

Case study

Integrated City Surveillance

Panama City - ThruLink™ brings it all together



Background

The Panama City Surveillance project is part of a national public safety system plan created by a presidential edict. Panama's executive government felt that in order to improve the country's economy it was imperative to establish a comprehensive public safety system. The integrator called to duty was Cable & Wireless (C&W), the multinational telecommunications giant. C&W was uniquely qualified to provide the system as a turn key solution to Panama's National Police; they have the network infrastructure and the manpower necessary to execute it in the time frame allotted. A total of about 580 cameras have been deployed thus far.

Challenges

The biggest challenge was to effectively deploy a high quality, full frame rate CCTV system on a public telecommunications system across multiple network platforms (MPLS, ADSL and Ethernet), which spread out through the entire country using hundreds of nodes, and operating under high data and voice traffic. A second challenge was to allow C&W to perform network maintenance and troubleshooting using their standard resources.

Our Solution

From the outset, the chief design consultant and the integrator C&W were convinced that the best possible solution optimized video compression and quality using Constrained Variable Bit-rate (CVBR). CVBR ensured uniform usage of C&W's network bandwidth, and allowed them to properly estimate the network load at peak times. However, because the selected IP-CCTV System uses UPnP Protocol to discover the video monitoring and recording system devices on the network, it was necessary to create VLANs and VPNs, thereby encapsulating all of the system's components' data traffic inside their own separate virtual network. This would enable C&W to perform system diagnostics and troubleshooting without interference from other elements external to the system. ThruLink™ enabled the VLANs (Virtual Local Area Networks) and VPNs (Virtual Private Networks), encapsulated the traffic and encrypted the data frames, making the video streams virtually invisible to an outsider.

The Results

Using ThruLink™, C&W was able to efficiently create VLANs across its Wide Area Network, simulating LAN characteristics. Effectively, ThruLink™ has the system operating as if it were entirely located inside one facility instead of being spread out throughout the entire country. The result, arguably, is simply the best video quality of any countrywide IP-Video system. The National Police is extremely satisfied with the video system's quality; their ability to control cameras through the system's Mapping GUI (Graphical User Interface) tool and with its virtual matrix features.

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