

## Case Study: NCIS Deploys Broadband Satellite for Terrorism Exercise

### Overview of U.S. Naval Criminal Investigative Service (NCIS)

The U.S. Naval Criminal Investigative Service (NCIS), is the Department of the Navy's primary law enforcement and counterintelligence arm. NCIS needs the ability to quickly set up high-tech operations centers at major crisis scenes across the globe, sometimes in areas where communications can be a challenge. Previously, the NCIS investigated the attack on the *USS Cole* in Yemen, and they want to be ready to face communications challenges going forward in areas such as the Middle East or Iraq.

### The Challenge

In May of 2003, NCIS' Washington, D.C.-based Field Office Major Case Response Team staged a mock car bombing at the Center for National Response, a new counterterrorism training facility in West Virginia. Called "Operation Rubble Pile," the scenario involved teams of emergency and NCIS personnel combing through the smoke and destruction of a roadway tunnel.

The facility was built with different "sets" able to simulate different kinds of weather and crises such as a highway tunnel accident, the rubble left by a massive explosion, or a chemical agent laboratory. NCIS needed to relay information and video on the situation and exercise back to the agency's Washington DC headquarters. Wesley Fox, an NCIS Special Agent with the Technical Services Division stated, "We wanted to send live video images so that our entire leadership in Washington DC could view the actual incident scene and our response, and make real-time decisions based on what they were seeing."

### The Solution

NCIS set up two pan-tilt-zoom IP video cameras at the crime scene, which were connected to a video server and a Tachyon Quick Deploy LAN and satellite dish. Tachyon's transportable Quick Deploy unit allowed NCIS to send real-time streaming video from cameras mounted at the scene back to the agency's Washington DC headquarters. Tachyon's system sends the video to the Customer Premise Equipment (CPE) over commercial Ku-band satellite transponders. The CPE is the remote connection to Tachyon's high-speed network and includes a satellite dish with integrated transmit/receive electronics, and Tachyon's Indoor Unit. The information is then sent through an Internet backbone to Tachyon's Gateway which consists of a satellite antenna, transmit/receive electronics, modem and processing electronics, server computers, and data networking equipment. Standard hardware and protocols are employed in the Gateway to ensure end-to-end transparency and compatibility. From the Gateway, the information is then sent on to the customers LAN.



## The Results

“We chose Tachyon partly because of its uplink capability,” Fox said. “Most satellites provide a high-speed downlink, but we were actually pushing this video data up from the remote site to the Net, so we needed the reverse channel to be high-speed as well.” Fox said Tachyon’s portability and ease of use were also important factors in their decision. “The Quick Deploy unit was perfect for us because it transports easily and you can get it running within 30 minutes,” he said. “It was very simple to align the dish and get a good signal – it’s an out-of-the-box type of setup that needs little training. We could run a Web server or a media server on the scene if we wanted to



stream the video or set up a multi-cast. And we were able to have people all over the country viewing the scene over the Web, but the main audience was the command post at our Multiple Threat Alert Center in Washington,” Fox said. “They were able to watch the exercise unfold live, as well as the response effort on scene. We also transmitted large files via FTP from the scene – we published streaming video onto a Web site we had designed for this scenario on the Web server at our tech office in Norfolk, Virginia.”

Tachyon’s system also enabled NCIS staff to access high-speed Internet and intranet data on their laptops from the crime scene as they gathered evidence and began a mock investigation with other law enforcement agencies. Tachyon performed so well that the NCIS hopes to procure other Quick Deploy systems for its forward deployed offices and mobile command post trailers, as well as to possibly provide backup Internet connectivity for some of its field offices.

## Moving Forward

Beyond the advantages of delivering data to and from a crisis site, Fox said satellite connectivity can fill several NCIS needs. “In other situations, a Tachyon setup could relay surveillance video from sites that we need to monitor live,” he said. “If we can set up an IP-based camera with a satellite and relay the signal a 24-7 staffed location, that will save us manpower by not requiring a physical presence there.” Fox said NCIS could have saved money by using satellite broadband at the recent commissioning of a ship in Norfolk, where a T1 line had to be purchased at high cost in order to run their IP cameras web casting the event.

In addition to surveillance, Fox said NCIS could use Tachyon satellites to provide Internet access to its Special Agents in remote places. “We can use it in places like Iraq or elsewhere in the Middle East, where we have Special Agents, to give them communications and email,” Fox said. “It’s the sort of thing you can take to almost any location and right there, you’ve got a connection back to the States,” he said, “even if it’s in a tent in the middle of the desert.”