

University of California Information Technology Guidance Committee
Research Cyberinfrastructure Advisory Group

May 19, 2006
East Bay Community Foundation
“James Irvine Foundation Conference Center”
353 Frank H. Ogawa Plaza, Oakland <http://www.eastbaycf.org>

Agenda

- 10:00 **Welcome and Introductions** (Kris Hafner)
- 10:10 **Building on Recommendations from the October 10-11, 2005, UC Research Cyberinfrastructure Meeting** (See attached and <http://www.ucop.edu/irc/itlc/cyber.htm>)
- 10:20 **IT Guidance Committee** (<http://www.universityofcalifornia.edu/itgc/>)
- Objectives, approach, status
 - Role of the faculty advisory group
- 10:35 **UC Research Cyberinfrastructure – Current Status: Working Group Scope and Participation**
- High-performance computing (Bill Labate, Frank Wessel)
 - Data stewardship (Dan Greenstein)
 - Advanced networking services (Jack McCredie, David Walker)
- 12:00 **Lunch**
- 12:45 **Discussion: Identify Major Systemwide Opportunities to Improve the UC Research Cyberinfrastructure**, for example:
- New models for UC to improve capability and effectiveness
 - Campus cluster collocation
 - Inter-campus collaborations
 - UC grid
 - Prototypes / proof of concept / applied research
 - Research data repositories
 - Other
 - Identification of federal grant opportunities
 - Data collection / information gathering
 - Identifying the “value proposition” of collective action
 - UC advocacy role regarding NSF / NIH funding constraints
 - Role models for UC: Who is ahead of the game?
 - September 8–10 Calit2 Workshop “Enabling e-Science Applications over Advanced Networks”
- 2:30 **Next Steps**
- 3:00 **Close**

- **UC Research Cyberinfrastructure Meeting**
 - **Summary Notes and Recommendations**

The UC Research Cyberinfrastructure Meeting, held October 10-11, 2005, at UC San Diego, brought together a community of faculty researchers and IT professionals committed to positioning UC to utilize the full potential of advanced information technologies to strengthen UC's research competitiveness in multiple disciplines. The meeting was sponsored by the Council of Research Vice Chancellors, the UC Information Technology Leadership Council and the California Institute for Telecommunications and IT (Calit2) at UCSD with additional support from the Center for IT Research in the Interest of Society (Citris), the Industry University Cooperative Research Program and UC Discovery Grant Program, and the Corporation for Education Network Initiatives in California (CENIC).

70 people attended the event, including several participants via video conference. Participants represented nine of the 10 UC campuses; the UC Office of the President; Lawrence Berkeley, Lawrence Livermore, and Los Alamos National Laboratories; CENIC; and the National Science Foundation.

The meeting's agenda, presentations, and other materials are collected at <http://www.ucop.edu/irc/itlc/cyber.htm>. This document serves to summarize discussions and recommendations relative to IT / cyberinfrastructure needs that could be addressed on an inter-campus or Universitywide basis.

- ***Summary of Major Recommendations Made during the Meeting:***

Among the major recommendations put forward during the meeting brainstorming sessions are the following:

- ***Planning***
 - Develop a 10 year vision/plan for UC cyberinfrastructure which accounts for stable, evolutionary technology with services and support to end users.
 - Develop and communicate a non-technical business case for strategic investment in cyberinfrastructure (for leadership support and funding).
 - Create a Research Computing Group under the IT Leadership Council to facilitate collaboration among UC campus, medical center and lab organizations responsible for delivering and supporting research computing infrastructure and services. (Note: The group is being formed.)
- ***Funding***
 - Submit an NSF proposal (with private sector partners) to prototype state of the art regional cyberinfrastructure

- Benchmark cyberinfrastructure spending in other “best practice” states.
 - Identify stable funding streams for research cyberinfrastructure (for example, through redirection of contract and grants overhead – a “1% solution”).
 - Identify a seed funding strategy to launch new initiatives as demonstration projects while long-term funding strategies are developed.
- **Network**
 - Create a UC advanced research network (dedicated lambdas operated by CENIC) to provide inter-campus, state, regional, national and international advanced networking capability to the UC research community.
 - Identify faculty on each campus to be early adopters of this strategy.
 - Develop secure, reliable networking services for this dedicated network.
 - Leverage existing collaborations in the medical sciences (e.g. California health care and tele-medicine initiatives) .
 - Create a demonstration project to develop a "sensor internet" connecting distributed devices for data collection.
- **Data Stewardship**
 - Develop a networked, layered approach for data preservation and exploitation.
 - Form academic/industry partnerships to facilitate academic use of large, distributed federated data repositories.
 - Leverage existing competency centers and resources (e.g., CDL, SDSC)
 - Study/survey existing preservation solutions.
 - Increase UC's representation in forums that influence the policy and funding affecting UC's potential as a digital steward.
- **High-Performance Computing**
 - Identify strategies to improve utilization of existing computational capabilities at the campus and University-wide levels (e.g., campus-based clusters, San Diego Supercomputer Center (SDSC), National Energy Research Scientific Computing Center (NERSC)
 - Develop statements of best practices that campuses can adopt to provide appropriate levels of support to their local cyberinfrastructure
 - Create "UC Grid," a blueprint for distributed, networked, high performance computing capabilities designed to address inter-campus or UC-wide research computing needs.