

Market View: Enhancing Military Communications

Providing the tools for real-time decision-making in critical situations

The Challenge

Armed Forces must be prepared to conduct a wide range of operations from conflict prevention to counter-terrorist operations to high-intensity war fighting. Critical to successful military operations is the dissemination of information to and from the field.

Video footage can provide a wealth of information to support decision-making in critical situations. However, the transmission of video to, from and between field troops has traditionally been difficult because of network bandwidth issues.

The communication networks in place for voice and data communication are often not sufficient for transmitting video while upgrading or increasing the bandwidth on the existing networks can be an expensive and lengthy project.

Deriving the Full Benefits of Advancing Technology

Advancing technology has made the transmission of high quality video over narrow bandwidths possible. Unique compression technology from Visual Defence allows video to be sent and received over existing military communications infrastructure like tactical RF radio, cellular or satellite networks without compromising video quality. Secure authentication and authorization procedures ensure that video is kept secure.



Transmitted video can be viewed on a wide range of devices (e.g. tablet PC's, laptops, rugged iPAQs and cellular phones).

This technology allows armed forces to incorporate video into military operations and communications to enhance the quality of information.

Incorporating Video into Military Operations and Communications

Video can be incorporated in a number of ways to best support military defence. Cameras located in strategic fixed locations as well as cameras on vehicles, drones and even troops can augment other sources of information.

With video from those cameras pushed to hand-held devices, field troops are able to verify information and make better informed decision in critical situations. Additionally, sharing video between troops or between troops and commanders offers an additional layer of decision making support.

Imagine how much better prepared troops who have the ability to view a scene before actually entering will be.

The Platform for Video Enhanced Communications

Video Management

With a potentially unlimited amount of video information coming from multiple sources, the need to manage video efficiently is paramount to the effectiveness and usefulness of the incoming information. Visual Defence's Virtual Matrix System (VMS) platform allows for comprehensive video management to ensure that the viewing, transmission, dissemination and recording of video truly supports your operation.

VMS provides the ability to integrate multiple distributed video sources. The solution is fully scalable and provides layers of redundancy to meet the most demanding requirements while supporting legacy equipment to operate in hybrid and distributed networking environments.

Video Analytics

VMS seamlessly integrates with video analytics to detect elements such as motion detection, directional movement, left baggage or people counting.

Digital Video Storage System

The Digital Video Storage System is an advanced storage and filing system that allows audio and video from multiple sources and multiple compressions to be easily queried and viewed. It also employs a unique video authentication tool that will detect video tampering of any image.

VDEye

The Visual Defence Eye is a designed for streaming video over narrow bandwidths to allow the ability to access video data on a wide variety of devices including laptops, tablet PCs, rugged PDAs, stationary PCs as well as a range of cellular phones,

As a highly secure and reliable solution, the VDEye is suited to critical activity environments, particularly mobile military devices. To make the use of video most beneficial however, sophisticated video management is essential.

Combine Video with Complementary Systems for Increased Command and Control

Command and Control Center (3C)

3C is a common management platform providing defence clients with a customizable and scalable solution to converge physical security subsystems into one easy-to-manage system.

Its ability to integrate and manage third-party systems suits the needs of military defence by consolidating a vast amount of information from various sources and presenting it a way that will draw an operator's attention to the most critical information.

3C is an intuitive system that combines the VMS (described above) with an event management and response module, a mapping module and a VoIP intercom management module.

Event Management and Response

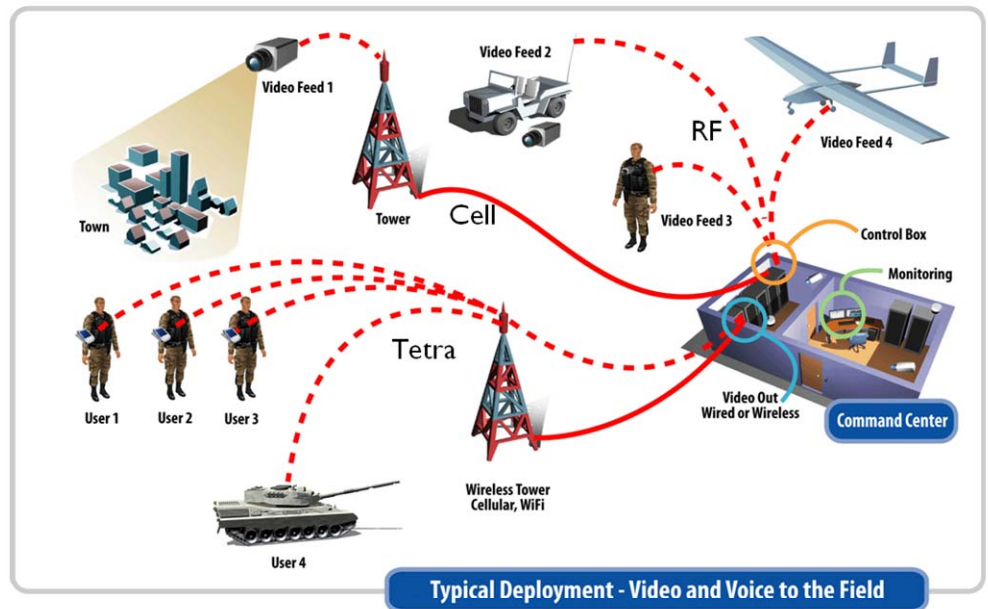
The event management and response module displays notification of an alarm indicating alarm type, description and priority. Alarms can be generated by any integrated subsystem. The associated predefined procedure for responding to the particular alarm also appears on this screen to guide the operator through the required response actions.

Mapping

The multi-level mapping module is designed to respond to alarms (i.e. intruder alarm) from the event management system, instantly 'popping up' a map with an alarm icon to indicate the location of the alarm. The operator also has visual representation of nearby cameras and can double click to display for fast alarm verification.

VoIP Intercom

The Intercom Management System (IMS) is a standards-based VoIP Intercom solution. IMS integrates voice, image and data into one cohesive solution allowing for the ability to communicate across vast distances over the network.



Typical Deployment - Video and Voice to the Field