

To: Governor Dave Freudenthal

From: Robert Aylward, UW Vice President for Information Technology and Co-Chair,
Governor's Task Force on Distance Education, Video Conferencing, and
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Subject: Report on progress of and expenditure of appropriations for Statewide Video
Conferencing

Date: 1 November 2010

This is the report of the Governor's Task Force on Distance Education, Video Conferencing, and IP-Based Communications (Governor's Task Force), pursuant to 2010 Wyoming Session Laws, Chapter 39, Section 328, which specifies "the task force shall provide a report to the governor and joint appropriations interim committee not later than January 1, 2011 specifying: (i) The progress toward full implementation of a state video conference capability that is technologically robust, expands video conferencing service capabilities and minimizes duplication among state agencies and government entities; and (ii) A proposed budget for operating the state video conference capability for the period commencing July 1, 2011 and ending June 30, 2012 as well as the biennial budget period commencing July 1, 2012."

Included below are (1) a report of statewide video conferencing consolidation and development activities, (2) a report of expenditures to date and proposed budget and (3) recommendations.

Section 1: A report of activities involved in the consolidation and development of a statewide video conferencing system into the Task Force's Video Conferencing Enterprise.

The central work of the Task Force during the initial stages of video conference consolidation has been to assess and reduce areas of service duplication, increase interoperability among disparate video systems, begin to develop common policies, and set the stage for continued consolidation and operation.

Based upon the initial recommendations provided to Governor Freudenthal in December 2009, and the direction discussed with the Joint Appropriations Interim Committee, the general consensus of most Task Force members has been to work towards the development of a statewide Video Conferencing Enterprise (VCE), representing the varied interests of Wyoming's video conferencing stakeholders and including the following elements:

- Centralized, cross-agency scheduling resources
- Centralized, cross-agency help desk resources
- Cooperative interfacing of all video conferencing hardware into a single system
- A web-based interface allowing anyone to view the statewide system and request conferencing resources

The viability of the VCE was to be demonstrated and initiated in a pilot project with the Wyoming Video Conference System (WVCS), operated by the Wyoming Division of Administration and Information (A&I), and the video portion of the Wyoming Equality Network (WEN), operated by the Wyoming Department of Education (WDE). After the WVCS-WEN consolidation trial period, the University of Wyoming's Outreach Video Network (OVN) was to be consolidated into the VCE, followed by other State of Wyoming entities.

In April 2010 the Task Force through the State of Wyoming Chief Information Officer's office and utilizing funds appropriated by the 2010 Wyoming Legislature, contracted with a project manager for the pilot project and to initiate the VCE, Mr. Jeff Hubbard of TEK Systems. Mr. Hubbard has been working with state entities involved in video conferencing in Wyoming in order to develop and implement a plan for statewide video conference system consolidation and integration.

Through August 2010 - WDE and A&I Pilot:

Video conference consolidation meetings among the WDE, A&I, and Mr. Hubbard began in April and continued through August 2010, producing areas of agreement for video systems integration, though not systems consolidation. This portion of the project was to be the pilot project for statewide consolidation and to establish the VCE. The results of this pilot project technologically integrated but unfortunately did not consolidate the two systems.¹ Some issues of difference, primarily policy considerations, prevented system consolidation; however, accomplishments in this portion of the project through August 2010 include:

- Full and thorough analyses of the technical steps required to functionally integrate the two separate, yet very similar, systems of the WDE and A&I. This evaluation included not only the base hardware but also cooperation of the two groups to plan steps to maximize video delivery integration.
- Full understanding of the operational and procedural differences between the two entities, and a roadmap to technologically integrate the two systems.
- Development of a roadmap to unify the two very distinct scheduling methods into a common and interchangeable web-based scheduling solution. An internally developed temporary solution was assessed and can be deployed if the RFP (see below) result does not provide an alternative solution.
- Successful hardware integration between the WVCS and WEN.

¹ Consolidation requires two elements: 1) The *technical* integration of all the hardware and the video network, and, 2) the unification of disparate methods of operation, including such items as scheduling, billing and help desk.

Since August 2010 – UW, A&I, and then WDE:

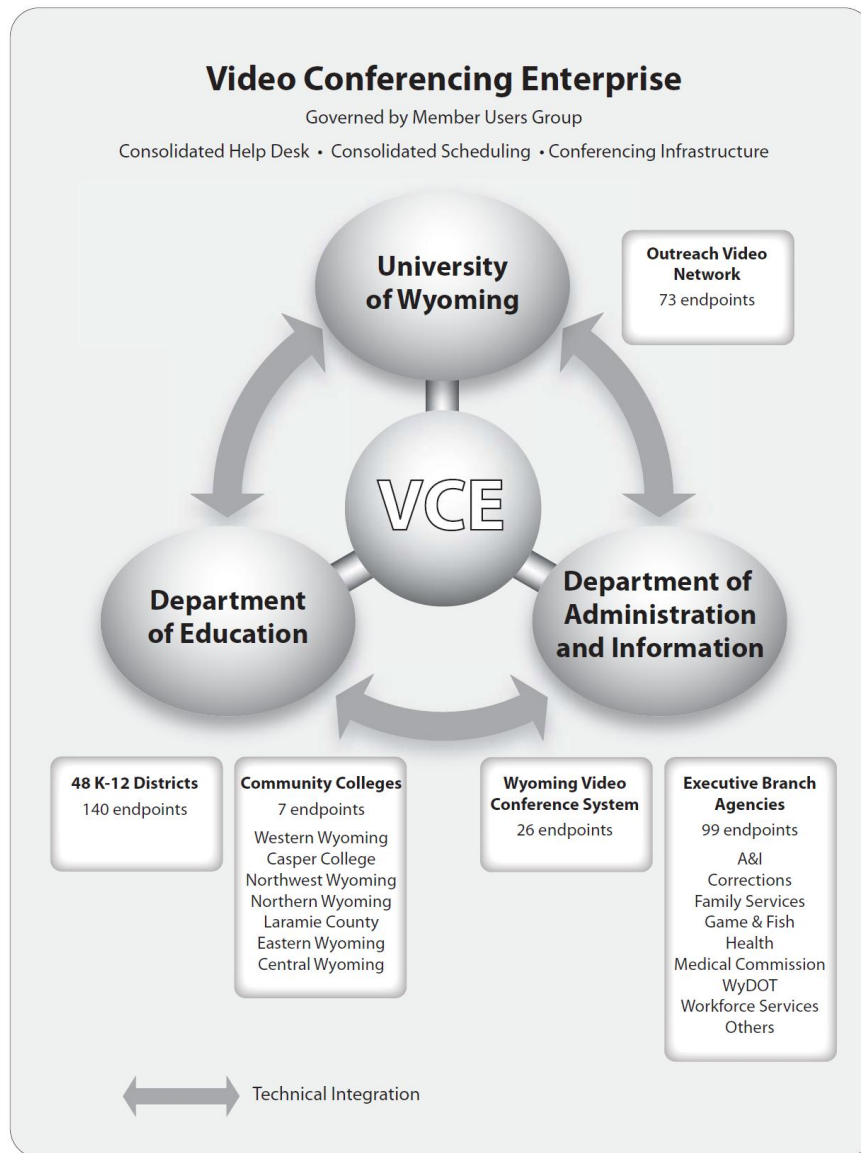
Significant advancement has been made since August. Video conference consolidation activities between the WVCS and the University of Wyoming's Outreach Video Network (OVN) began in August 2010. Rapid progress has been made in consolidating the two systems. At the direction of the Task Force the two groups began working collaboratively with Mr. Hubbard. Since early October, as the work between the two groups was progressing, the WDE's technical staff also engaged in the process, creating renewed focus on the hardware integration of the three systems. While the original goal was to be a proof of concept with just the WVCS and the WEN video, the addition of the third and final major video conferencing system in the state (OVN) has created the technical functionality of having a single large system that encompasses the majority of endpoints throughout the state, including state agencies, K-12 schools, the Wyoming community colleges, and the University of Wyoming (Laramie and outreach sites).

Since October, the recent full cooperation of all three technical groups, UW, A&I, and WDE has allowed for a more cooperative integration of the systems into a common infrastructure. Achievements to date include:

- A common collaborative scheduling system among WEN, WVCS, and OVN systems is in the final stages of deployment.
- A web-based component of this scheduling interface, allowing users to go online and request a conference, is in the development and analysis phase and can be deployed by early 2011 in the event that the RFP (see below) doesn't produce another suitable solution.
- A video conference bridging backup among WEN, WVCS, and OVN providing enhanced redundancy in the event of a hardware failure.
- The establishment of a collaborative help desk for WEN, WVCS, and OVN end users is in the final stages of deployment.
- Consolidation of the independent operational and help desk procedures into a common user-guide.
- The purchase of additional software licenses (through the State CIO Office, utilizing funds appropriated to UW by the 2010 Legislature) to allow for the cross-functionality of all video endpoints.
- An "exchange program" to cross train personnel from each group in the operational details of the others' conferencing equipment.
- A web-based Wyoming map prototype for the public Internet showing video conferencing endpoints, including their configuration details and scheduling information.
- Internal network protocol agreements have been arranged among all entities.
- A common point of contact for all statewide video conference support and scheduling needs will be deployed by the end of 2010.

Significant progress has been made in technologically integrating the three primary video conferencing systems in the state, with some initial steps towards full consolidation, especially between UW and A&I. Essentially the three separate and distinct video conference systems, with separate management, control, and operational processes, have been *integrated* from a technology standpoint into a single infrastructure with 345 endpoints. Our recommendations below are for the further consolidation of the systems and operations. Figure 1 illustrates the current integration of the three systems and further development of the VCE.

Figure 1



Additional Consolidation Activities:

- In September the Task Force voted to house the VCE at the University of Wyoming, similar to the arrangement for the Wyoming Distance Learning Center (WyoDLC).
- An RFP has been drafted for a statewide enterprise video conference solution, including common bridging and scheduling systems. The RFP will be issued in early November. The RFP considers proposals for outsourced, vendor-based hosted systems as well as in-house systems.
- Mr. Hubbard has also additionally met with other video conferencing stakeholders to gain an understanding of their needs. Those needs have been considered in the development of the RFP as well as system design and operations for the development of a statewide video conferencing solution. Since April, in addition to the work with the Wyoming Department of Education, Wyoming Department of Administration and Information, and the University of Wyoming, Mr. Hubbard has met with these constituencies:
 - Larry Biggio, Executive Director WyHIO
 - Wyoming Telehealth Consortium
 - Dr. James Bush, Wyoming Department of Health
 - Bob McMillen, Department of Family Services
 - Lance Naef, Department of Workforce Services
 - Wyoming Community College Commission
- The Task Force has developed a draft MOU between the member groups and the VCE to assure member interests are well represented.
- The Task Force has developed a draft charter for the VCE.

Section 2: Appropriations expenditures for the Wyoming Statewide Video Conferencing project, and proposed budgets for FY 2012 and the biennium period commencing July 1, 2012.

On December 9, 2009, the Task Force submitted Summary Recommendations to Governor Freudenthal (Attached). Corresponding funding was requested by the Task Force for:

- 1) Approximately \$2 million for new video conferencing infrastructure: web conferencing, desktop video, as well as network and endpoint upgrades;
- 2) \$485,000 to hire a Video Conferencing Enterprise Coordinator and for video conferencing support through June 30, 2012; and
- 3) \$262,000 to sustain the operations for the Wyoming Video Conferencing System (WVCS) through June 30, 2011.

Items 2 and 3 were funded under 2010 Wyoming Session Laws, Chapter 39, Section 328. \$1 million was set aside under Chapter 39, Section 328 (b) and (c) (i) for distribution to

the Task Force “if the governor finds satisfactory progress is being made toward the implementation of an effective state video conference capability.”

Video Conferencing 2010 Wyoming Session Laws, Chapter 39, Section 328	Appropriations			Actual and Forecasted Expenditures		Funding Recommendations			
	March - June FY10	FY11	FY12	Through FY12	+/-	FY11	FY12	FY13	FY14
Video Conferencing Coordinator and Video Support (VCE)	\$ 150,000	\$ 167,500	\$ 167,500	\$ 473,951	\$ 11,049			\$ 167,500	\$ 167,500
Wyoming Video Conferencing System (Move to VCE ~FY11)		\$ 262,000		\$ 615,642	\$ (353,642)		\$ 342,593	\$ 310,000	\$ 310,000
Set- Aside		\$1,000,000				\$ 657,407			
Totals			\$ 1,747,000				\$ 1,000,000		\$ 955,000

- Notes: 1) Funding does not include the current video budgets of the OVN and WDE.
 2) If the VCE moves forward then the WVCS funding would be moved to the VCE. If not then WVCS will still need operational funding for FY12 and beyond.
 3) It is likely the RFP responses will be greater than \$657,407, possibly increasing the next biennial request.

Section 3: Recommendations

To fully implement the consolidation of the state’s video conference systems into the Video Conference Enterprise, the Task Force recommends:

1. Continuation of support for the WVCS system components as they become fully consolidated into the VCE (FY 2012): \$342,593. Support expenditures will still be required after consolidation.
2. Creation of the Video Conference Enterprise through
 - a. Continuation of technical and policy consolidation processes among the WVCS, OVN, and WEN (completed by start of FY 2012): requiring time and effort of personnel from A&I, UW, and WDE to complete the process. Personnel and other savings will be identified during this time.
 - i. Further align processes across video systems, including consolidated scheduling, help desk, and technical support
 - b. Full implementation of:
 - i. a common scheduling system
 - ii. an updated bridging system
 - iii. a common help desk
 - iv. common technical support
 - c. Creation of a web-based interface for conferencing requests.
 - d. Expand the membership and video system to incorporate other users such as telehealth, the courts, libraries and others.
 - e. Creation and implementation of a VCE users group governing council with representatives from participating groups and in a federated governance model.

3. Enhance VCE system infrastructure to provide expanded, technologically robust, video conferencing service capabilities: Utilize \$657,407 of the \$1 million set-aside for the purchase of video conferencing equipment, upgrades, web conferencing, and desktop video for the VCE including such items as
 - a. Replacing MCU (bridge)
 - b. Upgrading gatekeepers and firewalls
 - c. Creating and deploying a web-based scheduling interface
 - d. Implementing desktop video conferencing and web conferencing
 - e. Defining, securing, and deploying additional resources needed for an expanded, consolidated statewide video conference system (VCE)

Summary:

Through August 2010, the Task Force made headway but struggled with policy issues in the pilot project, limiting its ability to make appropriate advancement. Since then however, with the inclusion of UW and its OVN network and the commitment of WDE's technical group, significant advances have been achieved.

It is unknown how the new the State Superintendent of Public Instruction will view a continued approach to consolidation. Even if the WDE remains only integrated it still makes economical and functional sense to establish the VCE and fully consolidate the remaining state systems as well as broaden a consolidated system to include such elements as desktop video, web conferencing, telehealth, libraries, local economic development groups and others.

The continued goal is to develop the state's video teleconferencing system into an efficient and effective strategic asset for the state, well positioned to adapt rapidly to changes in technology and use.

APPENDIX A

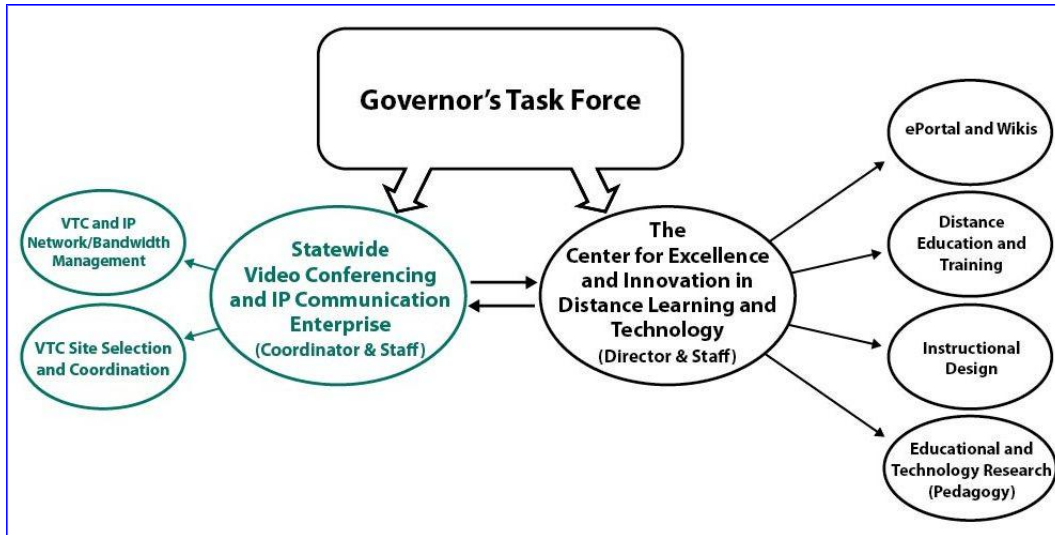
TASK FORCE ON DISTANCE EDUCATION, VIDEO CONFERENCING, AND IP-BASED COMMUNICATIONS

SUMMARY RECOMMENDATIONS TO GOVERNOR FREUDENTHAL 9 December 2009

Background: In November of 2008, Wyoming's Governor Dave Freudenthal formed a task force to examine distance education, video conferencing, and other IP-based communications across the state. Task Force members are Wendy Curran, Governor's Advisor for Health Care; Rob Hurless, Governor's Advisor for Energy and Telecommunications; Dr. Karla Leach, President, Western Wyoming College; Dr. Jim McBride, Superintendent of Public Instruction, Bob von Wolfradt, State CIO and co-chairs Robert Aylward and Dr. Maggi Murdock of the University of Wyoming. The primary goal of the Governor's Task Force is to find ways to integrate and enhance distance learning opportunities at all levels (K-12, community college, UW, professional development, and lifelong learning) as well as determine how best to integrate the various video conferencing systems that the state currently supports. The efforts of the Task Force are aimed at focusing these strategic state resources to better serve the residents of Wyoming.

Early in 2009 the Task Force issued RFPs to hire consultants to help examine and make recommendations concerning distance learning and video conferencing in Wyoming. The consultants were charged with examining the needs of the state's residents and practitioners with regard to distance education and video conferencing, making an inventory of existing distance education programs and video conference systems, analyzing the information gathered, and making recommendations to the Task Force. The consultants finished their work and provided their recommendations to the Task Force in late summer 2009.

Recommendations: Utilizing the work of the consultants and focusing its recommendations to accomplish the objectives outlined for the Task Force by the Governor, the Task Force has integrated its recommendations to the Governor under the concepts of (1) a *Video Conferencing Enterprise (VCE)* and (2) a *Center for Excellence and Innovation in Distance Learning and Technology (Center)*.



VIDEO CONFERENCING ENTERPRISE (VCE)

- The purpose of the Video Conferencing Enterprise is, through the Task Force, to integrate state video networks and systems in order to establish an effective state video conference capability that is technologically robust, expands video conferencing service capabilities, and minimizes duplication among state agencies and government entities.
- The Video Conferencing Enterprise will be responsible for integrating the existing independent video conferencing systems through:
 - setting standards and protocols for current and future technologies;
 - integrating scheduling;
 - identifying, developing and integrating appropriate end sites;
 - planning for and implementing future IP-based technologies; and
 - allocated VCE funding for statewide video conferencing and emerging technologies – all being based on the needs of constituents/stakeholders.
- The Video Conferencing Enterprise will report to the Task Force.
- The Task Force that will provide appropriate representation of video stakeholders and will provide oversight of the Video Conferencing Enterprise.
- The Video Conferencing Enterprise will require a Director/Coordinator with supporting staff. Initial funding for the Video Conferencing Enterprise will be through a legislative appropriation recommended by the Governor.
- In accordance with the purpose of these recommendations, stakeholders in the state's video conferencing networks and potential users of video conferencing will be informed about the Video Conference Enterprise and have a voice in suggesting standards and protocols, integrating scheduling, identifying appropriate end sites, and planning for future IP-based technologies based on their expertise, experience, and needs.
- The VCE will work closely with the Distance Learning Center in establishing the state's video conferencing infrastructure.
- The integration of the WDE and State video conferencing systems can begin immediately, with the understanding that the Video Task Force will approve final protocols and standards to guide the integration.

THE CENTER FOR EXCELLENCE AND INNOVATION IN DISTANCE LEARNING AND TECHNOLOGY

- The purpose of the Center is to focus, integrate, and enhance distance learning opportunities.
- The Center will be responsible for providing leadership and support for distance learning opportunities of all kinds and at all levels: K-12, higher education, professional development, training, and lifelong learning.
- The Center must be independent, centrally funded, and legislatively mandated to provide the authority, responsibility, and accountability necessary to make the Center efficient and effective.
- A Distance Learning Council will provide oversight of the Center.
- The Center will require a Director with support staff.
- An integral part of the Center will be functional groups, composed of existing and future personnel with expertise in various aspects of distance learning (e.g., pedagogy, instructional design, learning technologies), with assignments in their existing institutions and part of their time assigned to the Center as needed.
- In accordance with the purpose of these recommendations, the Center will be initially defined through a charrette-style visioning meeting, to include stakeholders from all learning sectors, in order to provide more details about the Center for legislative consideration.
- The Center will work closely with VCE in establishing the state's video conferencing infrastructure.

The Task Force will continue to prioritize and develop other consultant recommendations and incorporate other appropriate stakeholder inputs to integrate, enhance, and support distance education, video conferencing and IP-based communication in Wyoming.