

, Hydroacoustic and Infrasound Monitoring for Seismic Stations Applying 3G/4G Technologies

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The Observatorio San Calixto (OSC) is the National Data Center for the Plurinational Bolivian State. It manages the certified seismic stations PS06-LPAZ, AS08-SIV and one infrasound array IS08-BO. The distances from our center to the far away seismic station is about 1000Km (AS08-SIV) and the other two are located at Altiplano where the environment to work is often hard. In order to obtain the state of health (SoH) from these seismic stations we built a low cost board based on embedded technology (RaspberryPi) that allow us to monitor the batteries voltages, temperature at cave, intrusion, hard-disk/USB space and sometimes works as data buffer. The source code is powered by Python and the dependencies for the input/output are taken from RaspberryPi cloud, furthermore, we were able to send this information through the Internet using 4G dongle from local telecommunication company. Data is sent to the OSC by a VPN, this information is then stored in a small database powered by MySQL, the information is displayed for the operators each three or four minutes. This method is also used in the national seismic network to help the station operator to anticipate and solve problems.

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Promotional text

The objective of this topic is to show the improvements in the remote monitoring of the stations and to optimize the operator's work.

Oral preference format

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