



USE CASE | GOVERNMENT FACILITIES

Video Information Sharing and Collaboration among City Authorities

New York City Department of Transportation

The Challenge

With a staff of over 4,000, The NYC Department of Transportation oversees one of the most complex urban transportation networks in the world. NYC DOT staff manages approximately 5,800 miles of streets, sidewalks, and highways and 789 bridge and tunnel structures.

As part of a citywide initiative to facilitate information sharing and collaboration among local emergency service organizations, the DOT sought ways to share the video information from its network of traffic cameras with other agencies and city authorities. In crisis situations, the information needed to be accessible in real time, allowing a coordinated joint response to be executed quickly and effectively among police dispatchers, fire departments, medical services, etc.

Achieving these improvements required a new means of providing connectivity among the organizations affected for the sharing of video information. As these groups' facilities were not connected to the existing DOT analog system, it appeared that new underground cable infrastructure would be needed throughout the city. Beyond the high costs of such a massive months-long construction project, it meant that public daily life would be interrupted as well.

To preclude the need for new street-level network construction, the DOT sought a system that would utilize existing system connectivity and would provide a high level of reliability, excellent picture quality, and cost efficiency. The VITEC EZ TV IPTV system was identified as the ideal solution.

The VITEC Advantage

The selection of VITEC EZ TV gave NYC DOT a solution that eliminated the need for bricks-and-mortar construction, using existing fiber and broadband connectivity to serve as a digital video delivery infrastructure. EZ TV provides the agency with a powerful video distribution solution for up to 5,000 concurrent users, encoding, managing, and delivering hundreds of live video feeds from street and traffic cameras.



At the heart of the system are the VITEC MGW 5100 Video over IP Streaming Platform and the VITEC H.264 Real-Time Encoding Module, supporting real-time processing of digital and analog camera feeds with low latency compression and streaming in MPEG-4 H.264 Format. The IPTV signal is fed directly to PC workstations, as well as to laptops and plasma screens equipped IP set-top-boxes (STB). Additionally, VITEC decoders make the video accessible over existing analog closed circuit TV systems in public facilities throughout the city.

To reduce video artifacts typically generated by remote traffic and surveillance cameras, VITEC's advanced pre-processing and filtering technologies provide high picture quality with low bit rates, and optimized utilization of system bandwidth.

The VITEC EZ TV IPTV system gives the DOT a resource-effective system for the distribution of live digital video feeds, managed by a highly adaptable and resource-efficient administrative toolset, and providing intuitive, easily configurable information monitoring options for end users. The industry-leading VITEC viewer GUI enables end users to monitor 1, 4, 9 or 16 simultaneous streams in easily configured onscreen windows.

With the VITEC EZ TV IPTV system in place, the city's emergency services organizations can now choose from hundreds of real-time feeds from cameras throughout the city. This instantaneous sharing of information facilitates real-time collaboration among agencies.

The result is that police and firefighting personnel, as well as traffic control and other emergency response resources, can now efficiently view any video feed available to DOT using the powerful VITEC PC-based video player as well as TV monitors and plasma screens in command centers, fed by IP decoder set-top- boxes.

Advanced IPTV Services

VITEC EZ TV's advanced features give emergency response agencies new options for assuring staff readiness. EZ TV's video recording and Video-On-Demand (VOD) capabilities give NYC DOT powerful new tools for realistic situation assessment training, scenario management exercises, and other skills development objectives.

In addition, the VITEC IPTV solution allows for cost-effective upgrades to High Definition (HD) broadcasting with low bit rate H.264 HD streams.

With its deep experience in video delivery systems, VITEC is positioned to provide state-of-the-art IPTV solutions that are specifically designed to meet current and future needs of emergency services agencies.

Key Benefits

- ❖ Fast deployment - Pre-integrated system enables effective deployment with any network size
- ❖ Reliability - Carrier class systems provide comprehensive redundancy, guaranteeing no single point of failure
- ❖ High picture quality at low bit rates - High quality H.264 video compression for broadcast quality without compromising bit rates
- ❖ Centralized management - IT administrators can easily manage remote access, content, and player distribution
- ❖ Unified user management - HTTP management application integrates with existing Microsoft Active Directory business rules to manage secure user access
- ❖ Browser-based architecture - Provides immediate access to all content, via a web browser, from every desktop throughout the system.
- ❖ Powerful player - The EZ TV PC player offers advanced capabilities, such as VOD support and multiple window mosaic views in HD/SD MPEG-1/2/4, H.264 and other video formats
- ❖ Dynamic channel guide - Users view up-to-date channel listings, with channels grouped for ease of use. Built-in tools simplify administrative tasks and automate content listing updates

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