Equipping Responders for the Hot Zone

The UK's Hazardous Area Response Team partners with Excelerate Technology and iDirect. The result: a satellite network that provides first responders with high-speed connectivity to treat disaster victims onsite.

In the critical moments immediately following an emergency, information exchange is vital. Reliable, real-time access to voice, video and data services for first responders can be the difference between life and death in a situation when every second counts.

Today, thanks to a satellite communications network built by Excelerate Technology around iDirect's satellite-based IP platform, the UK's Hazardous Area Response Team (HART) is gaining an edge on emergency response. The broadband network has equipped first responders with mobile connectivity, allowing them to respond more effectively and enhance patient care at major incidents.

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David Savage
CEO, Excelerate Technology

*i*DIRECT

A Lifesaving Connection

Immediate treatment

HART trains its paramedics to respond to major disasters including terrorist events, natural disasters, chemical and biological incidents, or large-scale accidents of any kind. The duty of these specially trained responders is to reach patients as soon as possible and begin immediate treatment in the 'hot zone' – the dangerous center of the incident.

These teams must quickly and accurately transmit critical information back to command centers, regardless of location or access to traditional communications support. To facilitate this, HART required a mobile solution capable of consistently providing the necessary bandwidth to support a full range of mission critical applications – within minutes of arriving at an incident scene.

In 2005, HART approached iDirect partner Excelerate Technology, the leading supplier of satellite broadband solutions to the UK's Emergency Services, to develop a solution.

iDirect's platform is relied on daily by many first responder agencies for secure satellite broadband connectivity completely independent of terrestrial infrastructure. With the iDirect platform, responders gain the ability to communicate seamlessly in densely populated urban areas where incidents may have damaged the existing infrastructure, or in remote and isolated locations where no infrastructure exists.

High-speed communications access inside an MIRV allows HART paramedics to assess and treat patients at the scene.

A Reliable, High-Speed Network

A HART MIRV joins the Royal Berkshire Fire and Rescue Service on the scene of an incident.

Next-generation response

With iDirect's satellite-based IP communications platform providing the backbone of the network, Excelerate equipped Mobile Incident Response Vehicles (MIRV) with satellite connectivity. Each MIRV instantly provides voice, video and data access to expert personnel at other locations around the world for backup and support, and allows HART paramedics to manage treatment at the scene more efficiently.

From body-worn and vehicle-based camera systems, paramedics use the network to transmit live video of an incident scene for secure viewing by authorized personnel from any location. The network provides a cellular backhaul solution for Voice over IP (VoIP) and private GSM traffic between command centers and field teams. Data connectivity provides responders with a way to quickly and securely receive or transmit critical information.

"The iDirect satellite IP platform is central to the mobile broadband solution we developed for HART," said David Savage, CEO of Excelerate Technology. "We've found iDirect technology to be ideal for mission critical situations where fast deployment, reliability, ease of use and efficient bandwidth utilization is essential."

iDirect's satellite routers are designed for easy deployment and combine a flexible satellite networking platform with advanced Group Quality of Service (QoS) and prioritization capabilities. Not only can Excelerate prioritize voice, video and data traffic over the HART network, but with iDirect's state-of-the-art Group QoS, Excelerate can determine traffic prioritization across multiple vehicles, applications, remotes and sub-networks simultaneously, adding a new level of granularity for simpler network management.

A New Strategy For Response

Success in action

The HART network was recently put to the test during a chemical contamination at a UK mall. When shoppers at Birmingham's Bullring shopping center complained of dizziness, nausea and difficulty breathing, the West Midlands Ambulance Service deployed HART to the scene.

With at least 50 shoppers and mall staff requiring treatment from a suspected petrochemical-based contamination, HART was able to remotely access medical consultation via the command MIRV's mobile broadband network and treat numerous victims at the scene for immediate discharge.

By facilitating medical assessment and treatment on the scene, HART helped prevent response teams and vehicles from becoming overwhelmed with hospital transport, and patients from incurring costly ambulance trips and hospital visits.

Based on successes like this, HART is expanding the program nationally. The organization has already tapped Excelerate to develop new fleets of MIRVs.

Today, emergency responders rely on satellite as part of their standard communications strategy. Thanks to Excelerate's mobile broadband solution developed on the iDirect platform, HART is now extending connectivity into the hot zone to respond faster and more effectively.

Rapid Expansion

The initial success of the program is spurring high demand in the region:

♦ Five sets of HART ambulances have already been delivered to the UK

♦ Expansion plans have already increased the contract size by 50%

♦ At least 15 sets are planned for service by Spring 2010

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