Video Conferencing Offerings

December 18, 2012

Team Members:

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*Team Leaders
Executive Summary

Like most academic institutions, Purdue’s video usage, capabilities, and current directions are characterized by the summary comments in a recent Forrester study\(^1\): use is extensive but distributed, and limited and distributed funding across numerous organizations prevents coordinated approaches, despite recognized benefits of full campus direction and strategy. Campus users and IT leaders recognize the limitations of existing video conferencing provisioning.

Our committee reviewed the existing charge for this sub committee and felt it necessary to limit the scope of our investigations to the following three areas: 1) conduct an inventory of video conferencing equipment and locations on campus, 2) review and recommend approaches to high-definition (HD), central and shared video conferencing facilities on campus, and 3) investigate ways to incorporate a greater breadth of video conferencing vendor solutions (protocols) along with a greater depth of technologies (mobile devices to full-scale studio features). To this end, we recommend a centrally-managed and supported bridge solution from one of many competitive vendor solutions.

Committee Charge

This group was asked to assess video conferencing services on campus and identify gaps in current strategies when compared to desired capabilities. We attempted to understand the level and priority of video conferencing demands on campus and recommend an approach to video conferencing capabilities going forward. While our committee work recommends an approach in three areas, we did not attempt to develop an investment budget and cost recovery model, leaving this work for follow on subcommittees as outlined below. Implementation timelines are as suggested in the supporting appendices.

Committee Approach and Outcomes

A known gap to the video conferencing capabilities across campus is the lack of a bridging solution that can span a variety of platform technologies as well as support multiple video conferencing protocols. Many groups are looking for this type of solution and the need exists to span platforms and clients. Echoed across many units, particularly our focus group from several groups engaged in redundant specification and searches for this technology. Supplemental benchmarking confirmed needs across our peers. Bridge vendors have significant licensing costs so we may be able to leverage better costs across the campus as a whole. Funding for this type of approach should be a blended central support approach as well as funding support from the colleges and organizations most interested in this type of capability, much like the SharePoint support model. Our governance model might include ITaP, academic, and vendor representation, but small enough to manage the initiative effectively.

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We propose a technical selection committee to review and select a vendor for the entire campus with the product selection by late April 2013. Several groups already are moving forward with their own choices. Examples of vendors for consideration include: Vidyo, Blue Jeans, and FuzeBox. We believe this bridge solution is a necessary complement to a hosted solution such as Adobe Connect that is being pursued; this is because of the breadth of potential clients and devices that need to be supported, and the varied quality of service needs as well as multiple protocols. See Appendix A for a brief description of the recommended approach for selection of a campus bridging solution.

Our second fundamental need that was highlighted in our discussions was an increased awareness and communication of room-based video conferencing systems on campus. An effort was made to identify many of the locations, but there is very little in the way of tracking these systems currently due to localized support and ownership. It seems that groups unnecessarily purchase multiple systems in the same building when space sharing could be possible. Not every room needs a platform-based video conferencing system as computer-based systems improve in capability and decrease in cost. Many of our more progressive peers have captured an inventory list and make it known to campus constituents, making this information widely accessible. Purdue needs to do the same, sharing equipment and locations to reduce duplication of capability simply due to organizational structure boundaries. We make available information on media-rich classroom systems and should extend that data to include video conferencing equipment within conference rooms and other locations. See notes for Duke and MSU. Providing this information will provide for reduced capital expenditures and improve equipment utilization. Over time these rooms will partition into fewer higher end video conferencing platforms versus numerous lower-quality systems that exist locally now. Once the inventory is well-known and defined, governance and funding for this equipment can remain within the existing ownership units. See Appendix B for a recommendation to develop, maintain and manage a campus inventory of video conferencing facilities, production support resources and best practices.

The third area of focus for this committee’s work was to look at the higher-end, higher definition video conferencing needs on campus. We believe there is need for this capability, but not as many facilities are necessary as vendors might suggest. Also, these systems could be distributed to only a few sites and meet requirements. The current usage as reported to us on an ad-hoc basis suggests that those investments are made to have convenient, local access to these facilities, but are generally underutilized. We believe an inventory and central scheduling of these facilities is needed as well as an understanding of requested usage. It may be that the university can determine a set of fewer locations to focus on providing highly-reliable and mediated video conferencing when this type of capability is required. True HD video conferencing systems have a Quality of Service requirement for bandwidth that requires more capable management and understood network bandwidth. Users and organizations need to be willing to pay for some part of the fully loaded costs associated with managing these HD video conferencing facilities. The university may want to subsidize some portion of these higher end video conferencing needs as they are more expensive to maintain and operate, but can provide reliable capabilities when necessary for higher profile clients and events. These HD
systems should be governed by a small group of ITaP and academic stakeholders. If an academic group wishes to establish an HD capability, they need to be strongly encouraged to make these systems available to other academic units and organizations wherever possible. Appendix C provides a recommendation for further committee study of how best to provide HD video conferencing facilities and services, where they should be located, and funding model suggestions.

**Benchmarking**

Through our benchmarking we’ve seen institutions that subsidize video conferencing to encourage its use as a sustainability initiative and as an alternative to travel. As Purdue seeks to reduce costs and increase its efficiency, we should make high-quality video conferencing capabilities a viable option to travel for administrative functions and faculty research collaborations. Many advisory committees with regional campus presence could be conducted in this manner; meetings that change to this format could catalog their savings for recognition during Green week.

Minnesota’s Office of Information Technology promotes university-wide standards for video conferencing solutions. It recommends purchase, operational, and maintenance guidelines to maximize university benefit, utility, and interoperability. For more information see: https://docs.google.com/document/d/1fqmTwZ9mnBsKi9nt9b2X-5GI4BSScSwrsU5YzVvb30Y/edit?hl=en_US&pli=1.

Duke’s Office of Information Technology maintains an inventory list of video conferencing rooms available on campus. They are still able to offer “no-cost” multi-point video conferencing services with technical support through their state IHETS-equivalent organization. And for desktop services they appear to have standardized on Cisco’s Jabber Video for TelePresence offering. See http://oit.duke.edu/ww/web_multimedia/multimedia/avConferencing/videoconference/index.php for Duke’s video conferencing information.

Brown University’s central video conferencing services are managed by their Computing & Information Services group. CIS supports two IP-based and one web-based solution for their customers along with Skype and Adobe Connect support. They also maintain an inventory list of locations they don’t support (local technical support and ownership) as well as a supported studio for fee.

Northwestern’s Information Technology group maintains a well-organized web page for their video conferencing solutions at http://www.it.northwestern.edu/videoconferencing/videoconferencing.html. They maintain a central Northwestern Video Bridge for their public and private video conference rooms which can be reserved online and at no cost to NU faculty, staff, and students. They also provide a consulting service to help departments and organizations adhere to necessary campus standards when designing localized video conferencing solutions.
Observations from most of the benchmarking data suggests central support and maintenance of the studio-quality and HD facilities, some with and without fee-for-use, informative web-pages describing the recommended technologies and products, as well as an inventory of campus locations, many with online scheduling.

Summary and Recommendations

As our committee wrestled with the varied issues surrounding video conferencing for academic institutions and Purdue specifically, we found reference materials, benchmarking data, and best practices that suggested common themes and approaches to consider. We first spent time investigating the current state of video conferencing on the WL campus, and quickly realized that we needed to constrain our scope of work to focus on several key issues and concerns. After several meetings, data gathering, and discussions with video conferencing owners and providers on campus, we focused our efforts in the three areas described above: a needed inventory of video conferencing sites and capabilities on campus, a better understanding, service provision, and promotion of the HD facilities available, and an investigation of a bridge solution to handle the greatest variety of device types and protocols in a centrally-managed way. We have recommended three new subcommittees to further the nascent work of our committee in each of these areas, and reports of their preliminary findings and plans going forward are attached to this report. Video conferencing practitioners from across the campus have come forward as volunteers for these committees and we further recommend that our current video conferencing team be reconstituted for the Spring 2013 term of the IT-OOC in order to coordinate and facilitate the work of these three subcommittees.

Finally, it should be noted, but is likely obvious that our situation at Purdue is like many other institutions of higher education, and we have video conferencing strengths and weaknesses in similar areas. Reviewing the September 2011 Forrester report on Video Services in Higher Education, our issues mirror their findings (see Appendix A, and their bulleted observations below). Our recommendations are in concert with the Forrester key points and should inform and provide additional direction for our path forward. The three new subcommittees should be cognizant of these dynamics:

1) Understand the implications of an explosion of uncoordinated video
2) Inventory current use cases and business influencers and video technologies
3) Identify the additional outcomes and potential video use cases to optimize existing technologies
4) Identify crucial technologies for coordination and potential consolidation
5) Incorporate a video component into a campus-wide IT strategy
Appendix A: Video Bridge Technology Task Team Charter

Summary
The key technology in delivering a robust video conferencing solution to campus is a video bridge technology capable of handling different protocols and clients, many simultaneous connections, that is easy to connect to and use, and provides superb reliability. Ideally, such a service would also provide future compatibility with emerging technologies.

The OOC Campus Video Conferencing Strategy Committee is recommending a technical advisory team be formed to investigate requirements and rank several video conferencing bridges for consideration.

Goals
The Video Conferencing Bridge Task Team is charged with identifying specific video conferencing capabilities which are needed to serve campus, identifying vendor products and/or services which might meet those needs, and evaluating those products in order to produce a recommendation of select products for detailed consideration. The team should also take into consideration the five recommendations listed in the Video Conferencing OOC report from December, 2012 while evaluating solutions.

Team Deliverables
- Determine what current and future needs exist on campus for video communication
  - Work with the Video Conferencing Facilities Task Team to determine current connection needs
- Develop criteria matrix for evaluating products and solutions
- Identify vendors to evaluate
- Evaluate proposed solutions and reduce to three in ranked order for final consideration
- Write proposal outlining the strengths, weaknesses and TCO for each solution
  - Include detailed product descriptions including vendor information
  - Create a very basic implementation timeline and resource needs for each
  - Detail costs of maintenance, support and replacement cycles for each solution
  - Include risk analysis for each solution as well as risks involved in continuing without a coordinated campus solution.
Milestone Schedule

<table>
<thead>
<tr>
<th>Committee Milestones</th>
<th>Estimated Due Date</th>
<th>Deliverable</th>
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<tbody>
<tr>
<td>1. Complete needs assessment</td>
<td>2/15/2013</td>
<td>Feature matrix</td>
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<tr>
<td>2. Select products to evaluate</td>
<td>2/22/2013</td>
<td>Vendor List</td>
</tr>
</tbody>
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Meetings

1. Meetings will be held weekly from January 14th through April 30th, 2013.
2. First meeting will be January ?, 2013.
3. Meetings will be in ???? from ?:00-?:00?m.
4. Project materials will be maintained in a SharePoint website located at: [https://sp2010.itap.purdue.edu/ovpit/OOCRround4/campusvideo](https://sp2010.itap.purdue.edu/ovpit/OOCRround4/campusvideo)
5. Documents will be maintained by version.

Video Bridge Assessment Task Team

The term for appointment to this Task Team is January, 2013 through March, 2013.

Ed Stanisz                College of Agriculture
Mike Eldridge             College of Education
John Dietrich             ITaP
Gary English              ITaP
Mark Sharp                College of Pharmacy
?                        Purchasing
Appendix B: Video Conferencing Facilities Task Team Charter

Summary
The West Lafayette Campus currently includes a range of facilities and rooms equipped to host video conferences. Some of these are managed and operated by departments charged with providing such services and tend to be widely known and used by video conference patrons, while others are managed and operated by various schools, colleges and departments and which may be relatively unknown to video conference patrons. Additionally, the technical support for operating these spaces, especially those held at the school, college and departmental level broadly ranges, making the use of some spaces problematic.

Goals
The Video Conference Facilities Task Team is charged with identifying the current status of video conference facilities on the West Lafayette campus and the level of technical support associated with each facility, along with a plan for managing these assets and resources going forward.

Team Deliverables

- Survey the West Lafayette campus and identify the location, management policies, and technical capabilities of existing video conferencing venues (VCV’s) capable of hosting higher-end video conferencing.
- Similar to #1, survey the West Lafayette campus and identify which departments or units can provide production support for video-conferencing. Some of these departments or units may be affiliated with the VCV’s identified in #1.
- For VCV’s and production staff controlled by localized departments (as opposed to departments whose mission includes providing campus-wide services) determine each department’s willingness to join in a campus-wide confederation supporting video conferencing. Nothing about joining this confederation should be construed as removing primary control of these VCV’s and production staff from their current departments.
- Determine an optimal number of VCV’s to support current and near-term growth of higher-end video conferencing on the West Lafayette campus and an optimal staffing or production support paradigm. Consideration should be given to providing geographic diversity for the convenience of patrons, technical infrastructure related to production and creative support, production assistance, and non-technical infrastructure (accessibility, audience seating, parking, rest rooms etc.).
- Recommend management and funding models for the operation of West Lafayette VCV’s and production support to accommodate current needs and near-term growth of higher-end video conferencing. If there is a gap between VCV availability/capability or production support and current or near-term needs, recommend development of new VCV’s, renovation of existing VCV’s and staffing adjustments as part of the management and funding models.


Milestone Schedule

<table>
<thead>
<tr>
<th>Committee Milestones</th>
<th>Estimated Due Date</th>
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<tr>
<td>Interim report</td>
<td>2/18/2013</td>
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<tr>
<td>Final report</td>
<td>4/30/2013</td>
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Video Conferencing Facilities Task Team

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<tr>
<th>Name</th>
<th>Department</th>
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<tr>
<td>Phil Knobloch</td>
<td>ITaP Customer Relations</td>
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<tr>
<td>Ed Dunn</td>
<td>ITaP</td>
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<tr>
<td>Tim Frye</td>
<td>Engineering Professional Education</td>
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<tr>
<td>Ed Stanisz</td>
<td>College of Agriculture</td>
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Appendix C: Web Conferencing Facilities Task Team Charter

Summary

Web Conferencing is a related, but separate, element of video conferencing. Together with traditional video conferencing and video bridging, it will comprise the overall campus video conference strategy.

Today, the primary web conferencing service used on campus is Adobe Connect. Other hosted services that our committee has encountered include: Cisco WebEx, GoToMeeting, Video Meet and Elluminate Live (Now BlackBoard). These services are used in myriad of applications ranging from online meetings and seminars to for-fee distance education delivery.

The OOC Video Conference Strategy Team recommends that a team of experts and stakeholder, the Web Conferencing Task Team, be tasked to develop specific recommendations for Web Conferencing services on the West Lafayette (WL) campus.

Goals

The Web Conferencing Task Team will assess web conferencing needs on campus and identify gaps between current offerings and desired capabilities. It will recommend a specific strategy for the WL campus to meet the needs identified. Resources that the Task Team will rely upon include

- the OOC Video Conference Strategy charter and report
- the September 2011 Forrester report on Video Services in Higher Education referenced therein
- the Video Bridge Task Team report (see committee website).

Committee Deliverables

- A summary of the current and future web conferencing needs for the WL campus (e.g. Internal/external meetings, seminars, distance education, point-2-point, multicast, etc.)
- Criteria for evaluating current and/or new services
  - Are there already adequate services that simply…
    - need to be better leveraged better;
    - need additional investment and/or retooled;
    - need additional support services behind them;
    - need a different funding model, etc.
  - Is a single solution appropriate, or should there be a suite of use-specific products supported?
  - Should it be a hosted service, in-house or some combination?
- Evaluate products/services and identify those that most closely meet campus needs.
- Recommendations for delivering web conferencing services to meet the campus needs including:
- product/service recommendations
- approximate cost and timeline to deploy
- estimates of on-going costs (maintenance, life-cycle replacement, etc.)

Schedule
A project is in process that will replace the current Adobe Connect services with a hosted solution. The Web Conferencing Task Team should start its work shortly after the new system goes into production. Doing so will allow experts and stakeholders involved with the project to participate on the Video Conferencing Task Team. We expect the Task Team to begin its work in April, 2013.

Meetings
Beginning the week of April 1, 2013
6. Meetings should be held at least bi-weekly through June, 2013.
7. Project materials should be maintained in a OOC website located at: https://sp2010.itap.purdue.edu/ovpit/OOCRound4/campusvideo

Video Bridge Assessment Task Team

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Pat Reid</td>
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<td>Ed Stanisz</td>
<td>College of Agriculture</td>
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<tr>
<td>Pam White</td>
<td>College of Veterinary Medicine</td>
</tr>
<tr>
<td>Jason Culp</td>
<td>State-wide Technology</td>
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The term for appointment to this Task Team is April, 2013 through June, 2013.