



ICONS' Favorable Initial NSF Review

The Executive Summary from the First National Science Foundation Evaluation Report on ICONS:

"The Institute for Convergence of Optical and Network Systems (ICONS) has completed its sixth month of operation under NSF ATE grant DUE0501703. The project is off to a great start and is administered by a capable and committed team of experienced faculty who have the backing of a broad range of industry stakeholders who evidence strong engagement in the project activities and outcomes. *continued on page 2*

ICONS' 2nd Advisory Panel Meeting Tackles Curriculum Design Exercise

ICONS held its second Advisory Panel meeting on May 3rd in a CNIT classroom in Cloud Hall on the Ocean Campus. The meeting was well attended. *continued on page 4*

CCSF Closes Optical Fiber Ring With 2nd Fiber Entrance To Main Ocean Campus

In partnership with the City and County of San Francisco Department of Telecommunications and Information Services (DTIS), City College of San Francisco completes a diversely routed, optical fiber ring between its major campuses this quarter with a new fiber route into the Ocean campus.



*DTIS fiber installation coordinated with Wellness Center construction
continued on page 3*

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CNIT Interns Serve San Francisco Digital Inclusion Goals with Projects at Network Neighborhood Centers in Hunter's Point

In a relationship developed with ICONS Advisory Panel member SeaKay, one of the final 3 in the competition to provide San Francisco with universal free wireless Internet access, CNIT students are contributing to efforts to overcome digital divide issues in San Francisco.

The "Digital Divide" is the gap that exists between those who make effective use of computer and network technology in their lives and those who do not. *continued on page 2*

The project has achieved its initial curriculum and programmatic objectives on, or even ahead of schedule, and within budget. There are no factors or issues that would mitigate against continued funding, nor are there factors that might adversely affect project outcomes. There is evidence of institutional commitment, and the host institution takes great pride in this project and the interest it has generated from the ICT employers in the region.

The project is well established in terms of “mind – share” not only with the business sector, but with secondary education and universities as well. There is a strong sense of the end-to-end service that the project can provide in terms of recruitment, retention, persistence, placement or transfer, certification, and Baccalaureate completion.

The project is directed by a knowledgeable staff with a clear and shared vision of what they're about, and what needs to be done to achieve the project goals. The kick-off industry advisory meeting was well attended and there was evidence of enthusiastic participation and support for the project outcomes. The broad range of constituents on the committee, from equipment manufacturers, software developers, educators, service providers, workforce development, and standards bodies places ICONS in a position to receive and respond to industry developments and workforce needs in a timely manner, and to disseminate the latest information to the ATE community and technical educators across the country.

New courses in Fiber Optic Technology and VOIP have been developed and offered and full classes of students are already enrolled. A metropolitan area network, being developed with the City Of San Francisco, will keep the project in the center of high technology and workforce development in the region.

Infrastructure upgrades at all City College campuses including high speed LANs, WANs, and IP telephony are integrated with the state educational IT network to allow dissemination and interaction with other educators throughout California.

Local and regional employers agree that many key and mission critical ICT technology jobs will not be outsourced, and through their voice on the ICONS advisory panel, have lauded the project's goals to provide technicians with the appropriate hands-on skills plus the theory and vision to not only install and maintain, but also manage, their networks.“

Many people who have never had the resources or opportunity to learn how to use computers, information technology applications and networking solutions, like many available through the public Internet, are frequently at a disadvantage to people who do. Digital “have nots” lack skills valued by employers. They also lack tools to find and obtain jobs, like easy resume production, online job searches and applications.



SeaKay utilized CNIT interns this quarter to install and set up a wireless network and Network Neighborhood Center at the Alice Griffith housing project in Hunter's Point (photo above).



Additionally, five CNIT interns are providing technical and user support at the BayView Community Center on Commer Street, M-F, 10-4. CNIT has also provided a short term class in Internet and Email at the site.

For Fall 2006 CNIT plans to support a second community center and is working to recruit 15+ students to be able to offer more classes at the Community Centers.

The optical fiber ring consists of 12 fiber strands on a 30 mile route within San Francisco, connecting the main Ocean campus with the Gough St administrative facility and the John Adams, Alemany, Downtown, Evans and Southeast campuses. Intercampus bandwidth is provisioned today at 1 gigabit per second (Gbps), a billion ones and/or zeros every second. That's 333 times the 3 megabit per second (Mbps) bandwidth previously available between campuses. Bandwidth can be increased at any time over the 20 year term of the agreement, completely at CCSF's control, simply by adding electronics to the network, with virtually no bandwidth limit. Showcase Mission and Chinatown campuses will be added to the network when completed.



City College Optical Fiber Network

The fiber ring also ties City College into the carrier class data center at 200 Paul, where City College gets Internet access from the Corporation for Educational Network Initiatives in California (CENIC). Bandwidth to the public Internet has been doubled to 100Mbps, and connectivity to Internet2 has been added at a whopping 900Mbps. Internet2 connectivity technically enables high-speed collaboration and data sharing with virtually all educational institutions in the State of California. A full suite of world-class data, network, carrier and Internet services are available from a wide variety of service providers at the 200 Paul facility.

DTIS monitors the network 24x7x365 from its emergency services 911 center for ten years, proactively notifying CCSF of intercampus optical network service issues. The agreement for City College to use DTIS fiber is for 20 years. If there are problems with the fiber, DTIS will fix them.

The project has been paid for by overwhelmingly voter approved San Francisco taxpayer bonds. The operational, technical and academic efficiencies enabled with this network benefit the 3,000 staff and faculty and the 106,000 people who take classes at City College in San Francisco annually.



DTIS Crew Working on Fiber Install on Ocean Ave

CNIT/ICONS students in the Fiber Optic Technology course this spring observed DTIS fiber installation and splicing job sites to gain real world exposure to cutting edge technologies being deployed in the field. Fiber connectivity was also brought into the classroom, so students could gain real world experience with a metro fiber optic network.

During the first hour of the meeting, background on ICONS was presented for new members, which include Kaiser Permanente, Hewlett Packard, Verizon, Networld, Telekenex and CNET. Progress since the last meeting was reported, which includes: successful completion of initial VoIP and Fiber courses, high school outreach efforts, a new articulation relationship with CSU-Channel Islands, program displays in the science building and for travel, participation in an application for NSF grant funding for student scholarships, faculty training, and the summer convergence workshops. 11 of the fourteen students who completed the Spring Fiber Optics class passed the Fiber Optics Association CFOT certification Exam!

A long afternoon was then spent working together with Ann Beheler from the Convergence Technology Center in a comprehensive curriculum review and planning session. Advisors provided extremely valuable input into curriculum change decisions that will be reported at the next and last Advisory Panel meeting this year, planned for 9/27/06 at 11am.

ICONS is very grateful for everything that Advisory Panel members do to help make ICONS a success!

ICONS CALENDAR

Date	Event
6/6-7/20/06	6 Topic Summer Communications Convergence Workshops
7/06	NCTT Summer Workshop, ICONS presents IPTV in Springfield, MA
10/06	NSF ATE National Conference
10/06	League of Innovations CIT Conference
11/06	ICONS is patron and presenter at San Francisco IEEE Globecom

ICONS ADDING JUNIPER EQUIPMENT & INSTRUCTION TO CNIT CURRICULUM

ICONS has been working closely with Advisory Panel member Juniper Networks over the first two quarters of this year.



Juniper Networks is a San Francisco Bay Area based communications equipment provider with a very large share of the Internet Service Provider router market and a growing presence in enterprise routing, firewall products, session border controllers and associated service/solutions like VPNs, intrusion detection and policy management.



This quarter, CCSF has purchased four new Juniper J-series routers

Juniper has donated 3 of the more expensive and capable M-series routers



The new equipment is being integrated into CNIT's student instruction labs, and CNIT faculty is receiving Juniper training.

We are all collaborating during the rest of the year to develop a new course that will include JUNOS (the Juniper Operating System), exposure to Juniper and the Juniper product line, specifics for installation and configuration of Juniper products and interoperability with other vendor solutions, including Cisco Systems.

We hope the new course will be offered as early as the Spring 2007 semester.

Many thanks to Juniper Networks for their generosity, hard work and support in making ICONS a success!