Case Study

Deploying IP-Based Videoconferencing in a Large U.S. Government Agency

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Introduction

Wishing to remain unnamed, this large U.S. government agency is one of America's oldest government agencies. Employing over 30,000 people, the work it does is crucial to both governmental agencies as well as public and privately held companies. Given the geographical distance between the divisions of this agency, videoconferencing has long been seen as a way to quickly communicate and transfer vital information without traveling. Years ago, over 100 group videoconferencing systems were set up in conference rooms using ISDN lines and large group videoconferencing systems.

Recently, this agency contracted an outside agency to manage the implementation of two video services: streaming media and IP videoconferencing. Streaming media was implemented successfully and has gained acceptance from the employee population. Interactive IP videoconferencing is now being implemented with the goal of combining IP videoconferencing and streaming video, and to make this solution available to any of the over 30,000 employees.

CASE STUDY QUICK FACTS

MXM Size: 500-user license with 500-user standby MXM and 25-user MXM for duplicate test environment

Number of Desktop Endpoints: 35 VCON ViGOs

Number of non-VCON Endpoints (IP and ISDN): 75 (group and desktop systems)

MCUs Deployed: RADVISION viaIP400, RADVISION OnLan, Accord MGC-50

Most Valuable MXM Features:

- Remote management and configuration of endpoints

- Remote call initiation

- User directory

- Simplified gateway dialing and gateway hunting

The Need for a Managed Videoconferencing Solution

The problem was not whether or not to implement videoconferencing; videoconferencing was already established as a viable and useful tool on this organization's campus. The challenge was to take advantage of the expansive IP network that had been installed, and to stop laying down ISDN lines for videoconferencing needs. Combined with that, was the challenge of creating a videoconferencing network that could be managed, maintained, and administered from a central location. Making streaming and interactive video available to all employees meant that the solution had to include the ability to manage the overall bandwidth

have been very impressed with VCON's MXM," said the video network administrator. "The MXM is the only solution we have found that gives us the ability to manage the diverse video network from the inside out." The main features of the MXM that attracted both the integrator and the agency are:

- The ability to manage all the systems on the IP video network with one application - the MXM. This includes the ability to go in and change the controls on the desktop system and to access other videoconferencing vendors' web-based management tools, like those of the Polycom ViewStation and the Tandberg group systems.

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available for video, know where each videoconferencing system was located and be able to access that system remotely, and to be able to provide the quality of service that is needed between two researchers videoconferencing. Additionally there was another potential problem: there was no restriction on the kind of videoconferencing system that each department could purchase, so the videoconferencing management tool had to be able to manage a multi-vendor network.

Two products of VCON's were tested and selected by the integrator for deployment. ViGO was chosen as the recommended high-end desktop solution because of its unique form factor and feature/functionality set. The Media Xchange Manager (MXM) was chosen as the management tool and gatekeeper. "We

- Simplified Gateway Dialing and Gateway Hunting. Giving the users the added benefit of dialing "9" to call outside the campus was another reason the MXM was chosen. Users could never remember the long string of numbers that had previously been necessary to dial in order to call through a gateway.

- Remote Call Initiation. The ability for the administrator to remotely initiate a video call for those users who weren't comfortable initiating the call themselves, was seen as a big advantage of the MXM.

- On-line directory services were critical to the deployment. LDAP support was seen as a strong feature of the MXM.

Other features of the MXM that were important in the decision making process were the ability to monitor all videoconferencing systems to see who is in a call and at what data rate they are conferencing; the ad-hoc conferencing feature, allowing users to seamlessly join a 3rd, 4th, etc. participant to an existing videoconference; IP-PBX features such as call-transfer, call-forward, call-pickup and hunting groups; bandwidth management features such as the ability to adjust the bandwidth of an entire zone or the bandwidth of individual users.

A 500-user license of the VCON Media Xchange Manager was purchased to manage the IP videoconferencing network, as well as a 500-user standby license, which will be implemented in the next phase. A 25-user MXM was purchased so that the integrator

could run a test environment separate from the production network. Approximately 35 ViGOs were initially purchased for higher-end desktop applications. There are another 170+ videoconferencing systems of various vendors on the campus currently being managed by the MXM. The videoconferencing network is laid out in this format:

Using and managing IP video on a daily basis

This agency uses their videoconferencing systems in a variety of ways. Top researchers across the country can talk over videoconferencing, sharing ideas, solutions and problems. Many administrative needs can be handled and solved via videoconferencing across campuses. Additionally, this agency is able to videoconference with any university that it does research with.

Network Diagram of IP Video Deployment
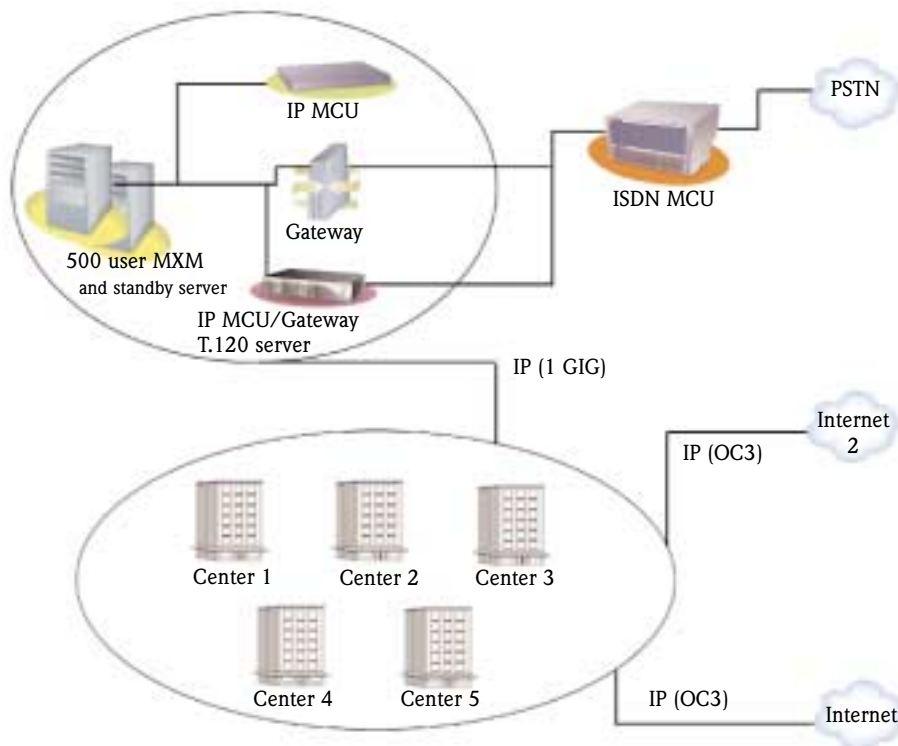
One of the main benefits of ViGO is that researchers and administrative staff can videoconference directly from their desk, instead of traveling to the nearest conference room that has video installed. Not uncommonly, the first users of IP desktop videoconferencing are the department heads. It is expected that there will be a "trickle down" effect, with their administrative staff of the department heads being the next likely group to take up desktop videoconferencing. ViGO allows the users to plug in a document camera or VCR, enhancing their ability to

able to push information to their existing on-line directories and to be able to use those directories when videoconferencing. VCON is working with the integrator to create a solution for this and is expected to have it solved before the final phase of implementation. While no solution can offer everything, VCON's MXM is providing 90+% of what they were looking for in a management tool - plus some features like call transfer and call forward that they haven't yet had the time to test and train their users on.

"Videoconferencing brings another dimension to collaborative research that can only enhance the relationships and the results."

share information with the remote site. Additionally, the top researchers will use desktop videoconferencing to collaborate with their colleagues both in the office and on-the-road.

A main advantage of the data sharing capability incorporated into ViGO, is the ability to share any document located on a user's PC with the remote - whether or not the remote system has that particular application loaded on their PC or not. Frequently, researchers will have unique and proprietary software loaded on their PC and the ability to share and collaborate on those types of documents over video is invaluable.

While deploying video over an IP network has proven to be challenging, with the MXM mass deployment of IP video has now become not only feasible, but also very manageable, which is critical to any network administrator.

With such a large campus and large employee population, this agency has some unique needs and requirements. One of these needs is being

Looking Forward
It is expected that the size of this network will increase from a 500-user level to over 1000 users. Some of these new users will be telecommuters and researchers doing work off-campus. In addition, more ViGO's are expected to be added, as well as VCON Conference Bridge (VCB) sessions. The VCB could serve as a small-MCU for video bridge calls with less than 8 participants.

"I see limitless possibilities to the kinds of applications used by the researchers and partnering Universities," said the integrator. "Videoconferencing brings another dimension to collaborative research that can only enhance the relationships and the results."

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