HotSpot in a Box with 3G to Wi-Fi Router Aids Disaster Response and Management

By David R. Ahlgren

When there are mass casualties in a terrorist attack or natural disaster, the ability of first responders to save lives depends on cross-agency situational awareness and coordination of their emergency response and management activities.

Instant access to reliable communications at the individual responder level is required, but unfortunately communication is often impaired by incompatible inter-agency voice radios and lack of a personal access to broadband IP data networks.

Enter the 'great communicator' – wireless IP data networks that provide low cost, person to person communication and access to the worldwide Internet. This capability enables instant voice, data and video communication through advanced technologies such as VoIP, digital video and solutions for bridging cross-agency command and control systems through XML/ SOA technologies.

These advanced technologies provide rescue specialists access to resources and knowledge that support of complex and dangerous operations and can save lives when applied during an emergency response.

Today we are fortunate to have 3G to Wi-Fi routers such as the Kyocera KR1 and Linksys WRT54G3G which are the ideal devices to form the backbone of today's on-site emergency response communication network. The 3G to Wi-Fi router is a two-in-one device that not only can create a communication 'bubble' or Wi-Fi Hot Spot over the disaster site, but also provides a broadband Internet connection with it's 3G broadband wireless capability. There are many 3G routers and modems to chose from including the Junxion JB-110B, Top Global MB8000; Airlink PinPoint, Sierra MP 595 GPS and the are compatible with GSM (GPRS, UMTS, HSPDA) and CDMA (EVDO, Rev A) cellular broadband data networks.

The Wi-Fi Hot Spot provides a WLAN (wireless data network) for voice, video and data communication between individuals and agencies, while the 3G Internet connection enables real-time, worldwide, two-way situational awareness.

Clearly, Wi-Fi enabled PDA's, phones and laptops, both low cost and ubiquitous, are the wireless technology of choice for enabling virtually all team members to participate as a contributing member in a common situational awareness.

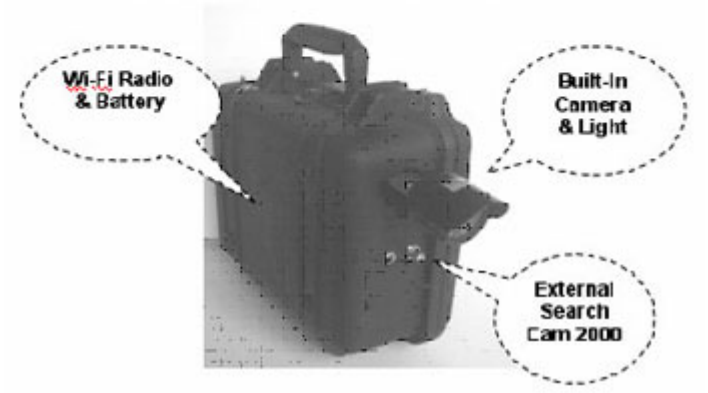
Entrée Wireless develops and manufactures ruggedized, man portable, battery powered products for Mobile Communication Systems. These products are designed to establish communication networks and improve voice, data and video communications at temporary and emergency sites. They can be deployed in a matter of minutes by simply turning on the switch.

Products include the Warrior HotSpot in a Box a 3G to Wi-Fi Router, portable mesh networks for very long range Wi-Fi and a variety of battery-powered video cameras in the Mobile Video System (MVS) family.

The heart of the communication system is the Warrior HotSpot in a Box (WBH-xxx series). This device offers extended range antennas, a rugged water resistant case, a 20 hour battery and a built-in high speed multi mode charger. www.EntreeWireless.com

The Mobile Video System (MVS) family of battery powered products include a Wearable Video Camera, a Portable Video Camera and the Video Control Consol for recording and display of video. See below for details.

Wi-Fi Mobile Video Camera



An Entrée Wireless Mobile Communication System was deployed at the recent "MOBEX joint disaster exercise" held at a simulated building collapse at the shuttered El Cajon Valley Hospital, El Cajon, California. MOBEX was organized by the San Diego Urban Search & Rescue (US&R) CA-Task Force-8 and the Disaster Medical Assistance Team (DMAT CA-4), with participation by the Riverside County US&R CA-Task Force-6. More than 200 individuals were involved in a series of day long 'rescues'.

Here is the Mobile Video System in action at the entrance to a building where a 'simulated' car bomb has exploded and a 'heavy lift' rescue deep inside the collapse is required. Clearly this is a dangerous environment where rugged and reliable equipment communication equipment is required. The Warrior HotSpot in a Box is on top of the car and creates a Wi-Fi Bubble over the area and provides Internet access over 3G wireless. The Portable Video Camera is being carried into the building and the Wearable Video Camera is on a rescue worker crawling inside the building. The video signals from these two cameras are connected via the Wi-Fi Bubble to the Video Control Console for recording and viewing.

The exercise included a full field medical triage center and some highly realistic casualties.

About Entrée Wireless – The originator of the Warrior HotSpot in a Box and a leading provider of mobile technology solutions that support first-responders and mobile-workers. Products include remote/battery powered systems, mobile video systems, mobile wireless gateways and mesh and sensor networks designed for police, fire, search and rescue, paramedic, SWAT, FBI, military and other government agencies. Complete hardware and software development services are offered. www.entreewireless.com

About DMAT CA-4 - San Diego Disaster Medical Assistance Team Provides emergency medical assistance in the event of a significant man-made or natural declared disaster. The medical team is designed to be self-sufficient in a disaster area for up to 72 hours and enables physicians, nurses, EMTs, paramedics, communications specialists and other allied personnel supply medical care in an austere environment. http://www.dmatca4.org

About US&R - If you have a major disaster in your community, Urban Search & Rescue (US&R) is on the scene to help. US&R is a rapid deployment team consisting of 70 technical rescue, and incident management specialists. The San Diego US&R Task Force 8 is specially trained to assist local agencies throughout the nation in mitigating large scale urban disasters, both natural and man-made. The San Diego teams' expertise is "confined space search and rescue" where structures have collapsed. Some of the incidents the San Diego team members have responded to include: the Northridge earthquake, the Oklahoma Federal Building Bombing and several Hurricanes.
http://www.sandiego.gov/fireandems/about/urban.shtml

About NDMS – The National Disaster Medical System (NDMS) is a section within Federal Emergency Management Agency in the U.S. Department of Homeland Security. It is responsible for supporting federal agencies in the management and coordination of the federal medical response to major emergencies such as federally declared disasters and disasters which exceed the capability of local and state resources. http://ndms.fema.gov - end -