Delivering Real-Time and On-Demand Video to PC and TV Screens Across the Base

Picatinny Arsenal, New Jersey

The Customer

The Picatinny Arsenal, located in New Jersey, is the home of the Armament Research, Development and Engineering Center of the United States Army. Its highly skilled workforce develops new technologies to address the requirements of the modern Army and often adapts existing commercial technologies to the high-performance requirements of the military.

The arsenal's primary mission is research, development, and pilot-plant production of explosives and propellants for the U.S. Army.

To distribute cable TV and other media content throughout the facility, the Arsenal IT staff recognized IPTV as a way to enable streaming of audio and video content to users' desktop workstations via the base's local network infrastructure. The Arsenal's IPTV system serves over 1500 personnel at the facility, accessing weapons shooting range monitoring cameras, informational presentations, inbound news and information cable channels, and real time local events and announcements, all as high quality MPEG-4 H.264 streams.

The Challenge

Picatinny Arsenal IT Services was faced with the sun-setting of its legacy IPTV platform. While the incumbent system was capable of meeting the Arsenal's core broadcast requirements, the system offered limited scalability, mediocre video quality using MPEG 4 part 2, a severely limited user interface, was cumbersome to administer, suffered from periodic outages, and couldn't interface with TV monitors and plasma screens.
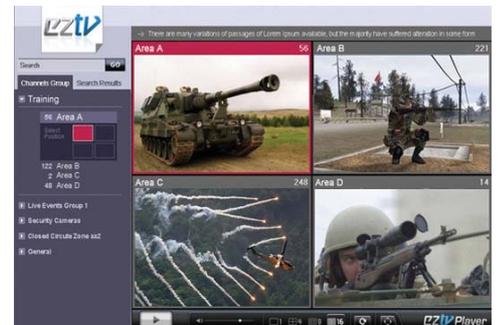
Within its budgetary constraints, the customer sought a system that would deliver:

✤ Broadcast-quality video using advanced, bandwidth-conscious H.264 compression, with more channels delivered on the existing local area network (LAN) infrastructure.

✤ Reliability and quality of service suitable for 24x7 mission critical applications.

✤ Support of streaming and playback of locally generated content, external video sources, and offline VOD assets.

✤ A powerful yet user-friendly IPTV PC player that would support multiple video formats and that would enable viewing multiple sources in real time on PC monitor.

✤ A scalable system that would allow back end channel lineup growth in a cost-effective manner.

✤ A site license fee for the front end IPTV Portal and Players with no recurring costs or seat-based licensing.

Discussions with the client in the implementation planning phase revealed additional needs related to the compliance requirements of applicable security regulations. The incumbent system's inability to segment end users by groups or locations had restrained the usability of the system for distribution of classified content. If VITEC could provide a resource-efficient way to incorporate security permissions already implemented in the IP network's Active Directory Service, the IPTV system would then be capable of delivering restricted content securely to appropriate end-users with minimal administrative overhead.

In addition to requiring robust encoders for the core channel lineup of externally-sourced TV programming, the client also expressed a need for smaller, portable units that would make real time local feeds possible from wherever needed on the facility. With VITEC portable units, the Arsenal staff could originate (as well as archive for VOD) local content for emergency channels, for live classroom training events, for informational presentations using PowerPoint, or for monitoring locations such as a weapons target range. Furthermore, the ability of the VITEC EZ TV to override end-user viewing choices to force-focus users' desktops onto a designated video stream provided useful options for emergency and command-center communications.

EZ TV IPTV Systems Benefits

✤ Improved User Interface for End-Users - Channel Guide: VITEC technology provides the viewers with a constantly updated Channel Guide. The Guide is fully synched with the content management database, assuring fully updated channel information for viewers with minimal system administrative overhead.

✤ Improved User Interface for End-Users - Personalizing The Viewing Experience: The VITEC System offers end users a powerful personalization toolset, allowing viewers to monitor as many as 16 user-selected windows of real time live channels and VOD content.

✤ Fast On-time On-budget Deployment: The VITEC implementation team delivered a system design within a week. The plan met and exceeded all customer core requirements by providing a large range of value-adds while staying within budget and timelines. The full implementation project, including installation, configuration, and production network verification testing, was completed in 3days.

✤ Superior Video Quality and Bandwidth: VITEC's System supplanted the legacy MPEG 4 Part 2 system with broadcast quality h264 video.

✤ Superior Reliability and Availability: Robust VITEC technology, field-proven software, and rigorous system QA and onsite testing have combined to give the Arsenal a highly scalable IPTV solution that is truly bulletproof.

✤ Enhanced System Administration Tools: The VITEC System provides a rich toolset for system configuration, management, and the ability to extend the security permissions in the system's Active Directory to the EZ TV administrative controls. These features enable system administrators to stream restricted materials to appropriate personnel, based on group or location.

✤ Emergency Channel: In case of an emergency or when there is a general announcement, the VITEC System enables administrators to re-direct all viewers' screens to a single live stream to assure effective dissemination of critical information.

VITEC
VIDEO INNOVATIONS

Headquarters

EZ TV
EZ TV Portal
EZ TV VOD

TV
IP STB

Encoders
MGW 5100
MGW 400

Video Source
Satellite TV
Camera

LAN

Desktops

Laptops
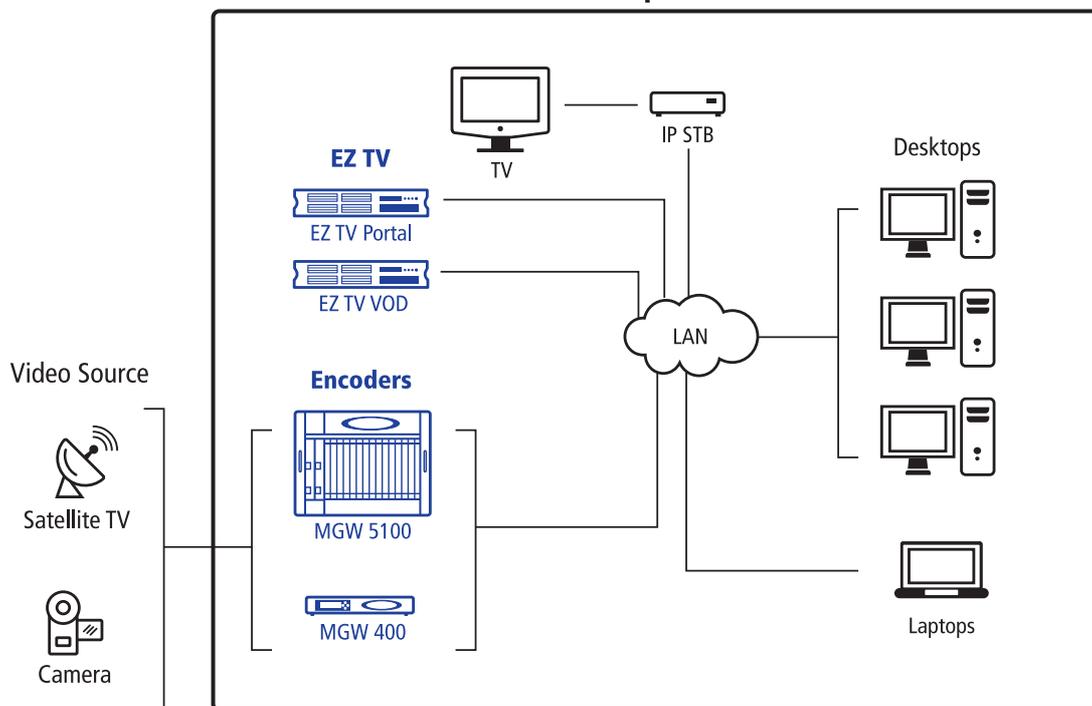
IP Connection

Remote Site

Video Source
Camera
MGW 400

LAN

Desktops
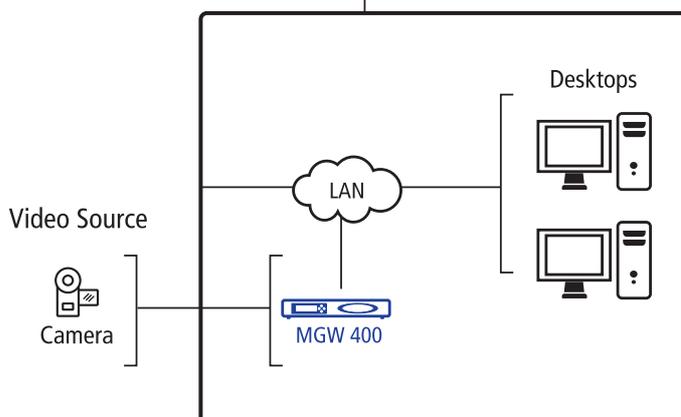
USA, Georgia
2200 Century Parkway,
NE Suite 900
ATLANTA, GA 30345-3150,
USA
T: +1-(404)-320-0110
E: atlanta@vitec.com

USA, California
931 Benecia Avenue
SUNNYVALE, CA 94085,
USA
T: +1-(800)-451-5101
E: sunnyvale@vitec.com

FRANCE
99 rue Pierre Semard
92324 CHATILLON Cedex,
France
T: +33-(0)1-46-73-06-06
E: france@vitec.com

GERMANY
Lise-Meitner-Str.15
24223 SCHWENTINENTAL,
Germany
T: +49-(0)4307-8358-0
E: germany@vitec.com

UNITED KINGDOM
LONDON, UK
T: +44-79-71-54-25-21
E: uk@vitec.com

ISRAEL
11 Galgalei Haplada St.
HERZLIYA, 4672211, Israel
T: +972-(0)9-9709-200
E: israel@vitec.com

CHINA
BEIJING, P.R. China
T: +86-(0)10-5172-7086
E: china@vitec.com

INDIA
NEW DELHI, India
T: +91-98-11-770000
E: india@vitec.com

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www.vitec.com