IRA Funds Request for Santa Rosa Island Showcase Environmental Surveillance Network

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Instructionally Related Activities Funds Request Summary

Project Sponsor	Andrzej Bieszczad
Activity Title	Santa Rosa Island Showcase Environmental Surveillance Network
Activity/Event Date	Spring 2016
Date Funding Needed By	February 2016
Previously Funded?	No
Semester/Year	Fall 2015
Proposal #	692
Report submitted for previously Funded Activity?	Yes
Report submitted for previously Funded Activity	irareport20142015cirainbow.pdf
Additional Report #1	—
Additional Report #2	—
Additional Report #3	—
Additional Proposers	—
Academic Program(s) / Center Name(s)	Computer Science Program
Estimated total Course Fee revenue	0
Amount Requested from IRA	4404.00
Estimated Number of Students Participating	15
Conditions and Considerations	Field Trip
Brief Activity Description	I am requesting funding for taking 15 students to Santa Rosa Island to deploy and test a pilot environmental surveillance network. This project is a collaboration between CS (CI Rainbow), SRIRS, Biology, and ESRM, but any student

	capable to contribute can participate. The project is a direct response to a call by the NPS to allow them to asses any future deployment of a surveillance network on the island expressed during a meeting at NPS facilities at Ventura Harbor on 8/25/2015. In this project, CI Rainbow team will deploy the self-sustainable network along with data collection infrastructure and install several terrestrial sensory stations (a partial mirror of the CI Park experimental network), while Biology and ESRM will focus on high quality sensors for sea water monitoring. The network will be constrained to the close vicinity of the station, but will include a link to the pier which will anchor the ESRM and Biology sensors. The SRIRS will be hosting the base station of the network. It will be receiving data from 4 terrestrial sensors (temperature, humidity, soil moisture, and anemometer) as well as data from the sea water sensors from a relay node linking it further to the pier. The relay node is needed since there is no direct line of sight between the pier and the station. All nodes except for the base station will use solar power. ESRM and Biology will provide the sea water sensors, so this request concerns funding for the infrastructure. The students will help with deployment, testing, and then running the network and analyze the collected data.
Learning Outcomes and Relation to IRA to Course Offerings	Participants will learn: - what is CI Rainbow and what sensory networks - why the network matters to their respective discipline - how they can use the network to their advantage After the trip, the participants will be able to: - apply the knowledge to their fields by designing innovative environmental applications - design, implement, and deploy the applications on the CI Rainbow experimental network - use the back-end data access and analysis (e.g., data mining) capabilities of the CI Rainbow infrastructure - experiment with their applications in the University Park - be ready to deploy their applications on the island when the SRI-located network is ready This activity relates to many technology, environmental, and biological courses. It is a very interdisciplinary undertaking.
Description of Assessment Process	Feedback from National Park Service and the management of the Santa Rosa Island Research Station will be the primary basis for the assessment. NPS is to asses the feasibility of a larger installation in the future. Additionally, all participants will complete a survey about the value of the event measured by the perceived degree of meeting the outcomes.
Activity Budget	SRIRSCIRainbowtravelbudgetf15.xlsx
CIA Budget	—
CIA Proposal	—
Course Syllabus	—
CIA Certification	—
Other Sources of Funding	NONE for this activity. However, I am applying for Lottery funds for the network equipment to be installed on the Island.
Target Audience/Student Marketing	Students from disciplines interested in environmental studies on Santa Rosa Island and eager to learn about the technology that supports such studies. It will be advertised mostly through faculty supervising capstone and research projects. Ads will be distributed to students in interested programs and across the campus.
Bring Benefit to Campus	—
Sustainability	The surveillance network is completely sustainable through the use of solar-power. Exploratory work in CI Park confirmed the feasibility of this approach. NPS want to asses not only the capability of the network , but also its physical parameters ("looks").
Program Chair/Director	michael.soltys
Dean	karen.carey
Acknowledgement	I acknowledge that I have reviewed and accepted the Conditions and Considerations herein. Please check off boxes as appropriate.

Program Chair/Director Approval

Approval	I approve the IRA Funds Request described on this page
Name	Michael Soltys
Date/Time	9/10/2015 8:54:59 AM
Validation	myCI-signin-GC-7826

Dean Approval

Approval	I approve the IRA Funds Request described on this page
Name	Karen Carey
Date/Time	9/28/2015 11:46:15 AM
Validation	myCI-signin-L4-8071

IRA Committee Decision

Decision	—
Comments	—

Actions

- IRA Committee Decision
- View IRA Funds Request