# "What Next?"

**Workshop on Interdisciplinary Strategic Issues in e-Science and Cyberinfrastructure**

**Caltech**

**Pasadena, CA**

**June 14, 2007**

**Dr. Larry Smarr**

**Director, California Institute for Telecommunications and Information Technology;**

**Harry E. Gruber Professor,**

**Dept. of Computer Science and Engineering**

**Jacobs School of Engineering, UCSD**

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# Marine Genome Sequencing Project – Measuring the Genetic Diversity of Ocean Microbes

**Plus 155 Marine Microbial Genomes**



**Each Sample ~2000 Microbial Species**

**Specify Ocean Data**








**Sorcerer II Data Will Double Number of Proteins in GenBank!**

camera
Marine Microbial Ecology

MARINE MICROBIOLOGY INITIATIVE

Gordon and Betty MOORE FOUNDATION

J. Craig Venter INSTITUTE

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# Can We Create a "My Space" for Science Researchers? Microbial Metagenomics as a Cyber Community

## Over 1000 Registered Users From 45 Countries




| | |
|---|---|
| USA | 583 |
| United Kingdom | 46 |
| Canada | 35 |
| France | 35 |
| Germany | 32 |

camera
Marine Microbial Ecology

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# Personal Light Waves
# A Global Foundation for Cyberinfrastructure at 10Gbps

Maxine Brown, Tom DeFanti, Co-Chairs

## iGrid 2005

THE GLOBAL LAMBDA INTEGRATED FACILITY

www.igrid2005.org

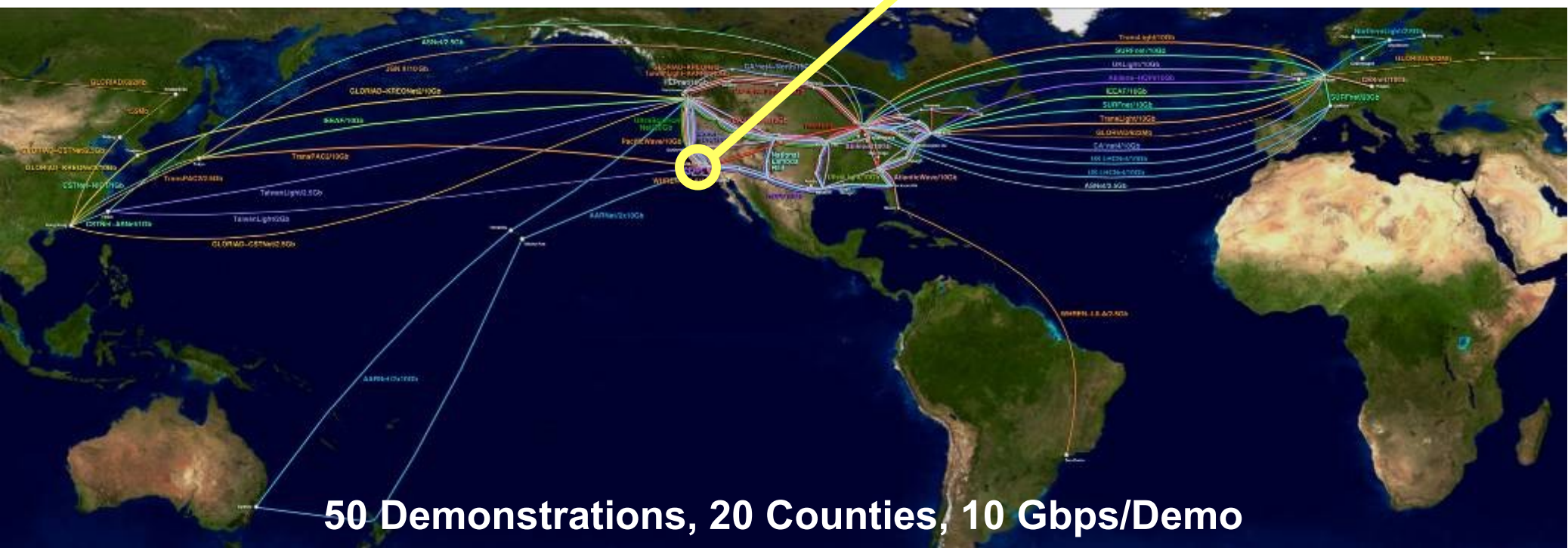


the UC Discovery Grant

**September 26-30, 2005**

**Calit2 @ University of California, San Diego**

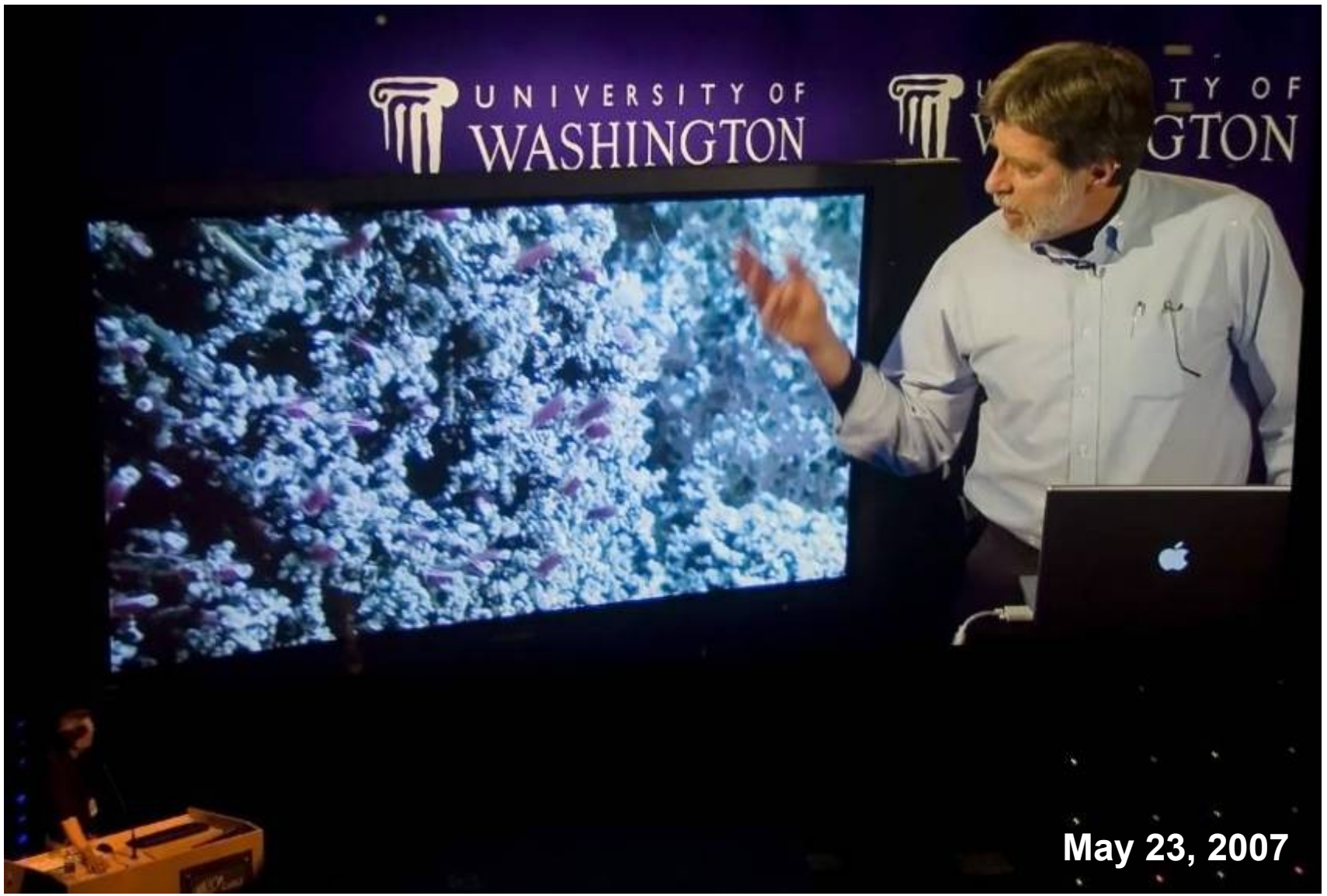
**California Institute for Telecommunications and Information Technology**



**50 Demonstrations, 20 Counties, 10 Gbps/Demo**

# e-Science Collaboratory Without Walls Enabled by Uncompressed HD Telepresence

1500 Mbits/sec Calit2 to UW Research Channel Over NLR




John Delaney, PI LOOKING, Neptune

Photo: Harry Ammons, SDSC

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# OptIPortal–Appropriate Termination Device for Dedicated 10 Gbit/sec Lightpaths



**Integration of High Definition Video Streams with Large Scale Image Display Tiled Walls**

**Scalable Adaptive Graphics Environment (SAGE)**

evl electronic visualization laboratory

OptIPuter

**Photo Source: David Lee, Mark Ellisman NCMIR, UCSD**

NCMIR NATIONAL CENTER for MICROSCOPY and IMAGING RESEARCH at San Diego, an NIH supported resource center

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# An Emerging High Performance Collaboratory for Microbial Metagenomics

