Antarctica! Exploring Extreme Ecosystems Creatively Through Art and Science

Submitted by:

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Project Description and Target Groups:

The Extreme Ecosystems project promotes interdisciplinary arts-centered research and immersion education. The planet's most remote landscapes are the most fragile and endangered. However, they also offer the most insight into a sustainable future. This project brings together science, engineering and media art to help better understand these issues.

The project is connected to the SCM sustainable design course *Media Art and the Environment* that explores how artists and scientists working together can collect and interpret environmental data in new forms of creativity and visualization. Students will carry out research in the remote science stations of environmentally-significant Antarctica to create and exhibit new media art and design projects that offer new approaches to understanding climate change and sustainable solutions. It also offers the technical and computing branches of the university the opportunity to explore new sensing technologies, and the science community the chance to discover new ways to visualize important data for better understanding by the public.

The pilot Mojave expedition from 2012 demonstrated the value of high-profile student experiences—the students become ambassadors with far-reaching impact. Although only 18 students went into the desert, many more submitted proposals and participated in the exhibition. While in California, our students interacted with students from top US schools and in Hong Kong, hundreds of primary, secondary and tertiatry students visited the exhibition. When multiplied by each posting on Facebook and Flickr, the student impact of these trips reached into the thousands. Adding the many news media stories about the trip, the reach to the community is into the millions. It is a proven method to begin a conversation about sustainability and climate change.

- 100-200 CityU Proposals submitted by Students
- 100-200 Contact with students from other universities
- 100 Assisting and participating in the exhibition
- 1000+ Students from Primary, Secondary and Tertiary Exhibition Tours
- 10,000+ Social Network contacts
- 1,000,000+ Broadcast and News Media Exposure

Timeline and Activities

The course will be offered in Semester B, 2013/2014 Academic Year, the expedition will occur in January 2014 for 16 Days. The exhibition will occur in May 2014 with a website and corresponding catalogue.

Task A—Form partnerships, secure sponsorships, secure funding
Task B—Research logistics
Task C—Hire Logistics Research Assistant and Financial Research Assistant; Call, Interview and Select Students
Task D—Planning Meetings, Project Meetings
Task E—Secure visas, airfares, transportation, accommodation, services
Task F—Expedition
Task G—Project Development and Design
Task H—Exhibition and Catalogue Publication
Task I—Reporting and Academic Journal Paper Writing

	2013				2014			
	Q1	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
Task A								
Task B								
Task C								
Task D								
Task E								
Task F								
Task G								
Task H								
Task I								

Interdisciplinary Objectives of the Project:

- To foster interaction and collaboration among art and design students, scientists and professionals in environmental concerns. Achieved through communications, partnerships, and field research.
- To learn how to use sophisticated computer sensing, location and presentation technologies and the computational programming needed to convert the data into new visual methods. Achieved through study, experimentation, research and on-site experience.
- To present varied possibilities with visualization of collected environmental data and info-aesthetics. Achieved through creative strategies outside the normal parameters of scientific data presentation.
- To learn to engage social networks and blogging in their research. Achieved through the use of social network apps and sites that link across geographic boundaries.
- To help the creative arts learn the 'language' of scientists and understand empirical research as an artistic strategy. Achieved through shared benefits for both.
- To present projects and prototypes that reflect new methods of artistic

actions taken within the natural environment in the context of sustainability and care for natural resources. Achieved through an exhibition and media coverage.
- To pursue embedded research in specific eco-systems including the cultural, sub-cultural and counter-cultural formations, histories, and aesthetics. Achieved through research, interviews, and site visits.

Deliverables of the Project:

- A networked discussion among students, academics, scientists and industry professionals about how art and design can offer new ways to interpret and present important data about the environment.
- New aesthetic forms (visually, sonically, sculpturally, *etc*.) that can help society better visualize and understand sustainable issues.
- Student projects that reveal an understanding of sustainable design, a new knowledge of sensing technologies, a background in sustainable art history, and a new way of looking at the natural environment.
- The establishing of long-term partnerships with international world-class arts and science organizations.
- Academic papers and conference presentations that promote Hong Kong as a leader in Sustainable Design, Media Art, and Environmental Concerns
- Media recognition that benefits the community by increasing awareness of climate change and how media art can be a vital part of public education.
- An exhibition, website, blog postings, videos, photographs and documentaries that can be referenced and visited by others interested in alternative ways to present climate concerns

Experience

The 2012 Desert Expedition achieved its promised outcomes and demonstrated the value in creating more immersive educational experiences and teaching fieldwork as a form of discovery for sustainable understanding. Cross-cultural and interdisciplinary, the international expedition and exhibition established key partnerships and garnered positive publicity for the school, university, and Hong Kong. Nearly 50 newspaper, web and radio outlets reported on the expedition and more renowned organizations and schools have now asked to participate in future expeditions. The projects have helped our students, many from lower-income families, to gain entry into top graduate schools, win regional awards in art and design, and secure jobs within local industry.

Budget

Amount Requested from the Interdisciplinary Opportunity Fund: **$300,000**

	Total	%	Notes
Income Sources			
City University Contribution			Half from the University
Interdisciplinary Opportunity Fund	$300,000	22.7%	
Teaching Development Fund	$150,000	11.4%	
Quality Campus Life Fund	$70,000	5.3%	
School of Creative Media	$150,000	11.4%	
External Sources			Half from Outside the University
Individual Contributions	$100,000	7.6%	Student Contributions
In-Kind Support	$150,000	11.4%	Equipment Sponsorships
Other Income	$400,000	30.3%	External Grants and Bequests
Total Income	**$1,320,000**	**100.0 %**	
Expenses			
Salaries and Wages	$140,000	10.6%	Research Assistants
Total Personnel Costs	**$140,000**	**10.6%**	
Equipment Rental & Maintenance	$50,000	3.8%	
Food Costs	$100,000	7.6%	
Insurance Expense	$10,000	0.8%	
Marketing/Advertising	$100,000	7.6%	Exhibition, Catalogue, Publicity Materials
Professional Fees	$70,000	5.3%	$50k Tour Guides, $10k Assts, $10k Other
Travel Expense	$800,000	60.6%	$550k Airfare, $250k Accommodation
Miscellaneous Expenses	$50,000	3.8%	
Total Operating Costs	**$1,180,000**	**89.4%**	
Total Expenses	**$1,320,000**	**100.0 %**	