Expert: Igor Kryuchkov

Title of the Session: The role of satellite communication equipment in preparedness and recovery: how to make the best use of an important tool.

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Summary

The world is becoming ever more reliant on uninterrupted access to voice and data communications networks. But even modern telcom infrastructure is not infallible especially during natural disasters. To help ensure you retain access to telephone and internet services from anywhere in the world and under any circumstances, use satellite communication equipment.

Context

In order to improve resilience and ensure quick recovery after a natural or a man-made disaster, every comprehensive contingency plan must take into account the need to maintain uninterrupted access to both voice and data transmission infrastructure. Over the years, satellite communication networks have proven themselves to be an invaluable tool in such circumstances.

Deploying reliable communications hardware is typically among the very first priorities in any emergency response, rescue, or relief situation. Traditional terrestrial networks (both wired and wireless) are only useful when cellular towers and other land-based equipment were available pre-event in the first place and remained intact after the disaster.

In many emergency situations this infrastructure is typically rendered inoperable for days (typhoon Usagi in Philippines in 2013 or earthquake in Pakistan in 2013). **This reality makes it <u>critical for local authorities, NGO teams on the ground and, crucially, the private sector</u> to have access to reliable, easy-to-deploy alternative means of staying in touch with key stakeholders.**

In recent years, satellite communications hardware and networks have undergone significant transformation.

- Operating costs have dropped dramatically
- Hardware became much smaller and more user-friendly
- Data transmission rates have increased
- Over the next 12 to 24 months, as existing satellite networks are upgraded, there will be a multitude of new features and applications on offer, including machine-to-machine equipment (e.g. automatic collection of data from remote sensors)

Satcom systems, as they are commonly referred to, can be broadly split into three types:

Handheld equipment: very similar to traditional mobiles in appearance and functionality, satellite telephones are an invaluable tool for making calls in emergency situations. They are ready to work out-of-the-box and operators require minimal prior training. Many models have excellent battery longevity and provide hours of talk-time.

Portable data terminals: Boasting a very small form-factor (no bigger than a medium-sized laptop computer), these terminals offer high-speed internet access and ability to stream broadcast-quality video. Very easy to use, they operate at speeds of up to 750 kbps. When faster data rates are needed, two or three terminals can be "chained" together with a simple cable.

VSAT (very small aperture terminal): these systems offer significantly higher data rates and lower cost per MB than portable terminals. However, they are much larger and less flexible, with dish sizes of roughly 1 meter in diameter. Operators will require training prior to use. VSAT equipment is frequently used when it will have to remain at a fixed location for a prolonged period of time or provide connectivity to large groups of people.

Similar to mobile networks, satcoms offer a choice of several large service providers and a wide range of available equipment. Each network (and the associated hardware) has its own strength and weaknesses. Currently, the four primary operators are Iridium, Inmarsat, Thuraya and Globalstar. Their primary differences lie in coverage maps (global or regional), areas of application and operating costs. We will be pleased to answer any questions you may have regarding what system would be most suitable for your needs.