

# CASE STUDY: DEFENSE ACQUISITION UNIVERSITY (DAU)

## Immersive Telepresence Enhances Course Productivity, Reduces Travel Costs, and Offers New Training Opportunities

### CHALLENGE

Enhance the productivity of courses requiring intensive participant interaction with a VTC solution that simulates an in person experience, is interoperable, and DoD compliant.

### SOLUTION

Polycom RPX suite, an Immersive Telepresence solution that is easily scalable, standards-based, and includes:

- Four life-sized HD plasma displays
- HD audio with surround sound
- Separate-screen content delivery
- 18 participants per site, 10 sites
- Point to point and multipoint call capability
- JITC certified solution

### RESULTS

- HD audio, video, and life-sized projection creates a platform for students to easily interact and engage
- Facilitators can more productively lead courses, observing expressions and eye contact
- Legacy VTC can still be used for courses and easily integrated into the RPX solution
- Travel costs are reduced with 10 course locations instead of one
- DAU can further its mission in new ways by hosting distance learning, business meetings and teaching to larger groups

### BACKGROUND

The Defense Acquisition University (DAU) Mission is to provide practitioner training, career management, and services to enable the Department of Defense (DoD) Acquisition, Technology, and Logistics (AT&L) community to make smart business decisions and deliver timely and affordable capabilities to the warfighter.

The Program Management track that features the PMT401 Program Manager course has been at the core of DAU's curriculum. PMT401 is an intensive ten-week course that is mandatory for senior executives and is designed to strengthen their skills through detailed discussions, analysis of case studies, media training and leadership simulations.

The course's success is heavily dependent on intensive interaction, mentoring and coaching among participants and from the instructor. Clear observation of body language and facial

#### TECHNICAL SPECIFICATIONS

- Polycom HDX9000 video codecs supporting 720p at 30 fps
  - Polycom Digital Ceiling Microphone Arrays
- Polycom StereoSurround Speaker Kit
  - High Definition Rear Screen Projectors
  - 3-DDC High Definition Video Cameras
- Room control system with 10-inch color touch panel
- 19 inch displays embedded in multipurpose table
- Supports 192-inch x 42-inch high definition video in a 48:9 aspect ration at 3840 x 720p resolution
- H.264 video codec with H.239 People+Content
  - H.261 and H.263++ for compatibility with legacy video conferencing endpoints
  - RMX 2000 multi-point technology supporting resolutions up to 1080P

## BACKGROUND (CONT.)

expressions as well as the ability to make eye contact are critical in creating meaningful exchanges, successful discussions and simulations. Acting as a facilitator, the instructor relies on physical observation as a way of determining if the students are listening and engaged.

## LEGACY VTC AND PMT 401

PMT401 participants from all over the world are required to travel to course locations daily for ten consecutive weeks where the instructor is located, or attend via a video teleconference (VTC).

While the legacy VTC worked well for most courses it was not optimum for PMT401, which required fully engaged participants and observation of subtle body language. Varying video quality and monitor size made it challenging for students to participate freely and easily in discussions and simulations.

The DAU concluded that a state-of-the-art telepresence solution could increase the productivity of the PMT401 course by enabling clear face-to-face communications and presentation of content that simulates an in person experience. And, at the same time, DAU needed to maintain its legacy VTC systems for other courses.

## THE RIGHT SOLUTION: INTEROPERABLE, COMPLIANT AND STATE-OF-THE-ART

In May 2008, the DAU asked Iron Bow Technologies to create a standards-based, open architecture High Definition VTC solution.

Iron Bow Technologies and DAU thoroughly considered all available solutions on the market, but many had insurmountable drawbacks. Some required additional interfaces to work with DAU's existing VTC. Or, there were limitations in the number of participants, screen size, or video quality. And, most could not meet critical DoD technical compliance in the immediate future.

The Polycom RPX 418 HD Immersive Telepresence Suite was the only solution that fully met DAU's needs. It was easily interoperable with legacy VTC systems, DoD compliant, and offered superior cutting edge HDX9000 codec technology.

## IMMERSIVE TELEPRESENCE: SEE, HEAR AND PRESENT CLEARLY

The Polycom suite has seating for up to 18 people in a single room per DAU site with additional space for observers, and all parties can appear onscreen. With a four-screen display, it also has integrated pop-up LCD screens for content sharing. The solution provided by Iron Bow Technologies is JITC certified, allowing access to the DISA backbone.

All participants at connected sites can see each other simultaneously with large-as-life displays. The audio is high definition audio, and is supported by a combination of surround sound and directional

microphones. With VGA connection capabilities, content can be presented at a moment's notice (whether on or off a video call) by simply plugging a VGA cable into a laptop.

The solution is scalable, easily allowing the DAU to expand to ten plus locations in the future.

## CUSTOMIZING TEN SITES IN 18 MONTHS

The DAU plans to install the Telepresence solution at ten sites in the United States. Ft. Belvoir and Huntsville were completed in September 2008. Sites in PAX River, MD, Aberdeen Proving Ground, MD, Detroit, MI and Kettering, OH were initiated in the first quarter of 2009. Completion of the final four sites is anticipated by the end of 2009.

The first step at each site is for DAU to identify a room that is available and suitable. A pre-site survey is conducted by the Iron Bow Technologies-Polycom team to make sure it will physically accommodate the RPX solution and that the network infrastructure can support its capabilities. The DAU then makes any construction changes, network upgrades, or electrical improvements. A detailed checklist provided by the team helps to keep changes and schedules on track.

Polycom starts preparing the shipment simultaneous to the room prep allowing about 45 days. This ensures that deployment is seamless once the room is ready. Installation at each location can be completed in about two weeks.

## TRAINING AND ONGOING SUPPORT

The Iron Bow Technologies-Polycom team provided a three-day technical training onsite at Ft. Belvoir for all technical personnel and conducts hands-on telepresence training for facility personnel at each site. The team provides operational support through Polycom's Video Network Operations Center (VNOC), including 24x7 technical support as well as scheduling, remote monitoring, fault management, and monthly reporting.

## RESULTS THAT DRIVE THE DAU MISSION

Telepresence has allowed for far greater participation within the PMT401 course enabling students to be more engaged, the facilitator to be empowered and enhancing overall course productivity. 10 Telepresence locations rather than traveling to one. Telepresence is now simply an extension of the course site with all instructors and participants appearing to each other life-sized on a large plasma screen, creating an in-person face-to-face experience.

Aside from the PMT401 course, DAU can now further its mission in new ways. With 10 sites that can accommodate more than 20 people, DAU can host a variety of distance learning courses and business meetings. This will enable instructors to teach to larger groups of people and drastically reduce the travel costs for students.