



Case Study

Disaster Recovery & Emergency Communications

IPSTAR CCTV solution assists Thai Flood Relief Operations Center keep an eye on flood water levels

What is most difficult about disaster preparedness is the prediction of when and where disasters will strike. However, advances in technology have today provided us the means to monitor disaster-prone locations and make

preparations so that effective decisions may be taken as the disaster unfolds. Such disaster-prone locations that require monitoring also need a reliable means of communication so that a constant stream of data can be sent to

the decision makers. Since terrestrial means of telecommunication may be unreliable or simply unavailable when disasters strike, the only dependable form of communication is via satellite.

Challenge

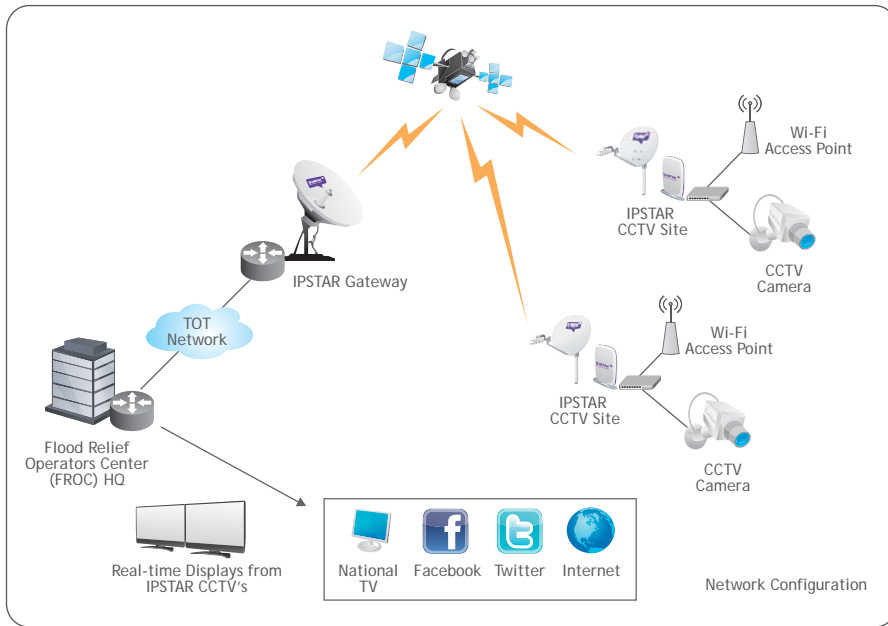
- Provide instant communications in flood-hit areas.
- Deploy IP cameras in locations where other forms of communication have been rendered unreliable.
- Make real-time video images available at command center.

Solution

- Deploy IPSTAR User Terminals at remote sites.
- Provide WiFi Internet access to disaster relief personnel.

Benefits

- Rapid Deployment**
- IPSTAR UT can be deployed rapidly at a very short notice.
- Nationwide Coverage and QoS**
- IPSTAR provides nationwide coverage and consistent QoS regardless of which disaster hit area is to be serviced.
- Full IP-compatibility**
- IPSTAR platform is fully IP-compatible, and can connect easily with IP cameras.



The Situation

Major floods have occurred in Thailand during the 2011 monsoon season mainly in the Chao Phraya river basin, affecting 2.3 million people, causing numerous deaths and damages estimated at more than 5 billion USD. The flooding has inundated about six million hectares of land and has affected several provinces from Chiang Mai in the North to parts of the capital city of Bangkok in the central region. Big volumes of water started flowing southwards in late July, and as the scale of the disaster became clearer, the government setup a Flood Relief Operations Center (FROC) in mid-August for centralized command and control of flood monitoring and relief efforts.

Along with the setting up of temporary shelters for the victims, and co-ordination of aid delivery, FROC was also involved in flood prevention measures such as rapid draining of canals and waterways, and the constructions of dykes at strategic locations to protect areas south of the moving flood waters. For effective decision making and water management, FROC needed to keep an eye on the water levels in various canals and rivers distributed throughout several provinces.

The Solution

With request from FROC to help during the disaster, IPSTAR responded with the concept of setting up CCTV cameras at strategic locations such as sluice gates so that real-time images of water levels could be obtained at FROC headquarters. A number of IPSTAR CCTVs were deployed in the provinces of Ayutthaya, Pathum Thani, and Bangkok, with IP camera installations backhauled over IPSTAR satellite service. The sites were based in locations where disaster relief personnel had their local command posts.

The sites were connected to FROC using the TOT Public Company Limited's network connected to the IPSTAR gateway. Along with real-time videos being made available to FROC, the IPSTAR service also provided WiFi Internet connectivity to the security personnel present at the sites.



Proof-of-Concept

IPSTAR proved to be an effective means for satellite communications in locations where other forms of telecommunication suddenly became unreliable. The Minister of ICT, H.E. Group Captain Anudith Nakornthap said, "The real-time images from IPSTAR CCTV were crucial for FROC in our decision making process and flood response plans, and also helped in the security of the sluice gates. The IP cameras deployed over the IPSTAR platform proved to be a highly reliable medium for monitoring change in water levels."

Mr. Pramote Boonnumasuk, Marketing Director of IPSTAR said, "The IPSTAR satellite platform has once again proved to be effective for disaster preparedness and monitoring. With a fully IP-compatible service, IPSTAR is ideal to connect any kind of IP-based devices such as cameras or other SCADA systems in remote locations. With its nationwide coverage, IPSTAR can be deployed at a very short notice in any location for implementing wide ranging applications and services."

About IPSTAR

THAICOM-4 (IPSTAR) is the world's largest and most advanced commercial satellite serving up to 10 million users in Asia-Pacific. The breadth of the satellite's geographical reach in the region – covering an area inhabited by 4 billion people or roughly 60 percent of the world's population – positions IPSTAR as the preferred gateway in 14 countries across Asia-Pacific. IPSTAR has achieved a critical milestone in its pursuit to bridge the digital divide in the region. With a combined 120,000 subscribers in Australia and New Zealand alone and still growing, IPSTAR has become the single largest VSAT network operator in both countries. Across the region, IPSTAR has sold nearly a quarter of a million user terminals.

For more information, visit www.ipstar.com.

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