

OLLI @ George Mason University
AV Support Committee
Board of Directors Meeting 10/19/2012
(Prepared by Board members Nancy Scheeler and Paul Howard)

PURPOSE: Today's resolution addresses a multi-phased acquisition and implementation of a video teleconferencing capability that will (1) allow live broadcasting of OLLI instructors or guest speakers in one OLLI classroom to other OLLI classroom(s) on other OLLI campuses and (2) support live interactions between persons in all the connected classrooms. The OLLI video teleconferencing capability will leverage George Mason University's (Mason's) extensive teleconferencing capabilities available to us at no charge.

THE RESOLUTION: Authorizes the expenditure of \$14,527.80 from the Friends of OLLI for Technology Project #17, the implementation of Phase One of a plan to use video teleconferencing in OLLI class programs; membership, board, and committee meetings; and other uses developed as familiarity and capabilities of our equipment allow. The resolution further authorizes the addition of \$877.50 to the expense budget for a video teleconferencing equipment maintenance contract and software update fees, and the transfer of \$1,152.84 from prior Friends of OLLI approvals for audiovisual (AV) purposes to Project #17.

FUNDING SUGGESTION: OLLI's acquisition of video teleconferencing resources is an appropriate beneficiary for a special, Friends of OLLI funding campaign. The amount requested for Phase One acquisition is approximately what was previously allocated to the "Future Fund" from a special grant from the Bernard and Barbro Osher Foundation several years ago and rolled into the OLLI Reserve Fund earlier this year. It would be appropriate to use this funding for near-term equipment acquisition, to be replaced by donation proceeds from the special campaign. Acquisition early in 2013 would allow the possibility of using this technology in the spring or summer term, assuming sufficient time for familiarization and training--essential for success.

PROJECT OVERVIEW

System Capabilities

In addition to live interactions between people, the video teleconferencing capability will enable OLLI instructors and class members to do the following:

- Broadcast PowerPoint presentations simultaneously with the speaking presentation, if desired
- Broadcast supplemental material such as Internet content (for example, YouTube videos, compact disks [CDs], or digital video disks [DVDs]) or computer-based content (for example, an Excel spreadsheet) simultaneously with the speaking presentation, if desired
- Allow the instructor to manage allocations of the broadcast screen real estate; for example, the instructor can use a partitioned screen with a large window for the instructor, small windows to show persons at other location(s) and even another small window for PowerPoint slides. These allocations can be changed during the class, as needed.
- Allow OLLI members in other locations to ask questions, participate in discussions, and interact with the instructor and others in other locations
- Allow instructors to see and interact with OLLI members in other connected classrooms during the presentation

- Allow recording of the speaker and the session for later use, if desired.

Advantages

We are seeking a video teleconferencing capability because we envision that it will provide the following advantages:

- Allow OLLI members at Tallwood and Loudoun (and in Phase Two, Reston) campuses to participate in popular courses and hear highly respected speakers without having to drive long distances.
- Increase access to lectures, presentations and performances by Mason faculty and students who cannot travel to all OLLI sites
- Increase audiences for popular classes, offering the potential to eliminate wait listing
- Reduce the need for instructors to teach classes at different campuses at different times or even different terms.
- Expand participation in OLLI ad hoc meetings to all three campuses. For example, OLLI members can attend Board of Directors meetings, committee meetings, meetings of resource groups and program planners at the OLLI campus most convenient to their residence.
- Increase membership involvement in OLLI-wide activities such as the annual business meeting in the spring and the town hall meeting in the fall. Loudoun- and Reston-based members can attend at the campus closest to their residence.
- Reduce rental facility costs and ease parking problems while at the same time allowing more participation in popular courses.

We envision using the teleconferencing capability at first for classes that lend themselves to a broad base of students and interaction between and among students at the participating campuses. For example, presentations by distinguished Mason faculty and guest speakers would benefit from this technology. In addition, OLLI activities that have appeal at several campuses can use the equipment, for example, the investment forum. We do not envision using teleconferencing for hands-on classes or groups that prefer to remain small. Over time, as we gain experience with using the system, we will learn more about the types of classes that work well with this technology.

We believe that a video teleconferencing capability will foster “one OLLI.” No matter how attractive the programming, long commuting times deter many OLLI members from driving to other campuses (for example, the drive between Loudoun to Tallwood can take up to an hour, one way). Video teleconferencing will allow these members to participate in classes on other campuses. Through discussions, OLLI members will be able to meet and get to know other OLLI members at other OLLI campuses. All OLLI members will be able to benefit from the distinct strengths and cultures of each campus.

Phased Approach

The OLLI AV Support Committee recommends phased acquisition of equipment and implementation into our program and activities. Each phase will leverage experience gained and lessons learned in previous phases.

Availability of funding and experience with successful employment of the system will determine the extent and timing of follow-on phases. OLLI's program needs will dictate the sequencing and prioritization of these steps.

- Phase One will acquire equipment and implement the capability between Tallwood's TA-1 classroom with the Loudoun Mason campus. Mason's Loudoun's campus has the ability to do teleconferencing in any of the classrooms in the Sterling facility. Combined seating capacities in TA-1 and the largest classroom at Mason Loudoun totals 133 persons.
- Phase Two will acquire equipment and implement the capability between Reston's new location at the United Christian Parish (UCP) and TA-1 and the Mason Loudoun location. OLLI Mason needs to start using this location before we can gain a full understanding of what will be required to expand the teleconferencing capability to this location.
- Phase Three will provide video teleconferencing in a portable package to extend the capability to off-site locations such as the Church of the Good Shepherd. Until this project reaches this phase, it is possible to have speakers with a large audience appeal to use Mason locations available to OLLI at no charge and broadcast to TA-1 and OLLI's Loudoun campus.
- Phase Four will provide system enhancements that OLLI may discover that it needs during the first three phases.
- In the future, Phase Five can explore outreach beyond OLLI Mason classroom locations. For example, OLLI can employ cloud services capabilities to stream the content of classes as they are being offered (real time) to websites accessible via browser. OLLI can also leverage Mason's infrastructure to record presentations for later web access by OLLI members. Such capability would allow members who cannot attend a class in person because of schedule conflicts, illness, or distance to view the presentation via the Internet. This capability may also allow membership of persons not able to participate in our traditional classroom settings.

Video teleconferencing is a strategic initiative for OLLI, offering many new and unique opportunities for us. These may include moving beyond class and meeting sharing between OLLI classrooms to other OLLIs across the country and entertaining presenters from organizations such as the National Oceanic and Atmospheric Administration from their venues.

TECHNICAL OVERVIEW AND COSTS

Background

Thom Clement and the AV Support Committee have been in discussion with Mason's Teleconferencing Manager Cherie Galantis since 2009 about video teleconferencing technology, Mason's systems, and the potential for OLLI to share Mason resources and expertise. Polycomm systems were loaned to OLLI by Mason's Kellar Institute in May 2010, but the technology was outdated and rated MD (manufacturer discontinued – i.e. – not supported) in September 2010. AV Support Committee member Mel Mikosinski spent in excess of one hundred hours researching and experimenting with the equipment. He determined it would not be suitable for our primary use of class-sharing media-rich presentations between locations.

In the course of our investigations of teleconferencing technology, demonstrations of equipment from LifeSize, now a division of Logitech, took place at OLLI in January 2010 and August 2012. Ms. Galantis has been present at both demonstrations, actively participating in the 2012 effort. She believes the LifeSize product line is appropriate for our use, and, as a standards-based product, will integrate with

Mason-owned systems as usage opportunities arise. We have performed initial tests of this integration during the August 2012 demonstration.

Mason's Sterling location purchased a portable video teleconferencing system in 2012. This investment by Mason in Loudoun significantly reduces the startup costs for OLLI to begin using video conferencing technology. The Sterling system integrates with their installed AV equipment, and can be moved between classrooms. OLLI will be able to use this equipment, subject to the needs of the University. Mason has a central teleconferencing infrastructure serving multiple rooms and venues on several campuses, including Sterling. OLLI may access this infrastructure, again subject to the needs of the University.

System Description

The LifeSize system consists of a number of components that work together to enable video teleconferencing between and/or among OLLI classrooms (termed "endpoints"). Linking several endpoints together requires the use of a multipoint control unit (MCU). The LifeSize system supports high-definition (HD) video teleconferencing.

The proposed systems use a high-definition pan-tilt-zoom (PTZ) camera for the speaker/audience views, and direct inputs for other media sources. A high-quality microphone array and digital signal processing permit questions from class/audience members to be heard at other locations. The existing classroom-based video projectors will be employed as the displays.

The attached diagram presents a high-level diagram of the complete system architecture after the completion of Phase Five. Video teleconferencing takes advantage of the Internet. We will be able to use Mason's connectivity (the Mason Cloud), but if it is not available to us because of University needs, OLLI will be able to route the video teleconferencing directly to OLLI Loudoun and OLLI Reston.

Phase One: Establishing the Foundation of OLLI's Video Teleconferencing System

In Phase One, we propose to equip TA-1, the largest venue under OLLI's direct control, with the foundation of a video teleconferencing system. We will purchase a Lifesize Room 220 system as the primary building block of our teleconferencing system. This system includes an MCU capable of handling eight endpoints (7 plus 1 – itself), and can display simultaneous HD images from four locations at a time. The Room 220 system includes the PTZ HD camera, MCU/codec, and LifeSize Phone - the control console and multi-element microphone array. We will also acquire two copies of LifeSize/Mirial Softphone, PC-based teleconferencing software that will allow us to test, experiment, and learn the capabilities of the Room 220 within OLLI, without having to schedule time and resources with Mason.

Phase One costs reflect a discount via Virginia State contract through Mason. Phase One expenses also include budget for contingency costs to integrate the system with OLLI's network and other AV equipment, as necessary.

LifeSize Room 220, 10X vidcam, 2 nd Gen Phone	\$
LifeSize Mirial Softphone – 2 seats (software)	\$
Tax	\$
Contingency (network, AV integration)	\$
Phase One Total	\$15,680.64

LifeSize Customer Care – hardware maintenance and software upgrade annual contract
Expense Budget funding \$877.50

To learn more about the LifeSize Room 220 system, watch the video clip at the following website:
http://www.youtube.com/watch?feature=player_embedded&v=jvH7XJ_IL08

Phase One Implementation

After OLLI acquires Phase One equipment, we will require a learning curve, ramp-up period of at least sixty days before planning for multi-session classes presented via teleconferencing. OLLI resources, particularly the allocation of time in TA-1, must be dedicated to this effort if the eventual implementation is to be a success.

Likewise, staff time must be devoted to the formal training sessions offered by the vendor and by Tallwood Site Assistant Bill Walsh during the learning curve period. Consultations with Mason IT / Networking & Security personnel, as well as Mason teleconferencing staff will be required. Ultimately, training resources for instructors using this technology will be required, but may be as simple as a one- or two-page handout.

Phase Two: Equipping Reston with an Endpoint System

Providing video teleconferencing to Reston will extend our capability to our third permanent location, using a LifeSize Express 220 equipment package, which costs roughly half that of the Phase One implementation at Tallwood. Additional costs may be incurred for necessary bandwidth/LAN connectivity at the United Christian Parish (UCP) facility.

Should OLLI decide to enable video teleconferencing at other OLLI locations such as an additional location in Fairfax or at the Lorton Workhouse Art Center, costs would be comparable to costs for Phase 2 for Reston.

Phase 2 costs reflect a discount via Virginia State contract through Mason. Again, the costs include a budget to cover contingency issues.

LifeSize Express 220, 10X vidcam, 2 nd Gen Phone	\$
LifeSize Customer Care (expense budget item)	\$
Tax	\$
Contingency	\$
Phase 2 Total	\$9,415.96

To learn more about the LifeSize Express 220 system, watch the video clip at the following website:
http://www.youtube.com/watch?feature=player_embedded&v=jC3dEkS0yYc

Phase Three: Road Show/Remote Location Endpoint System

Providing video teleconferencing in a portable package will extend our capability to off-site locations such as the Church of the Good Shepherd. Additional costs may be incurred for necessary bandwidth / LAN connectivity at these facilities, lighting, etc.

Phase Three costs reflect a discount via Virginia State contract through Mason. Again, the costs include a budget to cover contingency issues.

LifeSize Express 220, 10X vidcam, 2 nd Gen Phone	\$
LifeSize Customer Care (expense budget item)	\$
Tax	\$
Contingency	\$
Phase Three Total	\$9,415.96

Phase Four: System Enhancements

Provision of additional PTZ cameras may ultimately be appropriate for one or more locations. A flat panel monitor, used as a second display, allows maximum view space of presentation and presenter images, by moving remote endpoint audience images from the primary, projected image.

Phase Four costs reflect a discount via Virginia State contract through Mason. Again, the costs include a budget to cover contingency issues.

LifeSize 10X PTZ HD Vidcam, mounting shelf, cabling	\$
Flat Panel Display, est. including mounting or cart, and cabling	\$
LifeSize Customer Care (expense budget item)	\$
Tax	\$
Contingency	\$
Total	\$9,467.12

Phase 5: Outreach Beyond Classroom Locations

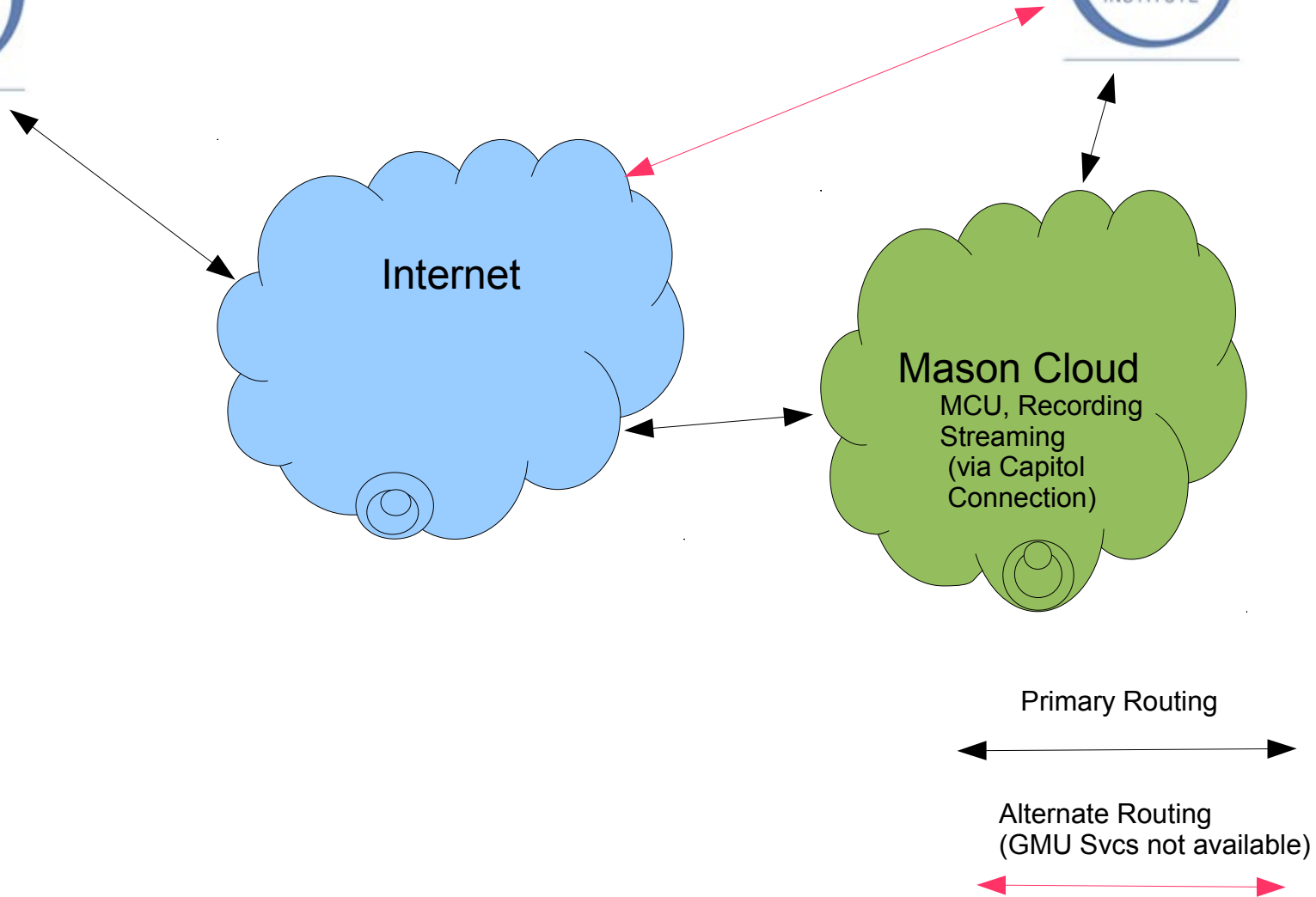
Building on the foundation of the Phase One equipment acquisition opens many possibilities for enhancing our services to members and the ability to acquire new members. Mason has the capability for recording presentations for later web access. Such capability would allow OLLI members who cannot attend a class in person because of schedule conflicts, illness, or distance to view the presentation via the Internet. This may attract new members unable to participate in our traditional classroom settings. Other services, such as streaming (synchronous) via Mason's Capitol Connection are available for remote members to view presentations when they are presented. (There is a charge for this capability.)

If Mason resources prove to be overbooked or otherwise unavailable for OLLI use, equipment could be obtained to provide these services, or some combination of equipment and services offered on a monthly or ad hoc fee-for-service basis from LifeSize and 'cloud' providers. No cost data has been provided for this phase, since such applications by OLLI are deemed to be several years in our future.

Tallwood
8 port MCU



Sterling

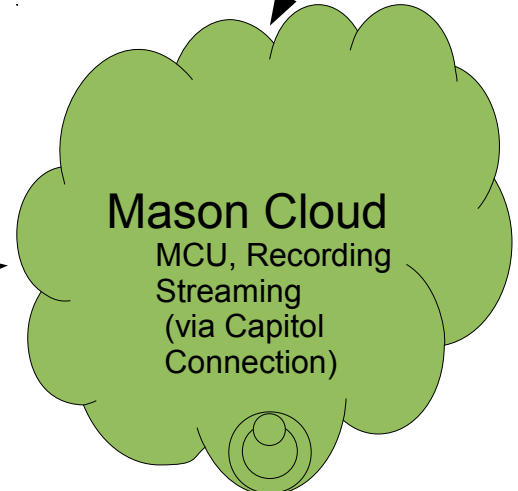
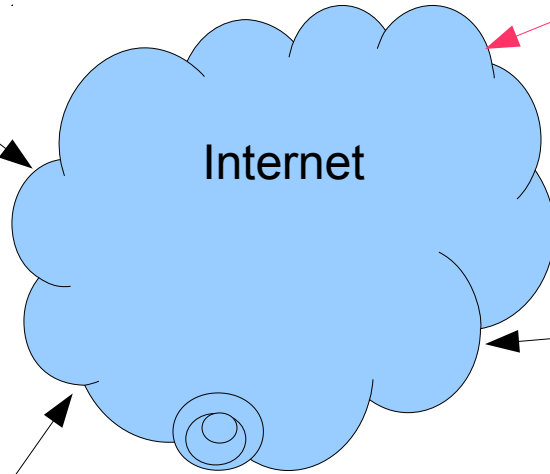


OLLI Teleconferencing – Phase I

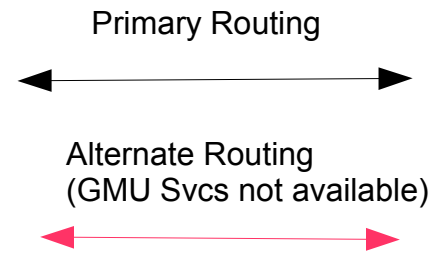
Tallwood
8 port MCU



Sterling



Reston



OLLI Teleconferencing – Phases 1 & 2

Tallwood
8 port MCU



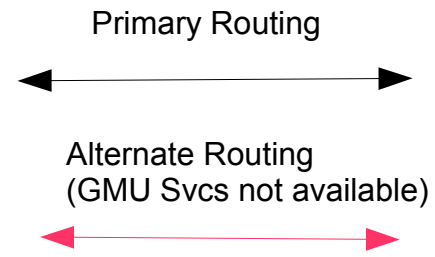
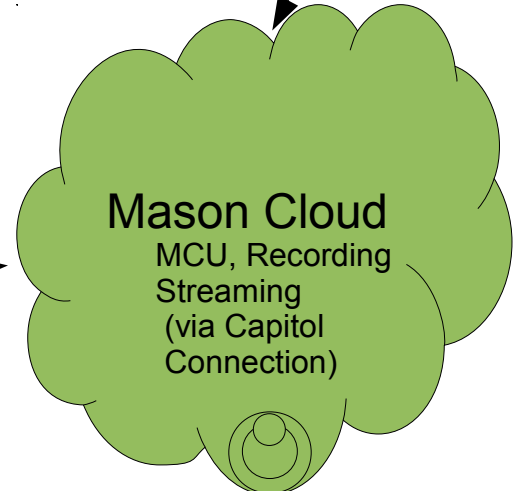
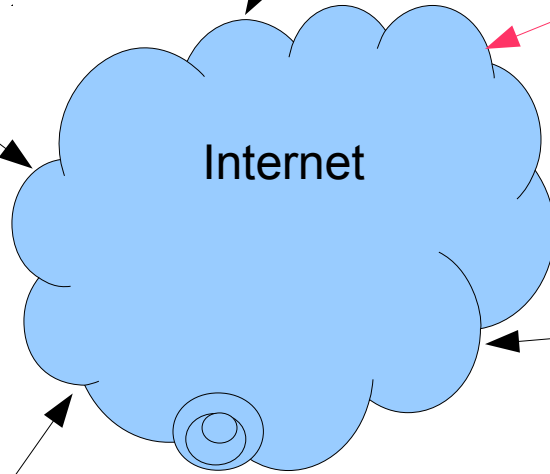
COGS, Alt. Locations



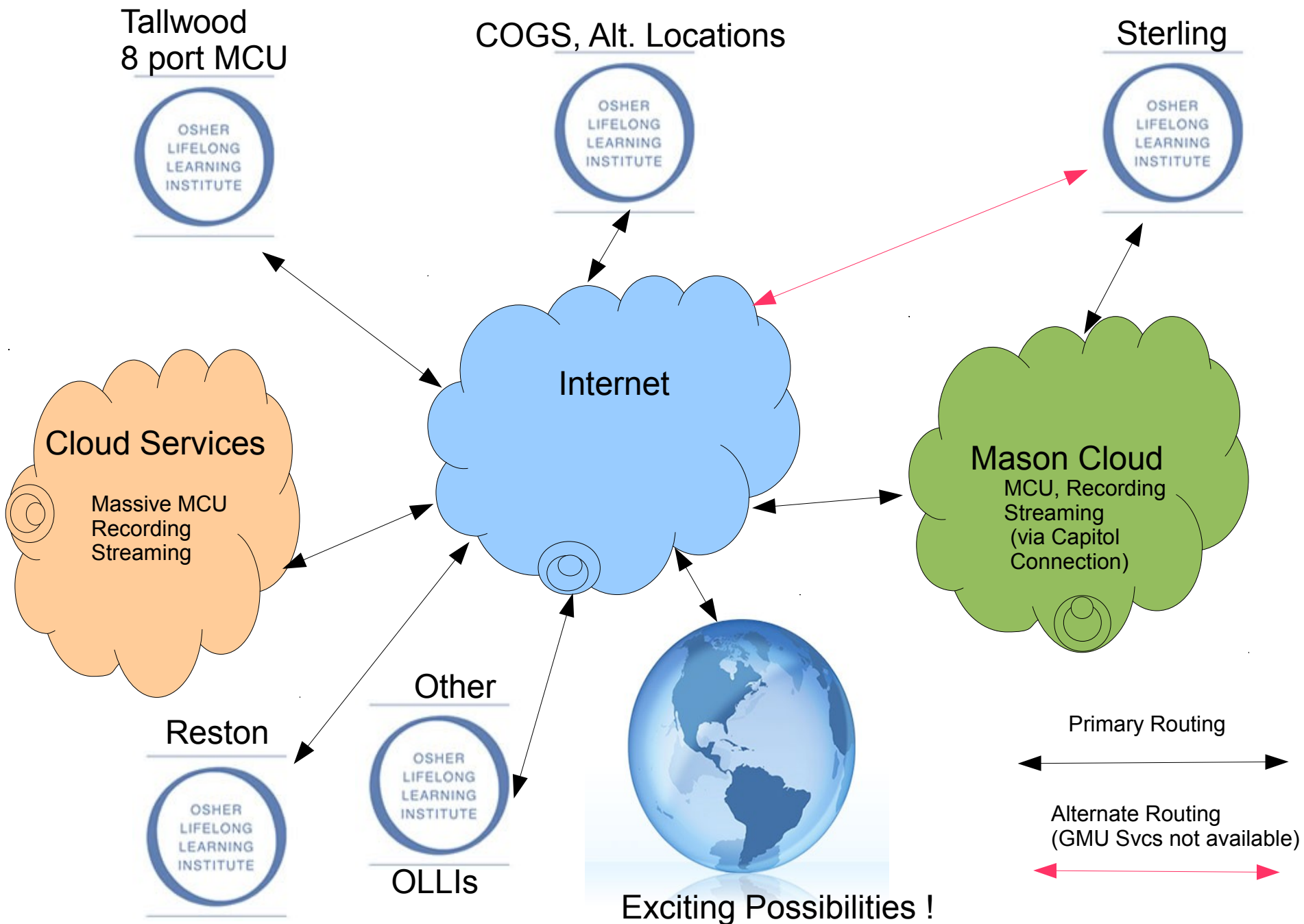
Sterling



Reston



OLLI Teleconferencing – Phases 1, 2, & 3



Exciting Possibilities !

OLLI Teleconferencing – Phases 1, 2, 3, & 5 - Ultimate Configuration