Visualization Incentive Grant: Demonstration and exploratory projects incorporating visualization into teaching and learning

Program Overview:
CIT is offering two types of grants for faculty wishing to explore visualization in their teaching:

- Grants for informal, exploratory investigations which might use any of a variety of approaches (see examples on previous page)
- Grants specifically for developing 3D virtual reality models using Duke’s walk-in 3D virtual reality room, called the DIVE

If you want more ideas before proceeding to the grant information, feel free to do any of the following:

- consult with CIT staff (send email to cit@duke.edu to schedule a consultation)
- view our visualization example pages: visualization of concepts and processes, interactive data visualization, and 3D object and data modeling
- attend a visualization workshop session on 2/21
- attend one of the DIVE Open Houses being offered weekly by Dr. Rachael Brady, Director of the DIVE (Thursdays 4:30-5pm in room 1617A CIEMAS).
- arrange an individual consultation with Dr. Brady (email rbrady@duke.edu to arrange this).

Who is eligible to submit a proposal?
All Duke University instructors including faculty, lecturers and graduate student instructors, and staff who work with teaching faculty are eligible to apply. Project leaders must be working full time at Duke for the duration of the project.

How do I submit a proposal?
NOTE: Prior to downloading the application please read the “fine print” below, for more details about the grant.

Then, fill out the application form for the appropriate type of grant (below), and submit to CIT. We will begin review of applications on March 9, 2007*.

Use of the DIVE (Word file)
Visualization exploration (Word file)

Email the completed application form to: cit@duke.edu. cit@duke.edu

Have an idea that doesn’t fit this grant application?
The CIT has a variety of options for helping faculty with instructional technology projects. See more information about other CIT project support programs.

If you would like notification of future grant programs and instructional technology initiatives, join the CIT mailing list.

The “Fine Print”
What types of resources may be requested in the grant?
Grant proposals may request funding, CIT staff time, CIT student-worker time, and time/resources from other campus units.

Funding may be used for:

- Purchase of **specialized** hardware or software necessary for the project and not available through other university facilities.
- Wages for student workers directly connected to the project (hired and supervised by the project PI or her/his designate).
- Payment to contract workers for programming, web development and other technical services.
- Renting time in the DiVE for students to use/interact with models.

Funds may **NOT** be used for:

- Instructor salary or faculty stipends.
- Standard computing equipment typically acquired through departmental or school funds.
- Establishing new classrooms or labs or upgrading those facilities.
- Personal or departmental equipment purchase when other university facilities, such as the CIT Instructional Lab or campus or departmental facilities, can be used.

What are the requirements for PIs of accepted projects?

- Participate in an initial planning meeting with CIT staff (and DiVE staff, if relevant) during late Spring 2007
- Meet at least once in Fall 2007 and once in Spring 2008 with CIT staff to discuss progress on the project; stay in touch with CIT staff to keep them informed about project progress.
- Implement the project in a course during the 2007-08 and/or 2008-09 academic year.
- Write a report summarizing project outcomes.
- Share information about the projects via a **project profile** and (in some cases) through a campus presentation.

What is the proposal review process?

Note: Individuals considering submitting a proposal are strongly urged to meet with a CIT staff member before the proposal due date. A CIT consultation will help you prepare the best possible proposal and make sure you have addressed the criteria below. To ensure that CIT staff are available to discuss your proposal, email cit@duke.edu to request a consultation several days before you would like to meet.

CIT will do a brief review of the initial applications in both tracks and will contact each applicant for additional information. Applicants with feasible projects which CIT may be able to support will be asked to complete Part 2 of the application by April 6, 2007, to provide more details for consideration in a second round. Full applications will then be reviewed by the CIT staff and (and Dr. Rachael Brady, for DiVE proposals) based on the criteria shown below.

**1. Innovative use of visualization technology to address an instructional need**

Proposals must include clear educational goals, an explanation of how the project will accomplish those goals through a creative and appropriate use of visualization technology, and a plan to assess the impact of the project on teaching and learning.

In addition, DiVE proposals need to explicitly articulate the need for use of such a sophisticated immersive virtual reality technology as the DiVE, instead of using a different visualization technique.

**2. Feasible project plan**

The reviewers will consider whether the project seems carefully planned, whether necessary personnel have been identified and whether the proposed timetable and outcomes of the project seem realistic. Where relevant, applicants should discuss their project ideas with their department chair and with technical support staff in their school to determine impact on
school resources, if any. Projects must have some component that can be implemented in at least one course no later than Spring 2009.

3. Project impact

Our intent in funding these exploratory projects is to invest in enhancements to teaching and learning which could be re-used and ongoing, and have the potential for a significant impact. The reviewers will also look at the applicant's plans for evaluating the success of the proposed project, and plans for continuing successful projects, including how any continuing costs of the project (after the CIT funding ends) will be supported. All else being equal, projects which appear to have the potential to have a larger impact (those which are integral to curricular change in the department/school, or which involve more students, more courses, more instructors, will be used in more semesters, or can serve as a model for others) will be given higher priority for support.

For larger projects, commitment from the school or department increases the likelihood that the project will be completed and broadly used. Depending on the nature of the project, applicants may be asked to include in Part 2 of the application a clear statement of how the project supports department and/or school pedagogical goals, and/or the signature of the department chair or academic dean.

What is the grant timeline?
Initial Application Form due: March 9, 2007, 5 pm*
Review of applications, consulting and information gathering: March 12 – March 26, 2007
Part 2 of Application Form and Signature Page due from invitees: April 6, 2007, 5 pm**
Review of completed proposals: April 6 – April 20, 2007
Announcement of selected projects: by May 4, 2007
Funds transferred to projects: end of May 2007
Implementation of projects: between May 2007 and May 2009
Presentations about projects: April 2008 or April 2009***
Written report on projects submitted to CIT: May 2008 or May 2009***

*This date is somewhat flexible; CIT will begin reviewing applications on this date, and applications submitted on time will be given first priority for review and consultation.
**The due date for the second part of the applications is firm.
***Due dates for presentations and reports is dependent upon the planned project completion date.