

# Technical committee meeting March 15, 2011

## I State fiber updates

All states reported on the fiber progress. Work is progressing.

## II Data center updates

Maine:

Maine is the secondary data center. Continuous backups with the ability to failover. Large degree of cooperation/collaboration with Delaware and Vermont. Data center working great, working to upgrade storage size.

Maine is investigating cloud. Using Eucalyptus to create virtual machines for distributed research, classes involving multiple entities, and to allow researchers to work together on the same machine. A recent investment from the state will allow Maine to significantly grow its resources for High Performance Computing and Cloud Computing.

University of Maine System is investing \$5M to upgrade the data center on campus. This is power, cooling and room renovations. This will bring a 30 year old mainframe computer room into a modern data center.

Vermont: Recently did \$4.4 M. Their network is a ring around Burlington. Loss of service at one site can be instantly brought up at the other site. Having redundant off site live backup is another good use of high bandwidth.

## III Improving collaboration through federated identity

Common federated identity is of high interest across all states. Shibboleth is the most likely choice for this. Many members attended InCommon CAMP in Rhode Island with lots of positive energy.

VT is using it keep passwords Peopleadmin is a big win. Proxy server to get into library now uses Shibboleth, federated internally.

UNH sees potential across units on campus that would benefit greatly.

## IV Video conferencing/telepresence and Cisco and Tandberg

Video conferencing/telepresence (Cisco spin) is growing rapidly. Jim Vincent from Vermont is one of top 3 users of Movi. Jeff Letourneau recently attended a recent technical committee teleconference via laptop on public network in State Government cafeteria. It is another way to collaborate, it is almost as easy as a phone call. Maine currently has about 300 users, about 1/3 regular and about 500 room systems. Usage explodes after deployment, almost

immediately after announcing. Deployment in Maine needed to be slowed until policies and funding models can be decided.

Harvard is upgrading to 10000 Movi licenses. Communication at a distance includes from the 3rd floor to the 5th floor of the same building as well as from state to state.

Maine is looking at melding telephone and video conference. Cisco is merging many product lines. The Cisco telepresence is the "legacy telepresence" the Tandberg is the "new telepresence" This includes the laptop/desktop based Movi.

Predictable URIs are made possible by VCS , Video Communications Server, Cisco's call control server, allow one-click Movi sessions. Lots of good information comes from the Cisco sales people. These devices can be clustered in a server farm for redundancy. It might be a good opportunity to collaborate. Within DNS, SRV records give a mapping so you can point to the right VCS, making setup easy. It may be good to invite Leo from Cisco to talk to the technical committee to talk about video conferencing and possibly Internet2 at the same time.

Vermont has a Jabber Server that has similar one-click video conferencing.

Maine makes it easy to go from two point to multi-port conferences, put one person on hold, call another, and automatically move to an MCU. The multi-way conferencing gives preference to scheduled in the event of congestion.

## **V Measures of success**

NECC can't simply build the network and trust that they will come. We need to come up with marketing and/or some kind of an event highlighting the effect of improved bandwidth. The 4pi microscope at Jackson Labs live streamed to Dartmouth, for example, or some otherwise high bandwidth visualization. It would be good to do a before and after, with now being before, highlighting what we can't do now but will be able to do. What is the "killer app" that this technology allows? What sort of research is enabled?

The pendulum is going from mainframe, to desktop, to shared resources. We need to think as institutions rather than individuals. We need to move collaboration to the institutional levels.

Rhode Island has a database that gets transferred to Brown. It takes a week. It is much faster to ship a hard drive than the bits over the network.

Researchers like the idea of having access to IT professionals as well as equipment. Missing IT expertise is critical. We need to pool talent as well as equipment we are all short handed. It cannot be on a project by project basis, IT personnel cross all projects. Money can be an impediment to collaboration, counting beans and accounting for time is a problem. Standard administration helps everyone, but doesn't fit any one project. How to account for time will likely remain problematic.

For networking, the value of the network goes up with more connectivity. The value of a disk doesn't depend on how many people have data on it.

## **VI Funding considerations**

Collaboration would be enhanced if there were more awards that require collaboration. In many ways we compete with each other for the same funding. Individual PIs getting all the money is more prestigious than being one of a group of co-PIs (there can only be one PI). Research promotes individual leadership versus team effort. An institution views a faculty member leading an effort more favorably than as a team member with another institution. Whether at our institutions or at the federal level, we need to value collaboration. Submitting multiple institution grants is much more difficult than single institution.

We still need to think of "off ramps". We have great highways, but we still have some last mile concerns in a lot of places. This may be a topic for future Track-II proposals.

## **VII Next meeting**

Will be mid-April and video conference oriented, both the venue and the topic.