

CalREN Video Services Oversight Committee Meeting  
April 16, 2004 10am – 3pm LAX Raddison Hotel

Attendees:

For CCC:

Lou Albert, LACCD  
Mike Arnold, Kern CCD  
Jack Lemley, Butte CC  
Jorge Mata, LACCD  
Catherine McKenzie, CCCCCO,

For CSU:

Mark Crase, CSU CO  
Jeff Layne, CSU Chico  
John Rolon, CSU CO

For CENIC:

Jim Dolgonas, Chief Operations Officer  
Sherilyn Evans, Director, Technology Consulting  
Dave Reese, Chief Technology Officer  
Chris Taylor, DC-TAC and CSUMB  
Mike Van Norman, HPR-TAC and UCLA (by phone)

For K-12:

Dave Barnett, Santa Cruz COE  
Todd Finnell, Imperial COE

UC:

Kim Dorsey, UCOP  
Howard Laurence, UCSD  
Mike Shannon, UCOP

Absent:

Roger Parker, CSU Hayward  
Phil Howard, State Center CCD

**Introductions** – Jim Dolgonas welcomed and thanked everyone for taking the time to participate on this oversight committee. Roll call was taken through self-introduction of all attendees.

**Charges to Committees** – Dolgonas began the discussion by providing a brief overview of the committee structure. There will be an oversight committee and two subcommittees. The term of the oversight committee will be through implementation of H.323 at those sites currently using H.320. If needed, before dissolving this committee, a

continuing body may be formed to serve as an advisory group for ongoing operational considerations.

The oversight committee will be charged with:

- carrying messages re: videoconferencing into appropriate groups within each segment
- serving as an interface to the central administration for the segment represented on issues that must be determined by segments (e.g. fiscal matters)
- reviewing and acting on recommendations made by either of the two subcommittees

One subcommittee will focus on videoconference user issues; the other will focus on technical issues. At times the subcommittees will need to work closely to explore issues, provide advice, and make recommendations to the oversight committee.

It was noted that there is a key difference between K-12 and the other segments represented. Migration from H.320 is less an issue for K-12. Rather, the K-12 sites are more focused on H.323 as implementation of a “new” service; whereas CSU, CCC, and, to a lesser extent UC, view this as a “replacement” service.

**Background** – Dolgonas, Mark Crase, and Dave Reese gave a brief history of the CalVIP project. A couple of years ago, CSU had the foresight to start exploring H.323 implementation. In addition, CSU recognized that its migration of data network services from 4CNet’s ATM infrastructure to the CalREN IP only network would remove the technologies that support H.320 videoconferencing. This added some urgency to H.323 implementation, and the CalVIP committee was formed. CSU was joined by CCC and UC in developing a joint project to create H.323 infrastructure to support videoconferencing across all three segments. CENIC, I2, and other stakeholders were also brought into the discussion. A consultant was hired by CSU to facilitate discussion and assist with specific tasks. This group issued an RFP, reviewed proposals, and awarded a contract for equipment, software and services to Applied Global Technologies (AGT).

In April, 2003, CSU realized that the technical and administrative structures in place for data migration to CalREN could be leveraged for better coordination/implementation of the video migration. CSU made a formal request to CENIC to take over the CalVIP project. When CENIC took over implementation of CalVIP, CENIC staff reviewed the equipment specifications in the contract and negotiated changes that decreased the contract’s total cost. Gatekeeper equipment originally to be purchased from AGT was instead purchased from Cisco. The AGT contract continued to cover all other equipment (three Polycom MCU’s, three regional Radvision Gatekeepers, and PCS scheduling hardware and software), along with installation and setup services.

After initial setup of the equipment by AGT, security concerns with the Windows-based servers being used as regional Gatekeepers (running Radvision on Windows 2000) and

scheduling servers (running Polycom Conference Scheduler on Windows 2000) caused CENIC to remove these systems from service. In order to remove the Windows servers as security threats in our system, Cisco 3725's replaced the Radvision systems as regional Gatekeepers, and the PCS servers were replaced with Polycom MGC software for manually configuring the MCU's directly with conference information.

A major concern with H.323 is maintaining the quality of the video stream. The technical solution for this is to enable Quality of Service (QoS) on the network. In order to support QoS, the routers on the backbone needed to be upgraded with channelized OC12 cards. This has been done. QoS must also be enabled at the campus level in order for this technology to provide value to H.323 videoconferencing. Since most campus equipment for connection to CalREN is relatively new or is being purchased specifically for data migration to CalREN, very little additional campus equipment is needed to support QoS, but some campuses may require hardware upgrades. Further, there are limitations to QoS. It works well for prioritizing bandwidth, but requires CPU processing power in the router to enforce QoS rules. This means that the router must be robust enough so that it isn't overburdened with other processes.

Dolgonas commented that early in the transition of responsibility for CalVIP from CSU to CENIC it was recognized that scheduling software was the weakest part of the CalVIP package. This was a substantial piece of the entire package purchased from AGT as a result of the RFP. It was not anticipated that migrating to this new software would be as disruptive to videoconferencing services as it has been. Dolgonas remarked that this issue would be discussed in greater detail later in the meeting.

**CalVIP Project Issues and Alternatives** – Sherilyn Evans provided a summary of major issues encountered in the CalVIP implementation as documented in a handout provided at the meeting (see attached). Given the number of issues raised, Dolgonas asked: if we could, should we revert back to H.320 videoconferencing?

The committee overwhelmingly and unanimously answered “No.” While the challenges inherent in the transition from H.320 to H.323 are considerable, it is the right technological direction for the educational institutions. The greatest challenges are related to assumptions and expectations related to replacing the existing service and support.

Regarding these assumptions and expectations, Dolgonas asked several follow-up questions:

- 1) Do we expect/need cross-platform (i.e., Mac and Windows) capability for scheduling?

If the assumption is that campus video administrators will ultimately resume responsibility for scheduling conferences themselves, the scheduling software must support both Mac and Windows users.

- 2) What are current hours and support responsibilities for videoconferencing?

John Rolon stated that 4CNet NOC's current coverage for videoconference support is 6am-12midnight on weekdays and 7am-5pm on Saturdays. Evans confirmed that videoconferences are routinely scheduled to start as early as 8am and to end as late at 10pm on weeknights. Saturday morning is the most common time for weekend conferences, though there are rare Saturday evening or Sunday events, for which support is scheduled on an "as needed" basis.

3) How does support get provided now?

Support is primarily handled by phoning a dedicated phone number for video calls manned by the 4CNet NOC. Jorge Mata stated that in the past 4CNet staff have been very responsive and have done whatever they could to resolve problems. Crase added that technical support for H.320 has rested solely with the NOC. At the campus level, the only support required is by video administrators for the codecs.

4) How will this need to change in an H.323 environment?

Evans noted that a key difference with H.323 is that campus network infrastructure is a critical factor, requiring campus network staff to be involved in troubleshooting problems. There is a need for greater integration between CENIC and campus support staff, and on each campus between video and network support groups. A lack of clear definition of roles and demarcation of responsibilities makes troubleshooting problematic.

5) What are expectations regarding CENIC's support responsibilities? Given the differences in H.323 world, how do we get campuses to provide needed local campus support?

Mata suggested that CENIC support staff levels may need to be increased to handle the additional responsibilities of videoconference support.

Chris Taylor suggested that someone at a high level at each campus be identified to ensure that interactions between staff at each campus are resolved locally. Is it possible to identify a specific campus contact or organization that will be responsible for completion of campus video migration and support and will work with all campus parties to get this done?

Crase and Michael Shannon respectively spoke for CSU and UC, saying this is a role that centralized administration can play. If a particular campus is problematic, Crase at CSU Chancellor's Office and Shannon at UC Office of the President can work directly with the campus to resolve.

Dolgonas observed that CENIC needs assistance from CSU, CCC, and UC central administration in identifying campus contacts and making sure they understand responsibilities and expectations. However, during implementation CENIC staff

need to work directly with campus staff. Central offices will certainly continue to play a role in addressing issues at each campus as necessary.

Catherine McKenzie offered that CCC CO staff can play a role in addressing issues at each campus as raised by CENIC. At CCC's, if sites to migrate can be batched into small groups, McKenzie can send initial announcements to campuses for follow-up by CENIC staff.

McKenzie also suggested that we need to limit unknown factors by putting information into the hands of video users so that they know some basics about what to do and who to contact. Dolgonas acknowledged that CENIC had received lots of feedback regarding insufficient of communications, even in light of CENIC's attempts to communicate to all the right people. How can we do a better job of getting the word out, including delineation of responsibility? Crase noted that a lot had been done in the early CalVIP implementation in an effort to communicate with campuses. He said that no matter what you do, there will be gaps in communication. The advisory committee agreed that having a specific contact at each campus who is responsible for getting the word out to the rest of the campus is the most viable strategy. McKenzie added that putting information on the Web will increase dissemination.

The discussion progressed to the definition of standards and responsibilities for H.323 implementation. As an example, Arnold noted that "neighboring" of gatekeepers is not currently supported, but is needed at Kern CC. Evans cited firewalls as perhaps the biggest obstacle to date successful implementation. Crase indicated that CSU CO is willing to specify firewall standards for campuses, if needed.

Others said that we need to be mindful of the fact that the Gatekeeper is the "new kid on the block" in terms of technology. There is resistance at the campus level to the characterization of the firewall as "the problem" when the network environment worked fine until the Gatekeeper came along.

McKenzie pointed out that CCC doesn't have statewide standards nor is it likely that standards could be enforced at all CCC sites.

After a considerable discussion among committee members, it was agreed that no one gatekeeper/firewall configuration (gatekeeper inside or outside the firewall) would be likely to occur. While this situation will make the implementation of H.323 video more difficult, it is a reality to which the project needs to adjust.

**Scheduling Software** – Dolgonas provided an overview of the situation with regard to scheduling software. 4CNet had a homegrown scheduler that users liked, but it doesn't work with H.323 gear. The new scheduling software that supports H.323 won't support the old H.320 system. After discussion with the CSU and CCC Chancellors' offices, a manual scheduling process was put in place as part of migration plan in order to bridge the two systems. There was an assumption that this wouldn't materially affect end user services. There was also an assumption that the length of time this would be needed would be relatively short (approx. 3 months), after which all sites would be on H.323 and using the same, new scheduling software.

Reese stated that scheduling must be used for events that require QoS and/or MCU resources, but ad hoc point-to-point IP-based video conferences can take place at and between any campuses without use of the scheduler. Of course, they won't have any guarantee of quality.

Given the longer term that we anticipate migration taking, the group considered short term options to improve scheduling of conferences:

- 1) ask video admins at each campus to resume scheduling using two scheduling systems;
- 2) continue current processes (manual scheduling at CENIC);
- 3) continue manual scheduling at CENIC, but add some functions (e.g., ability to view and print daily schedules);

The ability of campus staff to schedule conferences directly during migration is not an immediate need to restore. However, several people expressed a strong need for access to reports that show conferences that have been scheduled on a daily basis, including port numbers on the H.320 side. The committee agreed this needs to be provided. CENIC has been exploring the ability to create a software link between the two scheduling programs to create daily conference listings. CENIC will work with central administrations for each segment to identify resources address this need. CENIC will ask the video user subcommittee to review the reports of daily conferences for format and data.

To address long term plans for scheduling, it was agreed that the video user subcommittee should be formed right away. Ideally, the chair of the video user subcommittee should come from the Oversight Committee, but should also represent the user community. Jeff Layne was nominated to chair the video user subcommittee, and subsequent to the meeting Layne accepted the nomination. Kim Dorsey and Howard Laurence from UC will serve on the committee. Crase asked that we include the CSU video administrators who have already volunteered to serve on this committee. Mike Arnold from Kern CC offered to serve on the committee. Catherine McKenzie will look for additional volunteers from CCC. Todd Finnell and Dave Barnett were asked to identify 1-2 K-12 reps for this subcommittee. Dave Reese and Sherilyn Evans will provide technical consultation to the group.

The video user subcommittee's initial task is to identify specific requirements for the

scheduling software. It was recommended that they start with the original feature list for CalVIP software per the RFP. Once the committee has been formed, Evans can provide this list. After identifying requirements, reviewing current off-the-shelf packages, attending demonstrations on top products, and weighing pros and cons of the “build vs. buy” question are possible next steps.

**Additional Issues** – Before ending the meeting, Dolgonas opened the floor to additional questions.

Taylor wondered where desktop videoconference units fit into this plan. Reese responded that any registered codec will be treated as valid as long as a Gatekeeper is monitoring the registered codecs OR a static IP address has been assigned to the codec. One exception is that desktop computers with cameras and software will not be allowed to register with CENIC directly (i.e., these must be registered with campus Gatekeepers).

Taylor suggested that policies like these be put on the Web. Crase observed that it is feasible to provide a list of the things we ARE going to support. However, there are too many things we’re NOT going to do to list all of them. Reese offered that CENIC can add a FAQ for video services that will address some of the most common issues with regard to setting expectations. Reese added that the CENIC TAC is working on a Quality of Service document that can be posted on the Web. McKenzie raised training and documentation as campus needs that might be addressed through regional workshops as the migration proceeds to aid in information dissemination.

Shannon shared that there is far greater interest in QoS for MPEG streaming than for H.323 videoconferencing at UC campuses. Crase added that this is true at some of the CSU campuses as well. Reese affirmed that this need will be addressed.

**Next Steps** – Dolgonas reviewed next steps with the group.

- 1) Jeff Layne will confirm if he can chair video user committee and, if so, convene that group to look at scheduling software requirements.
- 2) CENIC will look at what we can do in the short term to provide daily reports of all videoconferences.
- 3) CENIC will discuss obtaining additional resources with CSU and CCC toward assisting with firewall and other technical problems. Catherine McKenzie will work on identifying a core group of CCC volunteers who could mount support effort to provide assistance throughout the CCC system.
- 4) CENIC will create a listserv for this group.
- 5) CENIC will send draft of minutes for this meeting to the group.
- 6) Next meeting to review these minutes via teleconference in two weeks – details to be sent to listserv.