

Seismological Network and Its Challenges

Due that Colombia has steep topography, the seismological data transport has been a challenge in order to provide it in Bogotá - Colombia, where the Colombian Seismological Network from Colombian Geological Survey (SGC) has its headquarter. In 1993, when it began to deploy infrastructure and seismological equipment, the telecommunications in the country had had an incipient development, so the robustness and strongest way to reach wide country for 24/7 earthquake monitoring was by satellite. However, the technology evolution has made the Colombian telecommunications companies reach far places and become them more reliable. This work has the purpose of test and analyze those technologies, including Internet (LAN, WAN, VPN) and cellular (MESH, VPN) in order to implement them in the earthquake monitoring; Those kind of technologies should have stable latencies, connections, and no data lost specially when an important earthquake occurs. The result of this test and analysis allow to know how those technologies can be used in earthquake monitoring either critical or post processing seismological stations and densify the wide country, improving the magnitude and location accuracy.

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