

Case Study

Environmental and Structural Monitoring



Customer: US Geological Survey

Web Site: www.usgs.gov

Country/Region: United States

Application: Urban Seismic Monitoring Network with low-power, long-range and IP access requirements

Customer Profile

the ANSS includes a national Backbone network, the National Earthquake Information Center (NEIC), the National Strong Motion Project, and 15 regional seismic networks operated by USGS and its partners. When earthquakes strike, ANSS delivers real-time information, providing situational awareness for emergency-response personnel.

ANSS provides dense station coverage for all at-risk urban areas. Information from ANSS is a key input to the USGS National Seismic Hazard Maps, which help communities in earthquake-prone regions develop safer building practices.

Urban Disaster Response Preparedness Requires Low-Power, Reliable Secure Wireless Network.

Situation

Researchers at the United States Geological Survey (USGS) needed a wireless network solution that would provide high bandwidth for networking multiple next-generation seismometers as part of the Advanced National Seismic System (ANSS). The ANSS is currently under development to improve urban disaster response time in instances of large seismic events.

Communication Solution

Intuicom implemented a secure, private wireless network system to provide real-time access to station data. The seismometers, arranged in dense arrays throughout high seismic risk communities, provide high frequency data from remote monitoring locations to measure ground shaking amplitudes and potential damage. In addition to remote, low power operation, the system required long range links in a difficult urban environment and IP access to the seismometers, data loggers and other station equipment.

Results

The high interference potential of urban installations presented unique challenge requiring super high-performance communications. Multiple seismic network operators for multiple deployments in several cities where the ANSS is establishing prototype networks have used the Intuicom system.

