Smarter Satellite Communications

How Humanitarian Operations Can Implement the Most Effective and Cost-Efficient Communications Solutions

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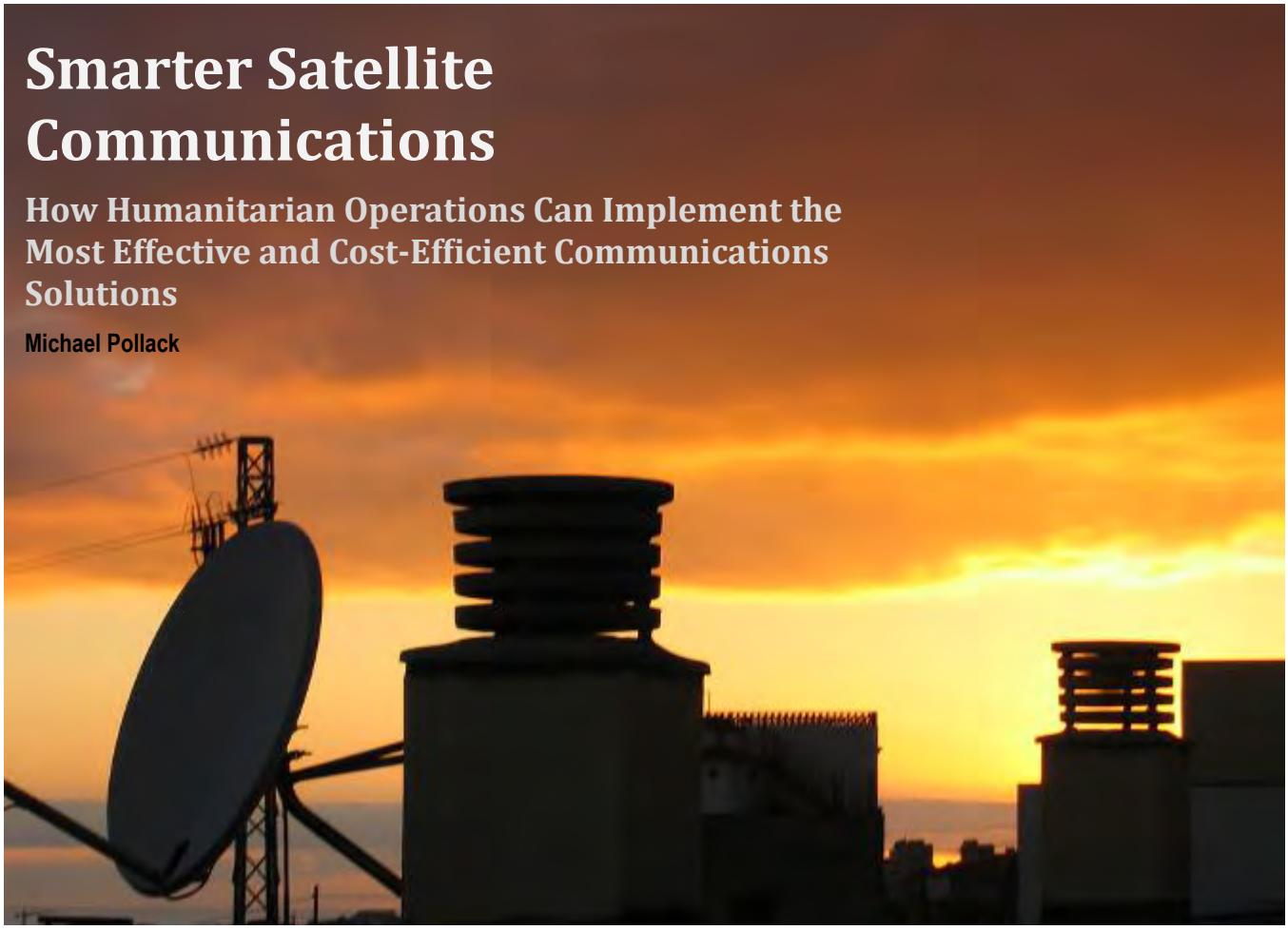

WHETHER a natural disaster has occurred, a famine is underway, or a war has displaced civilians, reliable access to global communications is vital to the ongoing and complicated logistics, operations, and management of humanitarian operations. From the very moment the first relief worker sets foot on the ground, there is an immediate requirement for robust international communications. The quicker relief agencies can deliver analysis and assessment of in-country conditions and needs, the more likely the correct plan can be implemented to ensure the success of the humanitarian mission.

With lives, livelihoods, and even entire cultures at stake, the underlying need for a range of stable communications options is essential to international relief operations. Yet by their very nature, these events happen in parts of the world ill served by wireline or cellular terrestrial telecommunications, either because of their rugged, remote, or hostile locations or the course of the disaster has eliminated any existing system. Compounding the lack of a working infrastructure is that today's communications require high-speed connectivity. Videos and photos can relay the damage or devastation far better than voice or text, but these bandwidth-hungry applications can pose technical and economic challenges.

The only viable solution for these circumstances is satellite communications. Its ability to provide broadband global communications in the most remote, desolate, and devastated circumstances offers aid agencies instant infrastructure for voice, video, data, Internet, and fax services. Satellite communications enables full-service reliable communications that can reach any place on the globe.

Know That There Are Options

Companies, such as UltiSat, can help aid organizations make smart, economical choices about how best to integrate satellite communications into relief operations. Costs are certainly a concern to everyone, but they perhaps loom largest in the arena of international aid where every extra dollar saved on administration can be put to better use forwarding the goals of any humanitarian mission. Satellite communications has the

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reputation of being costly, but well designed systems and deployments can provide humanitarian organizations with cost-effective and reliable global networks that can transport any kind of communication.

When considering satellite communication solutions it's important to consider that the options are a continuum ranging from a single handheld phone to a fixed mounted antenna, known as a very small aperture terminal (VSAT). Each option has advantages in different circumstances. As you move along the continuum, the initial costs of hardware and installation increase, but the cost of use, usually measured by minute (or megabyte) drop dramatically, generating savings that can very, very quickly outstrip the one-time costs of the equipment.

For example, a single user phone might rack up charges of several dollars for every minute of use, but a VSAT dish installation offering "all you can use" at a fixed rate for many users easily drops usage costs to pennies per minute.

Factors To Consider

When considering the different hardware technology options on this continuum, there are a number of factors to take into account, among them:

- Length of time the anticipated aid operation will take
- Number of users coming and going over time
- Types of uses—service needs can include voice, data, fax, Internet, streaming video (two -way "Skyping" or movies) and more
- Predicted volume/frequency of communications use—even frugal users find that "only when necessary" guidelines quickly fall to the more pressing, real-world need for information exchange
- Morale-enhancing communications with friends and family
- Relative mobility—consider if you will be staying in semipermanent conditions, moving around the country

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Communication Choices

Working with a quality satellite communications solutions provider, will offer a clearer picture of which satellite communications technology options will be most effective and cost-efficient for each of your specific needs.

Satellite phones

These provide instant voice communications and mobility the moment you land in country, but provide limited data and are much more costly for long-term use

Broadband Global Area Network (BGANs) or ThurayaIP

Portable terminals that provide voice as well as laptop Internet connections, fax, and other moderately demanding data services. Like phones, they are easy to use and provide instant service without permanent installation, but are also very costly for ongoing use

Integrated Kits (office in a box)

Fitting into carry-on cases, these all-in-one solutions provide a wifi network and instant connectivity via BGAN. As with other "pay-as-you -go" solutions, they offer excellent initial services and a cost-effective wifi ability, but are costly over time and do not provide broadband capabilities.

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Flyaway VSATs (very small aperture terminals)
Portable satellite dishes that provide cost-effective broadband for multiple users. While the equipment is more costly, they can quickly pay for themselves and are easily transported from place to place.

Fixed VSAT dishes
These are robust and cost-efficient options that provide unlimited broadband use to larger groups of users. High-speed connectivity provides VoIP, data, video, fax, Internet, and IP application services simultaneously. While requiring installation and are more costly upfront than phones, BGANs and integrated kits, they provide extremely reliable, versatile, and economical service for the long term.

One-Stop Shopping

There are a wide variety of satellite communication solutions providers and unless you are absolutely certain of the specific solution that's best for you, it may be advantageous to speak with a provider that can offer the entire range of satellite services from handheld phones to powerful end-to-end networking capabilities. This will allow you to design and implementation plan that accommodates all phases of your operations, yet offers the simplicity and convenience of a single vendor for service and billing.

Factors to consider in selecting a satellite communications solutions provider include:

- Speed of deployment or installation, often a factor of company size and flexibility, as well as having preexisting resources on the ground in or near your desired location
- Similarly, availability and quality of local field service—how far away is it? How skilled and reliable are the technicians? Can they offer host-country approval and licensing expertise?
- Location and availability of "help desk" resources, often housed at a network operations center (NOC)—in whatever country are they located? Who is staffing them and what is their expertise level? What languages do they speak? Are they available 24/7?
- Network reliability and uptime—most suppliers claim 99.5% or higher; if yours doesn't it could be a red flag.
- Network monitoring—companies that invest in diagnostic and troubleshooting tools not only tend to maximize uptime but also head off issues before they arise and optimize bandwidth and keep overall costs lower

More Cost-Efficient Satellite Communications

There is little doubt that satellite communications capability is an absolutely vital tool for any international aid or relief operation. It provides instant communication to the rest of the world from even the most remote spots on the planet. It provides your people with morale-boosting opportunities from more frequent family "visits" to engaging in social media to access to pragmatic, but important, tasks like paying bills. It can let those affected by a disaster connect with family to reassure them that they are alive and well. Plus, it can provide an instant back-up if any usable local infrastructure is damaged or made inaccessible due to weather, natural disaster, sabotage or conflict. The scalable, global, and ease-of-use nature of satellite communications offers maximum flexibility and economy, enabling any aid organization to get the full benefit of the technology while still working to maximize the effectiveness of every funding dollar. ■

Photo: Portable satellite communications. Credit: Sgt. Russell Gilchrest, The U.S. Army, Flickr