

12 – Telecollaboration

Action Item Template Response

General Action Item Information

Lead Division/Office: Enterprise Infrastructure

Action Item Number: 12

Action Item Short Name: Telecollaboration

Dependencies with other EP Action Items:

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I. DESCRIBE YOUR PLANS FOR IMPLEMENTING THIS ACTION.

IU's previous IT strategic plan delivered on its promises to provide a base level of telecollaboration services for all campuses and a robust network on which these services can thrive. Procurement of advanced, centralized infrastructure ensured that standard definition H.323 videoconferencing, streaming, and data collaboration are widely available in conference rooms, classrooms, and from personal desktop computers throughout the IU system. Moving forward, we need to focus on five areas to continue to position IU as a leader in the HD telecollaboration arena:

1. Renewal of central telecollaboration infrastructure investment

The goal of this plan is to enable a large part of the university community to effectively participate in telecollaboration activities. The aspects of the plan need to accommodate growth and future innovations in telecollaboration, and IU will need to lifecycle update and improve the infrastructure, including:

- **Network:** Growth and innovation in telecollaboration will demand more bandwidth and our network will need to adapt and respond to these new demands.
- **Bridging:** The enterprise multipoint control unit will need to address the increased need for port density (Philosophy of Abundance) and high definition capability.
- **Gateways:** An emphasis on interoperability and pervasiveness will dictate the need for gateways to phone conferencing (ISDN), desktop applications (e.g., OCS), SIP, and future environments that need to be incorporated into our telecollaboration environment.
- **Recording and streaming services:** As the live event capabilities improve, the infrastructure for recording and archiving collaboration sessions will need to expand and improve.
- **Strategic placement of UITS-purchased HD videoconferencing systems:** The seeding of cutting edge technology in key locations throughout the IU system allows for smoother transitions to the new technologies, while allowing key partners to play a role in the implementation of the new services.

- Strategic partnership with our chosen vendor: To position IU as a leader in higher education telecollaboration, we will look to forge partnerships with infrastructure vendors where possible.

2. Development of, and adherence to, a telecollaboration space standard

Successful telecollaboration is not possible without careful consideration of the telecollaboration space. The space may vary depending on the meeting function (e.g., executive conference, administrative meeting, academic class, lab) and room dynamics (e.g., size, seating) but we must provide a series of telecollaboration space recommendations to ensure a reliable, high-quality audio and video experience. The components of a standardized telecollaboration space include:

Room design

- Architectural and acoustic characteristics
- Tables
- Chairs
- Lighting
- Signage

Video considerations

- Cameras
- Codecs and protocols
- Monitors/projection

Audio considerations

- Microphones
- Speakers
- Telephony
- Codecs and protocols

Data-sharing considerations

- Codecs and protocols
- Monitors/projection

Indiana University has acquired several "telepresence" units. These units must be installed in rooms with specific dimensions, color schemes, lighting, etc. In fact, consideration for these telepresence rooms incorporates all of the items listed above. Specifically, the distance from the camera(s) to the participants is the key. By standardizing this distance, participants appear more life size. This same practice should be used in all high-definition videoconference rooms, where possible. Also, with all new buildings, consideration for conference rooms must occur early in the process to ensure standardized room configuration.

3. Integration with desktop solutions (e.g., OCS) to provide pervasive telecollaboration

- See Action 11
- Effectively address issues of using the telephone conferences and combining telephone and video conferences

4. Refinement of support model for telecollaboration

To improve the end user's conferencing experience, we should move to a more proactive support model. While wide adoption of telecollaboration almost certainly indicates a need for instant, reservation-less access to the entire palette of conferencing tools, there is another category of event whose success depends on a more thoughtful, orchestrated approach. Defining characteristics of this category include high-profile users or events, events in which meeting

participants are both within and outside the IU network or service envelope, and events that require an unusual or highly sophisticated blend of conferencing tools. In such cases, a concierge may act as the event steward, marshalling the proper technical resources and support personnel to assure the highest level of user ease and satisfaction, while providing expert management of the conference toolset before and during the event.

5. Implementation of high-end telepresence capability.

As stated, IU will continue to invest in its H323 based video environment to deliver excellent quality to a large population. This is currently based on the existing video switch, which is the Tandberg (Codian) Multiple-point Control Unit and the mix of Tandberg and Polycom endpoints. The implementation of Tandberg's Video Control Server will allow OCS integration and enhance the ability for desktops to interoperate.

That does not completely address the very high end or telepresence environment. Cisco is the vendor of choice in the corporate space for these units and the National LambdaRail has requested Cisco to certify NLR as a carrier for telepresence. This requires IU to install and support Cisco TP environment and it presents a tremendous opportunity for IU to deploy a set of Cisco telepresence units to meet a variety of institutional needs.

The recent acquisition of Tandberg by Cisco aligns with this strategy by providing a high-quality, standards-based product to reach a large user base and install a smaller set of telepresence units. Telepresence will meet a certain set of needs for executive meetings among the video locations and improve productivity. Telepresence provides a rich experience that emulates face-to-face meetings. The ability to achieve this experience extends beyond the technology to design and usage and there are limitations of space, location, participation numbers, and others that impact the experience.

The Cisco TP has a significant presence in corporate boardrooms. In addition to a large investment in the corporate space, there is a fair amount of traction for Cisco solutions in the Research & Education (R&E) area. The QUILT, Internet2, and NLR are all working with Cisco to deploy systems and the underlying support infrastructure – namely the exchanges that will allow R&E traffic to transit the national networks and interact with the commercial sector. In fact, IU will operate the hardware on at least one of these exchanges. AT&T and British Telecom are both very interested in working with the US R&E community on this project. One factor for the slow uptake of Cisco TP units is the uncertainty on how these systems will interoperate with other systems around the country/world. With R&E and the commercials working to interconnect TP exchanges this issue should be resolved.

IU will evaluate its initial set of 10 units that will be installed in 2010. This will provide a rich solution for executive or research collaboration by making these units available to the University community. Each site will provide ability for up to six participants to join a telepresence conference.

II. WHAT ARE THE POLICY AND PRACTICE IMPLICATIONS OF YOUR PLANS?

The space recommendations outlined in this document will require a new focus on conferencing (i.e., a blend of video, phone, VoIP, streaming, data collaboration) at Indiana University. Those who are identified as conferencing leaders and decision makers will need to organize individuals across internal and external UITS boundaries. Successes in telecollaboration will depend on the cooperation and collaboration of a diverse group of resources, including: video, audio, and phone engineers; local support providers; and room designers.

The implications of implementing this plan include:

- An improved conferencing experience for end users
- An increase in conferencing utilization
- Lower costs for conferencing
- A larger support role for LSPs
- Seamless integration of the diverse conferencing technologies
- High-end telepresence option in available locations

Standardization of space and equipment designed to enhance the conferencing experience requires a decision-making focal point. This is infrastructure, and thus belongs in Enterprise Infrastructure.

III. IDENTIFY STAKEHOLDERS.

- Video Infrastructure
- Classroom Technology Services
- Video Network Operations Center
- Networks
- Telephony Systems
- Messaging Systems
- UITs Support Center
- Executive IT Support
- University Architect's Office