



PROJECT BRIEF

AZERBAIJAN NATIONAL SEISMIC NETWORK

PROJECT OBJECTIVE

Provide a state-of-the-art seismic network for Azerbaijan.

PROJECT ACHIEVMENTS

The National Seismic Network of Azerbaijan (NSNA) is a real-time seismic network with high data return (in the 90%) exclusively over VSAT communication. Since the network's inception in 2003 with 16 short-period stations the NSNA has seamlessly grown over the last decade to a broadband network with 35 stations including 10 geodetic GPS stations.

NATIONAL SEISMIC NETWORK OF AZERBAIJAN

The *Republican Seismic Survey Center of Azerbaijan National Academy of Science* is studying the seismicity of the territories of Azerbaijan.

After a strong earthquake occurred near Baku on 25 November 2000, the government decreed to build a modern seismic network.

History

In 2003 after an extensive site selection campaign the first 14 digital seismic stations were installed with VSAT communication to record in real-time local and regional earthquakes. The data acquisition and processing was carried out with the Antelope Environmental Monitoring System.

Current System

Since 2009 the National Seismic Network of Azerbaijan (NSNA) has relied on Kinematics' Aspen system. The 35 Aspen Field stations consist of:

- ◇ Quanterra Q330 digitizer
- ◇ Streckeisen STS-2.5 broadband sensor
- ◇ Kinematics EpiSensor accelerometer
- ◇ Kinematics Marmot field processor

Additionally ten (10) sites have co-located a Trimble Net R9 geodetic GPS station. The data are acquired via Hughes VSAT modems at the data center of the Republican Seismic Survey Center in Baku. The Aspen Data Center consists of seven (7) Apple workstations redundantly connected to a RAID system. The communication between the data center and VSAT are two dedicated communication using a fibre optic link and as backup a VSAT connection. To maintain the 35-station network Antelope's state of health (SOH) capability is instrumental. Together with its command and control features the NSNA is efficiently supported with minimum field personnel.

Future

For the near future, it is planned to install three (3) Kinematics ISOPOD Ocean Bottom Seismographs (OBS). These are cabled OBS for permanent installation with real-time data communication.



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