is interested in working with departments to bring technology to students; feel free to contact us (techfee@u.washington.edu) with any questions regarding your proposal.