

## **Geophysical Society of Alaska February Luncheon**

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### **TALK**

Mission-Critical Real Time Data Acquisition: An Earthquake Early Warning Case Study

### **SPEAKER**

Michael Laporte, Senior Systems Engineer And Program Manager

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### **ABSTRACT**

Ensuring the reliable acquisition of real time seismic data from remote monitoring stations is an inherently challenging task. Stations are often in isolated locations with little to no supporting infrastructure, creating limitations on power and communications systems which demand design tradeoffs. When the data is driving mission-critical public safety systems, such as Earthquake Early Warning (EEW) networks, real time acquisition performance is of critical importance.

In particular for EEW, acquisition performance must be measured not only in real time data availability, but also data latency and bandwidth utilization. Beyond these key performance metrics, it is critical that the system is robust, with layers of redundancy to ensure continued operation in the event of a damaging earthquake. A comprehensive system test and acceptance program is needed to ensure performance requirements are met and to have confidence the system will function as intended at the critical moment.

This talk examines the factors considered, the approaches taken and the outcomes in the design and implementation of a real time acquisition system for the Israeli National EEW network, TRUAA.

### **BIOGRAPHY**

Michael Laporte is a Senior Systems Engineer and Program Manager in the Seismology Solutions department at Nanometrics, and is based out of company headquarters in Ottawa, Canada. In this role, Michael uses his management and systems expertise to provide end-to-end management and technical oversight of complex projects executed by the Seismology division. His expertise has been built in various roles over 18 years' experience at Nanometrics, including System Engineer, Product Verification Manager, a founding member of the Seismic Monitoring Services division, and TRUAA Program Manager, prior to taking on his current role.