inmarsat government

Always on the Scene

How Inmarsat Government SATCOM Solutions Help Ensure Critical Communications in Times of Disasters

FIRSTNET®

Critical SATCOM for First Responders

Watching a disaster unfold on television triggers an assortment of emotions – with many images difficult to watch. But to arrive at a devastated region in-person as a first responder? The impact cannot be described. You are surrounded by victims who need medical attention and food and water while in a desperate state to find their loved ones.

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In providing relief, first responders must focus on these victims, without worrying about whether they will be able to communicate with commanders at another site and send damage-related video and data to them. Nor should first responders be expected to have a detailed mastery of how a communication system works. The mission is about assistance and relief, not communications set-up.

But reliable, easy-to-install and operate communications amid such circumstances can be a fleeting commodity. In normal times, we consider cell phone coverage as ubiquitous – a given. Yet, that is not so at a disaster scene, where local terrestrial infrastructure and mobile phone networks are often overloaded, damaged or non-existent.

That is why Inmarsat Government satellite communication (SATCOM) services are critical in these situations. Inmarsat Government is the official provider of Satellite Solutions for FirstNet, and we are always there to provide the "First In/Last Out" proven SATCOM capabilities that responders depend upon. Through our SATCOM solutions, users acquire instant voice, data and video services in critically-hit areas – regions where traditional terrestrial and cellular networks sustain damage or get overloaded – using equipment that is often as simple and easy to use as cell phones, and small and light enough to store in a backpack. Inmarsat's narrowband and wideband SATCOM solutions have proven themselves – over and over again – as irreplaceable in delivering unique capabilities anywhere in the world.

Among all of the video and photographic images that our team has seen after the countless rescue missions we have assisted with, one in particular stands out: When Typhoon Haiyan struck Southeast Asia in 2014, responders were able to set up Inmarsat terminals quickly and easily. In the moment, someone took a

Satellite Solutions for FirstNet

FirstNet is dedicated to transforming the way first responders communicate. This includes not just a broadband LTE network, but also advanced satellite-based communication systems. Inmarsat Government-provided FirstNet SATCOM services deliver voice, video and data via direct access over satellite. Solutions available range from individual-use satellite phones to portable or vehicle-mounted solutions across all FirstNet states and territories, including rural areas.

Reliable, Flexible SATCOM

“First In/Last Out” easy-to-use, reliable and interoperable satellite connectivity – there for you when and where you need it

photograph of a crew at work with one of the terminals – with a cell phone tower literally bent in half next to them. The image demonstrated that, as much as we take cell phone coverage for granted in our day-to-day lives, we cannot assume it will “be there” during a disaster. However, throughout these events, responders rely on SATCOM services that address coverage needs and are easy to operate.

Ubiquitous Mobility

Responders must stand ready to get on a plane, ship or a vehicle and head to anywhere in the United States, its territories or even in the world with little to no advanced notice before moving into a location to work under extremely challenging conditions. Taking time to arrange for the shipping of gear means time taken away from the mission, so nothing beats the benefit of a small, highly portable terminal that can be quickly packed and transported for travel.

Thus, when they mobilize, crews depend upon Inmarsat Government SATCOM, because of its mobility and portability, no matter when and where the mission takes them. Communications are essential, but it is not the most important item competing for precious cargo space. Our BGAN terminals are small enough to swiftly pack, travel with and set up literally in minutes, anywhere they are needed – a

key “First In” capability during the initial 24 hours on the scene.

For longer-term requirements, the crews turn to high-throughput systems, such as Inmarsat Global Xpress, which delivers BGAN-style ease of operation, in wideband very small aperture terminal (VSAT). Ka-band terminals ATOM65GX and Explorer 8100GX are vehicular VSAT antennas that offer higher speeds and can be used by more users. From the moment the transit case is opened, connectivity is established in under seven minutes with minimal operator interaction. Once online, committed information rates (CIRs) with 99.5% availability pave the way for mission success. With Global Xpress, users are able to meet the expanding and increasing demands of their mission, such as high-speed internet and video streaming, until they are the “Last Out” of the region.

Ease of Installation/Use

As indicated, public safety organizations and first responder units must focus on the mission at hand. Inmarsat Government allows them to meet their immediate, key objectives through SATCOM capabilities that require minimum installation for use – users are up and running within a few minutes. And they do not need to undergo hours or even minutes of training to take advantage of BGAN and Global Xpress, because they are end-to-end systems delivered by a single operator with ease-of-installation and use in mind. This speaks to our dedication to SATCOM as a Service, enabling first responders to spend minimal time installing, troubleshooting and configuring, and all of their time on the mission.

Use case

Inmarsat Government installed a Vehicular Network System (VNS) on the Pennsylvania National Guard's Command trailer. VNS combines the best of LTE and satellite for true "go-anywhere" vehicle connectivity. By using VNS the Pennsylvania National Guard can deploy to a disaster anywhere in the U.S. and connect with local first responders. The system creates a 150-200' Wi-Fi hotspot outside of the trailer and connects to local networks. The router selects the connection based on rules set by the National Guard and whenever LTE coverage is unavailable.

Bandwidth on Demand – Anytime, Anywhere

In assessing damage and casualties, responders must connect to command and control center operations as well as restore communications for local members of the community. This level of communication requires high bandwidth availability for seamless voice, data, image and video transmissions for a variety of applications. With Inmarsat Government SATCOM, those running the command and control center operations, for example, dynamically allocate voice and data sources to where the most is needed in real time. They transfer live video streams from affected areas back to the center so they can observe and advise.

IP-Based Voice and Data

Inmarsat Government's IP-based SATCOM encompasses full-scale satellite networks and redundant ground systems, optimized for first responder customers. We design IP addressing constructs for the IP equipment, including satellite modems, convergence routers, switches and firewalls. We allocate IP addressing schemes based on customers' needs. We manage the allocation through the network, with complete portability of IP addresses assigned to any given remote satellite modem, allowing for seamless transition between satellite access stations.

End-to-End Managed SATCOM

It is not just the components that distinguish Inmarsat Government managed network services. It is the way Inmarsat Government custom-designs the network for first responders' unique needs. And then manages it completely from end-to-end, so users can rest assured about security and reliability. Inmarsat Government's proven end-to-end communication solutions encompass the design, implementation and lifecycle management of a scalable, hybrid satellite and terrestrial network that delivers highly secure, reliable IP connectivity and configurable bandwidth to support applications and services. By working with Inmarsat Government, customers have single-source access to our integrated and scalable network hardware and services anywhere in the world, as our Network Operations Center team is U.S.-based, certified and cleared and available 24/7/365 with just one phone call.

About Inmarsat Government

The U.S. government and first responder community has relied on, and trusted, Inmarsat satellite services since 1979. Inmarsat Government continues to deliver the world's most advanced global, mobile satellite communication services to U.S. defense, intelligence, homeland security, public safety and civilian agencies, with highly reliable, secure and affordable connectivity. Built with government users in mind, Inmarsat Government provides resilient, flexible capabilities to augment government satellite resources, anytime, anywhere. Leveraging an industry-leading scalable multi-band network infrastructure, Inmarsat Government offers a suite of managed network services and end-to-end communication solutions to support users on land, at sea and in the air, even in the world's most remote regions. Headquartered in Reston, VA, Inmarsat Government is a wholly-owned subsidiary of Inmarsat plc. For more information, please visit **inmarsatgov.com**.