INDIANA UNIVERSITY

11 – Communications Technologies

Action Item Template Response

General Action Item Information

Lead Division/Office: Enterprise Infrastructure
Action Item Number: 11
Action Item Short Name: Communications Technologies
Dependencies with other EP Action Items: 12, 13 29, 38, 39, 40, 414, 49, 50
Implementation leader (name & email): Michael Lucas (mlucas@iupui.edu)

I. DESCRIBE YOUR PLANS FOR IMPLEMENTING THIS ACTION.

This is a very broad action item that encompasses unified communication, voice communication, collaboration tools such as Adobe Connect (Breeze), Confluence, SharePoint and others. This plan is divided into focus areas to aid successful implementation. Those areas are Unified Communication, Mobile Communications, and Web Collaboration. There are overlaps among these, which will be addressed in the planning.

Unified Communication includes voice, video and presences awareness and skill-based call processing. It is the goal of this action item to bring these technologies together so that they may seamlessly interact with one another, regardless of location. Steps have already been taken toward accomplishing the goals of this action item, among them the implementation of Office Communications Server under the brand name of Unicom. However, to be truly successful, much still needs to be done. In order to carry out the goals of this plan, the details under section A. Unified Communications will need to take place.

Mobile Communications focuses primarily on the integration of cell carrier services into the communications infrastructure of the University. Items such as coverage, SMS (text message) services, and wifi convergence are addressed.

Web Collaboration identifies the tools and approaches for using collaboration tools to meet the goals of efficient communication and effective collaboration.

A. Unified Communication

 1.   Upgrade to Office Communications Server Release 2 (OCS R2) - Fall 2009

IU became the leader in Unified Communications when it successfully implemented OCS with PBX integration. In order for IU to remain a leader in this field, it is critical that the OCS-R2 be implemented as soon as possible. Furthermore, lifecycle funding for the OCS hardware and software should be made a priority to ensure IU's ability to maintain its status as a leader in this field. Additional improvements include:

  •   New Unicom infrastructure with improved load balancers and servers that support 64bit

processors required for OCS.
- Expand telephone integration to all regional campuses via switch upgrades or gateways.
- Develop new methods for marketing Unicom to the user community.
- Integration of the video infrastructure with OCS to enable desktop-to-meeting-room video conferencing (Action item 12).
- Addition of 2 FTEs to support Unicom services.

2. Focused deployment of advance call center applications

Legacy call centers are no longer suitable for today's fast-paced, technology-filled world. Call Centers must be able to support advanced features and functionality such as:

- Skill-based routing based on caller input or by collection of known data such as caller ID.
- Ability to quickly and easily record calls
- Availability of remote agents, eliminating campus dependencies.

3. Integration of conferencing resources for voice, video and OCS

IU supports three separate methods of conferencing, which include voice, video and OCS. Each of these systems is separate and operates independently. These systems must be integrated so that one can easily make a video call and connect to an OCS user. Or, and OCS user can place a call directly into a video bridge from anywhere in the world. The integration of these systems is being addressed in action item 12.

4. Convergence of the remote Meridian 1 option 11 switches to Voice over IP (VoIP)

In Indianapolis there are 6 remote switches serving IU departments at off-campus locations. Each of these locations should be upgraded to VoIP.

5. Convergence of the IUB and IUPUI telephone switches into one system

IU Bloomington and IUPUI currently have two separate phone systems that are tied together via trunking. In order to be able to support seamless communications across these two campuses it is imperative that these systems be combined into a single switch.

6. Install speech-enabled attendants

Speech-enabled attendants should be used to supplement call centers and main answering points throughout IU. Speech attendants take on the roll of answering and transferring routine calls, freeing up staff resources so that they may engage in activities that cannot be automated.

7. Other voice system upgrades

Voice systems comprise a variety of applications that interconnect to provide an exceptional user experience. There are numerous pieces of equipment that must be supported and upgraded such as CC-MIS, Conference Bridge, HDSL circuits and more. These were all identified and included in the 10-year Network Master Plan.

8. Regional campus alignment

Careful consideration should be given to centralizing voice services to maximize functionality while reducing cost. Many regional campus telephone switches are coming to the end their lifecycles and must undergo major upgrades or total replacement. However, at this time it is too early to predict the best solution for these campuses. Some of the possible options include remote SIP gateways at each campus connected to the CS-2100, a new deployment of a CS-1000 centrally located to support all

regional campuses, or a full OCS/Unicom solution. The best solution for these campuses will likely not be determined until early 2010.

 9.   Evaluate Open Source

OCS presents an outstanding mid-term solution. IU needs to continue to investigate and trial open source alternatives as providing appropriate alternative strategies to any proprietary software. SIP Foundry seems to provide the best and most scalable solution for IU in this space and UITS will work to pilot and test this alternative.

B. Mobile Communications

1. Survey and report on overall cell coverage at IUB and IUPUI.

The reliance on the cell network for delivery of communications will remain very important to communication strategy for the next few years.   The cell network with phones and "smart phones" will be the primary communications vehicle for our students in the coming years. It will also be an important vehicle for faculty and staff, although it will supplement unified communications for students.

2. Track wifi convergence issues.

The high-end devices currently use wifi connectivity for data delivery when signal is available. The ideal technical solution would be for the devices to also use the wifi network for all connectivity when available. This would allow us to leverage the investment in wireless network for all communications. This evolution needs to be tracked so investments are made for the long term.

3. Evaluate and install point solutions for cell coverage when the value is high.*

4. Initially implement SMS activity through carrier-supplied email gateways or social networking sites and evaluate the potential of an IU-owned SMS gateway.

SMS or "text messaging" has come up as an important means of reaching constituents, especially students. The plan is to use the carrier-supplied email gateways or potential social networking sites that gateway to SMS as an initial solution. It does require applications interfaces to be written so that transport can change without significant code rewrites. This solution lacks technical elegance, but it allows progress and samples the long-term value of a relationship.

C. Web Collaboration

1. Determine the role of each of the collaboration tools in the portfolio.   See http://www.kb.iu.edu/data/aygh.html.

2. Review redundancy among tools and determine if elimination or scope change is possible.

3. Build better support around tools and investigate abilities to integrate with Unified Communication platform.

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

Policy

- Standardization for how voice services are deployed and funded across all IU campuses.

- E911 policy adjusted as local laws require.

Practice

- Seamless and transparent user integration with other technologies, i.e.: video rooms, SharePoint, Oncourse
- Minimal overhead or time investment for end users
- Minimal usage rules/regulations by IT organization
- Create or promote a community of users for best practices, troubleshooting, implementation, and collaboration.
- A larger support role for LSPs
- Additional skill sets needed to consultant on, market, and deploy technology.

III. IDENTIFY STAKEHOLDERS.

UITS
- Enterprise Infrastructure
- Networks
- Communication and Support
- Enterprise Software

University
- Regional campus CIOs
- IT operations staff.