



Satellite, the Savior of the Sichuan Earthquake

Natural disasters are the major impediments that humans cannot prevent from happening. Also, the impact is often beyond people's expectation if preventive measures and infrastructures are not fully equipped. Among all the preventive strategies for avoiding natural disasters, utilization of satellite technology has received international attention for its effectiveness and significance on the spot. Satellite technology by far cut a conspicuous figure in the May 2008 earthquake in Sichuan, China.

Why Satellite?

When disaster breaks out, communications between first responders and the affected are vital. This is of particular importance under the condition of severed terrestrial connections by landslides and rock falls. Accordingly, satellite technology is the alternative measure of communication in such cases for coordinating rapid response.

Application of Satellite Technology

During the catastrophic Sichuan earthquake, several leading satellite companies contributed to the support of the recovery effort. First of all, ND SatCom's SkyWAN-based VSAT network played a crucial role as a platform between the Front Command Center in Dujianyan, and the first responders from the Earthquake Administration Bureau. With the outbreak of the calamity, the network instantaneously parted into two sub-networks: one managed a daily network and the other controlled an emergency network with a hub station in Beijing as well as various vehicle-based stations and transportable Fly-Away antenna systems. By using the network, officials at the China Seismological Bureau were able to report about the disaster situation directly through video conferences.

Also, standard broadband satellite terminals by Hughes Network Systems (HNS) were effectively used in implementing broadband connectivity for VoIP telephony and Internet access services. SVA communications and Sichuan Telecom in Chengdu

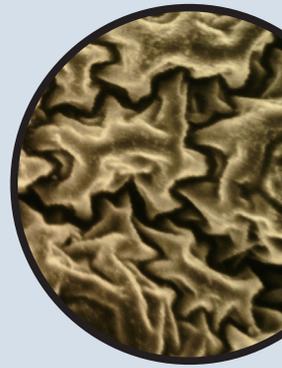
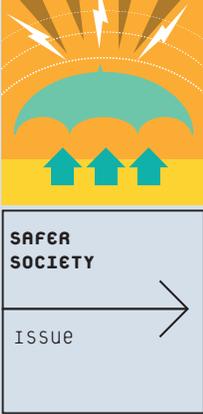
facilitated the equipment and offered voice, video and data communication services. What's more, C-COM provided China Central TV (CCTV) with its iNet-Vu Mobile antenna systems, enabling live broadcasts from the earthquake site that were difficult to reach. With respect to earth observation, COSMO-SkyMed, the Italian satellite system for Earth observation was employed for the use of capturing images of the adjacent area of the epicenter. This operation was beneficial because it captured quake damages to buildings and metal structures in the images.

Seeing More Potential in Satellite Technology

Besides those satellite uses for follow-up measures in Sichuan, satellite technology can be employed for early warning systems. This function will attract more attention internationally because in this way, what we thought was an unpreventable catastrophe could become a mitigated accident or even be circumvented. Thus, governments and administrations all over the world must not disregard the latent ability of satellite and should carry on further research on it. ☐☐☐

About the Article

This article is from *Sichuan – Satellite & the recovery effort*, which was inserted in *Satellite Evolution Asia* July/August 2008. The report investigates the essential role of satellite technology in the Sichuan earthquake in 2008 such as enabling reports of the scene of the rescue and playing a role in connecting severed communications.



Flu Epidemic

911 ICTs!!

ICTs give a hand

Nobody is sure about when and where the pandemic originated. The whole world has been drawn into a chaos caused by a contagious flu called the H1N1 or swine flu. Since the flu is particularly notorious for its virulence and contagiousness, people are scared and wary of catching the disease, putting on masks and washing their hands every minute. In these catastrophic circumstances, ICTs can also wear the hat of a rescue worker.

Among all the roles that ICTs can play, one function of ICTs is to collect data for H1N1 and create emergency scenarios. For instance, Johns Hopkins experts created a free Web-based software tool that is able to account for the number of victims, germ-carrying patterns, available medical resources, and bacterial incubation periods. Users can modify this data collection according to their needs and project the actions they need to take against the outbreak of swine flu. GE Healthcare also gives support to the Centers for Disease Control and Prevention (CDC) in understanding better the features of the flu and adequately tracking the trends of the disease.

Another role ICTs can perform is in disseminating information about the disease and warning against it. Tracking the number of swine flu cases and developing flu shot finders is an example. Google recently launched the online map service for providing US consumers with the nearest locations for receiving seasonal and swine flu vaccines. Besides Google, RSS feeds and Twitter are also offering a space of communication between public health officials and the public, enabling the dissemination of information at faster rates. Also, facilitating an iPhone application developed by the Harvard Health Publications Division of Harvard Medical School allows the timely spread of information on the prevention and outbreaks of the H1N1 virus.

Even though ICT itself can't directly be the vaccines for H1N1, it certainly helps in the process of the disease's prevention and treatment. Based on the current role that ICT plays, we can entertain the hope for more ICTs actively participating in emergency situations in the future, in the same way 911 does. ☺☺☺