

#### Expert Knowledge Transfer through Telepresentation

San Diego Supercomputer Center (SDSC),  
San Diego, CA



#### Background

As a national supercomputer NSF (National Science Foundation) center, SDSC is frequently the site for numerous scientific research projects which require high performance computing, networking, mass storage, and visualization. A sample of these projects include: Teragrid and HPWREN. Several times per year these projects hold conferences where scientific researchers and interdisciplinary experts convene and collaborate on cutting edge research. The issue arises in how to capture and disseminate that expert knowledge to interested viewers.

#### Furthering the Mission

As a national lab, sharing research and scientific knowledge is part of SDSC's mission. Paramount to SDSC is to provide access to interested parties and users interested in this information, and to also receive feedback from them. To further their mission, SDSC used Telepresenter technology provided by NCast to stream live and easily record the proceedings. The Telepresenter products offered a powerful combination of high resolution video (UXGA) capture quality, portability, and ease of use that removed the technical barriers normally associated with webcast and capture.

#### CI Channel

The content produced by the Telepresenters to record seminars was later distributed via the Cyberinfrastructure Channel, or CI Channel. The CI Channel is a webcast video service and resource for scientific communities, whose vision is to design, assemble, and create multimedia content that both meets the training and outreach needs of the various scientific research communities with CI, but also to deliver this content in high quality rich formats. More on the CI Channel can be found at [www.cichannel.org](http://www.cichannel.org).

## **TeraGrid 2007**

TeraGrid is an open scientific discovery infrastructure funded by the National Science Foundation. TeraGrid combines leadership class resources at eight partner sites to create an integrated, persistent computational resource. At the annual conference in Madison, WI SDSC used Telepresenter technology to create and customize multimedia content, webcast the proceedings and plenary talks, live and record the events for later distribution to remote audiences.



## **HPWREN**

HPWREN, or High Performance Wireless Research and Education Network, is a program for building a non-commercial broadband wide-area wireless network in several municipal counties for use in research and education and is also funded by the National Science Foundation. SDSC was recently challenged with streaming an event hosted in a mountaintop, aircraft hangar to the lobby of the Office of Cyberinfrastructure (OCI) for the NSF. SDSC solved this problem using a combination of Telepresenter and wireless networking technology to bounce a signal off of two mountains and relay a live stream to the OCI in Washington, D.C. SDSC has continued to use Telepresenter to webcast and record for other HPWREN applications such as the annual users workshop at the Ramona Air Attack Base in CA.



## **About NCast**

NCast Corporation provides industry-leading solutions for the capture, distribution, and archiving of high-resolution, mixed-media content such as rich-media presentations or high-resolution graphics and multimedia. NCast's 3rd-generation Telepresenter M3™ simplifies the mixing of audio, high definition (HD) video, and any high resolution RGB/DVI source, with PIP capability, into one rich-media file for webcasting or playback. The Telepresenter M3™ is used in applications such as presentation capture, live and on-demand training, multi-source videoconferencing, telemedicine, distance learning, and podcasting. For more information, call NCast at 800-541-9230 or visit <http://www.ncast.com>.

