Proposal Solicitation

Program Title: Visual Electronic Art for Visualization Walls

Synopsis of the Program:

The Visual Electronic Art for Visualization Walls program is a joint program with the Stanlee and Gerald Rubin Center for the Visual Arts (Rubin Center) and the Cyber-ShARE Center of Excellence at The University of Texas at El Paso (UTEP). The goal of the program, which aligns with the focus of ISEA International, is to foster interdisciplinary academic discourse and exchange among individuals working with art, science, technology, engineering, and mathematics. The program will support an artist in residence at UTEP to conceive and create new electronic visual art for a visualization wall, which consists of two high-performance computing clusters and one 90-megapixel visualization wall with 45 two-megapixel tiles in an arrangement of five rows with nine columns (see Appendix). The art must be specifically designed to increase understanding and appreciation of research and education activities directly related to science, technology, engineering, and/or mathematics (STEM) fields.

About the Centers. The Cyber-ShARE Center brings together experts in computer science, computational science, education, earth science, and environmental science to define new approaches to integrate data with varying accuracy and sensitivity, improve algorithms used in scientific applications, and build cyberinfrastructure that assists scientists in making informed decisions about retrieved resources. The Rubin Center presents exhibitions of contemporary art that encourage adventurous thinking and dialogue, offering its geographically isolated region a direct experience with art of international recognition and importance.

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Number of Awards: one

Full Proposal Deadline(s) December 12, 2011 (due by 5 p.m. proposer's local time):

Anticipated Funding Amount: $3000

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Eligibility Information: The artist must hold a MFA, a Ph.D. in a relevant field, or be able to demonstrate equivalent experience in the creation and exhibition of technology-based art.

I. PROGRAM DESCRIPTION

The Visual Electronic Art for Visualization Walls program aims to foster interdisciplinary academic discourse and exchange among individuals working with art, science, technology, engineering, and mathematics. The program will fund an artist to create electronic art that complements the science, engineering, and education efforts of the Cyber-ShARE Center and increase public understanding of multimodal linkages among the various disciplines. The art must be specifically designed to increase understanding and appreciation of research and education activities directly related to science, technology, engineering, and/or mathematics (STEM) fields. The proposed project is expected to result in media that can be used in programs that outreach to the public and students in K-12. Cyber-ShARE staff and faculty will be available to provide scientific and technical assistance to artists.

The project will provide opportunities for the funded artist to interact with other artists through the Rubin Center in collaboration with multidisciplinary scientists and students through the Cyber-ShARE Center. Integral to achieving the goal of the Visual Electronic Art for Visualization Walls program is a requirement to broadly disseminate the works that are produced by Center and project participants as a public benefit; therefore, the centers expect well-developed plans for bringing the artistic works before the widest possible cross-section of the public.

The visualization wall of the Cyber-ShARE Center of Excellence, which is described in detail in the Appendix, will be the target medium for the works to be produced. Examples of final products include dynamic or static gigapixel artistic renderings, preferably at the visualization wall aspect ratio of 16:9 or in multiples of the total wall size of 17280-pixel width and 5400-pixel height. The display software currently running the visualization wall is the Scalable Adaptive Graphics Environment produced by the Electronic Visualization Laboratory of the University of Illinois at Chicago (http://www.evl.uic.edu/core.php?mod=9&type=6&cat=28).

The Centers will provide the funded artist with access to technical support for the visualization wall, software, computing equipment, and laboratory facilities. Award recipients may be asked to attend a meeting at the University of Texas at El Paso for detailed planning of interactions with Centers' participants before the creative project begins. The Centers may provide additional funds and in-kind support, and successful applicants may seek additional funds to support the project. The links to the Centers’ websites are the following: http://cybershare.utep.edu and http://rubincenter.utep.edu.
II. PROPOSAL PREPARATION

Proposal content should be organized in the following order and format:

I. Cover Sheet including:
   - Proposer name
   - Address
   - Email
   - Personal website
   - Telephone
   - Fax numbers

II. Project Summary (one page max) includes the merit and significance of the project.

III. Bio (two pages max) that includes:
   - Degrees held
   - Synergistic activities
   - Summary of relevant exhibitions/public art projects completed

IV. Project Description (six page maximum)
   - Conceptual description of proposed artwork and rationale for choice, in particular how the proposed project will increase understanding and appreciation of research and education activities directly related to science, technology, engineering, and/or mathematics (STEM) fields.
   - Conceptual Design
   - Preliminary rendering of the proposed work
   - Description of how the resulting media can be used in programs that outreach to the public and students in K-12.

V. Timeline (one page maximum)
   Milestone and deliverables, as well as timeline for interactions with Center’s participants should be outlined. The proposal should contain sufficient information for reviewers to understand the scope of interactions with the research teams and the length of time using the computational resources to determine whether required time can be justified to support your work.

VII. Supplementary Documents.
   Supplementary documents must include: artistic samples, published reviews, and letters of support. The artistic samples should include an electronic and printed PowerPoint presentation with a maximum of five slides that are labeled with the artist’s name, artwork year, location, media, and brief concept description. Further directions given below.

VIII. Budget
   The budget should include all costs for completing the proposed work and funds for meals and lodging during travel to visit with participants at the Centers.
Directions for artistic materials. If large audio or visual files are important components of your work, the files may be placed in a “Dropbox,” or stored on a device (CD, DVD, flash drive) and mailed to one of the solicitation’s contact persons. Include instructions for viewing the files if needed, and include your name on each item. Ensure that each image is appropriately captioned or described and digitally watermarked with any copyright information. Mailed material will be returned via regular mail only if you include written return directions and the return address is within the U.S.

Address:

Visual Electronic Art for Visualization Walls Project
Cyber-ShARE Center of Excellence
Classroom Building Room C401
University of Texas at El Paso
500 W. University Ave.
El Paso, TX 79968 USA

III. MERIT REVIEW CRITERIA

To develop a potentially successful proposal, it will be crucial to understand the vision, mission, and goals of the Centers and their projects. Visit the websites of the Centers to find detailed information about them. All proposals will be evaluated through two merit review criteria: artistic merit and the broader impacts of the proposed effort. In some instances, however, the Centers’ reviewers will employ additional criteria as required to highlight the specific objectives of certain project aspects.

What is the artistic merit of the proposed activity?
How important is the proposed activity to advancing artistic excellence and academic discourse and exchange among individuals working with art, science, engineering, and technology? How well qualified is the proposer to conduct the project? How well conceived and organized is the proposed activity? Is there sufficient access to resources?

What are the broader impacts of the proposed activity?
How well does the activity advance artistic innovation and excellence while promoting teaching, training, and learning? To what extent will it enhance the artistic methods and techniques for education? Will the results be disseminated broadly to enhance integrated artistic, scientific and technological understanding? What may be the benefits of the proposed activity to society?

IV. AWARD INFORMATION

Public record. If you are selected, the project award will become a public record. The Centers’ websites will contain the name of the awardee, the contact information, and a description of the project.
V. SUBMISSION INFORMATION

Submit your proposal to:

cybershare@utep.edu   Subject: Visual Electronic Art for Visualization Walls Project

You will receive an acknowledgement that your proposal has been received.

VI. AWARD ADMINISTRATION INFORMATION

A. Notification of Award

Notification of the selection will be made by January 15, 2012.

B. Project Award Conditions

A project award consists of: (1) the award letter, (2) the schedule to make available project related funding and/or support; (3) the applicable award conditions, and (5) any announcement or other Center issuance that may be incorporated by reference in the award letter.

C. Project Start and End Dates

The anticipated start-date of the project is January 2012. The project is expected to end May 2012. The dates are negotiable with the awardee and the Rubin and Cyber-ShARE Centers.

D. Reporting Requirements

The project proposer must submit a mid-term progress report. Within 30 days after completion of the project, the proposer is required to submit a final project report.

Project reports will provide information on activities and project collaborators and participants, publications, and other specific products and contributions.
APPENDIX

Visualization Wall of the Cyber-ShARE Center of Excellence

The NSF MRI-funded Cyber-ShARE Collaborative Visualization System (C2ViS) Laboratory supports multidisciplinary scientific collaboration and visualization of scientific datasets for exploratory, monitoring, educational, and outreach purposes. The MRI grant (CNS–0923442) also provided funding to hire a part-time systems specialist and two graduate students who are the visualization team in charge of administration of the laboratory computational equipment.

The C2ViS visualization laboratory, which was designed to support both scientific visualization and information visualization, has a tiled-display video wall (see pictures below) built with forty five 40-inch 2.073 megapixel monitors with a total 93.312 megapixel resolution. Each monitor is driven by a T5500 Dell Precision workstation configured with a dual Quad core processor, 12 GB of memory, and a 2.5 GB nVIDIA Quadro 5000 graphics card. The workstations are interconnected with Mellanox Infiniband switches using a fat-tree configuration which delivers a one-to-one 40 Gbps, 100 ns inter-node connection. The low latency, high bandwidth interconnect, the nVIDIA graphics cards, and the dual quad core processors enable the video wall to also function as a high-performance computational cluster with total resources including 360 CPU cores, 0.5 TB of processor memory, 67.5 TB of secondary storage, and 15840 GPU cores with 112.5 GB of GPU memory.