

IPSTAR Enhanced Seismic Operations in Cha Yu Station

China Satcom, one of the leading telecommunication operators in China and partner of IPSTAR, recently connected a seismograph station in Cha Yu, China to the Internet, via the IPSTAR satellite. The newly installed IPSTAR broadband enhances the seismic research operations of the Cha Yu station. Built in 1976, the station is 900 km away from Lhasa, the capital of Tibet.

The Situation

During the previous years, seismologists in Cha Yu used phone lines to contact Lhasa to determine the size, location and depth of an earthquake. With the newly installed IPSTAR broadband connection, vital information on any earthquake activity in China is rapidly available in real-time and on a round-the-clock basis. In addition, an immediate readout of an offshore earthquake also allows Cha Yu station to issue a tsunami warning within minutes.

Early Warning System via IPSTAR

IPSTAR proved to be reliable in places prone to unpredictable and snowy weather, like Cha Yu. A test report in Cha Yu station stated, "In snowy weather, the satellite's signal strength will weaken a little but the weather has no impact on IPSTAR to transmit seismic data".

Satellite communication links are likely to be disrupted under heavy weather conditions, but IPSTAR's inherent Adaptive Coding and Modulation (ACM) prevents outages – enabling a seamless communication link between the seismologists and their instruments in the field. ACM enables the downstream carrier to dynamically change its modulation and coding in response to changing link conditions.



About China Satcom

China Satcom, one of the telecommunication operators in China, is under the management of the Ministry of Information Industry in China. The member enterprises of the company include China Telecommunications Broadcast Satellite Corp., China Orient Telecommunications Satellite Company Co, Ltd., China Space Mobile Satellite Telecommunications Co, Ltd., China Posts and Telecommunications Translation Service Corp., and China Telecom (Hong Kong) Chinasat Corp.

About Cha Yu

The remote county of Cha Yu lies in southeast Tibet, the highest region in the world. It is 2100 meters above sea level and has an average temperature of 18C. The county is surrounded with high peaks, deep valleys, snow mountains and grasslands. In 1950, Cha Yu was struck by 8.6 magnitude earthquake, stronger than the recent earthquake that hit Sichuan in China. The devastation resulted to snow avalanches, landslides and mudslides that resulted to loss of lives and destruction of properties in the county.