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Breaking Down the Barriers for Emergency Telecoms
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In April 1998, an article by Hans Zimmerman of the U.N. Office for the Coordination of Humanitarian Affairs ("OCHA") appeared about the role of "Telecommunications in the Service of Humanitarian Assistance."[1] It posed the question

> Why are communications for disaster response still a topic for discussion, when news travels around the globe in minutes and cellular phones provide instant personal communication links?

Since 1998, the world has experienced some of the most devastating natural disasters – earthquakes in El Salvador, Peru, Pakistan, Iran, Azerbaijan; the tsunami in Asia; mudslides in Bangladesh and the Philippines; floods in the United States, many parts of Africa and Indonesia. Yet we are still asking the same question. And believe it or not, the answer is still the same. The regulatory environment needed to allow the immediate entry and use of desperately-needed communications equipment is still not in place in many countries. General knowledge on the availability of emergency telecoms service and equipment is still not widespread.

In 1998, Mr. Zimmerman noted that wireline and cellular phone coverage, television and internet access was limited to urban areas and almost non-existent in the developing world. This situation has changed dramatically. Global tele-density has grown from below 15% in 1996 to above 60% in 2006. Mobile services, in particular, connect many more people. By the end of 2006, mobile phone subscribers had increased 20 fold. In Africa, for example, mobile growth rates are over 50% annually. There are now more than 3.3 billion cellphones in active use worldwide, with an estimate that by 2010 there will be 4 billion – for a world population of 6 billion.

But the rapid spread of mobile phones and increased tele-density within the developing world is not sufficient in times of natural disasters. Terrestrial networks are vulnerable to destruction depending on the type of disaster and require electricity in most cases. Even if not damaged, terrestrial networks can quickly become overloaded, making it impossible for calls to get through.

Furthermore, the requirements of governments and relief agencies are far more complex than they were ten years ago. We have gone beyond the time when common voice and data

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[1]   International Civil Defence Journal, Vol.XI - No.1 - April, 1998, p.p. 20-24.

capacity is the most urgent need. The new requirements depend on access to far-flung databases and require immediate access to internet services. Communications have to be available immediately, anywhere in the world, with no previous notice or time to plan elaborate engineering. At least initially, the solutions must be portable enough to be quickly moved into position without cumbersome logistical requirements. As pointed out by the United Nations Office of the Coordinator of Humanitarian Assistance,

> Only a reliable two-way exchange of information between cooperating people can make it possible. More and more often, rescue and relief operations require expert consultations, often not available in the field at the time when they are needed. In addition to the voice and facsimile messages, high resolution aerial or satellite photographs, thematic maps, measurements results, videotaped scenes, computer simulations, computer databases, computer software, etc. need to be exchanged.[2]

Iridium Satellite provides one type of communications that is uniquely suited to use in disasters, particularly during the initial phases when the terrestrial network may not be functioning and larger communications systems have not yet arrived. With a system of 66 satellites, Iridium covers all parts of the globe and operates independently of any terrestrial infrastructure. This puts Iridium in an excellent position to aid first responders wherever disaster strikes with voice, data and internet services immediately available.

But as with other communications systems, the Iridium system only operates if the handsets can be imported and the use is properly licensed by the relevant authority. In spite of the move towards globalization, politically and legally our world remains fragmented, and each sovereign country has its own system of laws, regulations, standards, and practices. Very few countries have actually "prepared" for disaster by enacting the laws and regulations necessary to permit rapid entry of communications systems in times of disasters or by stockpiling equipment to be used in emergencies. In Iridium's experience, customs authorities have refused to allow the handsets in because they are not familiar with satellite handsets or they cannot find type-approval information for the equipment or licensing information for the service is not immediately available. In other cases, it takes days, if not weeks, for the proper licenses to be issued, even on an emergency basis, so the service can be used.

Over the past ten years, there have been many efforts to get the full attention and support of governments to put in place the necessary regulatory framework before disaster strikes. The most far-reaching was the conclusion of a Treaty on Telecommunication for Disaster Relief and Mitigation in Tampere, Finland in 1998 (referred to as the "Tampere Convention"). The Convention calls on countries to facilitate the provision of prompt telecommunication assistance to mitigate the impact of a disaster, and covers both the installation and operation of reliable, flexible telecommunication services. Regulatory barriers that impede the use of telecommunication resources for disasters are waived. These barriers include the licensing

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[2] Evaluation, Emergency Telecommunications, available at http://www.reliefweb.int/telecoms/evalu/OCHA_6.html.

requirements to use allocated frequencies, restrictions on the import of telecommunication equipment, as well as limitations on the movement of humanitarian teams. Unfortunately, only 37 countries have actually ratified the Tampere Convention.

The ITU has focused much effort on educating administrations and the private sector about the importance of regulatory preparedness and the role that telecommunications/ICT can play in disaster mitigation and relief. The ITU has developed a disaster management program which aims to deliver and deploy telecommunications resources to countries, humanitarian organization and victims of disasters in a timely manner. Iridium is proud to be a partner with the ITU in these efforts. In December 2007, Iridium donated to the ITU 66 handsets and batteries, solar power charging equipment and unlimited airtime for disaster recovery.

Matt Desch, chairman and CEO of Iridium stated that the contribution would enable the ITU to "provide first responders with reliable Iridium voice and data services so that they can more effectively help a greater number of people in the early days of an emergency."

The most recent effort to raise awareness and spur action was the ITU's Global Forum on Effective Use of Telecommunications/ICT for Disaster Management: Saving Lives in December last year. It is important to recall one of the Forum's conclusions because it can form the basis of the message that we bring to regulators at the 8th Global Symposium for Regulators. The Forum declared that:

> Effective policies and regulations are essential in support of deployment and use of telecommunications/ICT for disaster mitigation and management. The regulatory regime has to be continuously reviewed. Where other barriers to the use of telecommunications resources for disaster response and relief exist, these should be addressed. These barriers could include, but are not limited to, regulations restricting the movement of telecommunications equipment and personnel, at both national and international levels. . . . It is important that while governments develop policies on disaster management, that the use of telecommunications/ICT resources is at the core of such planning.

Iridium would like to work with national regulators to ensure that, ten years from now, we are not still asking why globalization of telecommunications is not reflected in preparedness for the immediate distribution and deployment of telecommunications in times of emergencies and natural disasters.

We therefore propose that the Global Industry Leaders' Forum recommend the following best practices to the 8th Global Symposium for Regulators:

- All governments *and* satellite companies should become signatories to the ITU Memorandum of Understanding on Global Mobile Personal Communications by Satellite ("GMPCS") to expedite pre-authorization for satellite systems to use their

space segments and terminals so that mobile satellite communications are available immediately in an emergency.

- National licensing regimes should take into account the ability of service providers to deploy emergency services.

- National regulatory authorities should develop and publish emergency preparedness plans setting out, at a minimum, clear procedures for emergency authorization, names and contact information so communications companies know who to contact, means of contact, and liaison points for providing information to customs officials on authorized equipment.

- Governments should publish for industry and consumers information on available communications in the event of disaster. Such information should be kept up to date and users should be encouraged to test the readiness of their emergency telecoms at least annually.

- Review of the Tampere Convention should take place to determine what regulatory changes are needed to prepare for signatory status or ratification.

In addition, we recommend that the 9th GSR focus on best practices for emergency preparedness and the use of telecommunications/ICT for disaster mitigation and relief. It is our hope that with the dedicated effort and shared knowledge and experience of regulators from around the world we will soon no longer question the availability and deployment of emergency communications in times of disaster. Instead we will have global action plans that are deployed well in advance of times of need and that ensure to every country on the planet communications of last resort during and after national emergencies.