

# Operational Costs by Enhancing Regional and Local Capabilities: A New Paradigm for Long Term Global Network Operations

Wednesday, 21 June 2023 09:55 (1 minute)

The IDA/GSN seismic network consists of 40 broadband seismic stations around the globe. Fifteen stations serve as auxiliary seismic stations of the International Monitoring System (IMS). During the COVID-19 pandemic, travel was severely disrupted. However, after considerable adjustment, network data return remained good and operational costs decreased. This was due to several factors: 1) decreased international travel by US based field engineers, 2) increased reliance on local operators to perform more complex operations and maintenance tasks and 3) increased spare equipment on site. Repairs and sensor replacements were conducted by either local station operators, local contractors, or in-country seismic technicians. Advanced training of local operators was based on improved documentation, sometimes with on-site video streaming using cell phone based applications. Difficulties included a wide range of time zones for the US based engineers and cross-language communication combined with sometimes poor audio quality. These difficulties were addressed by developing more extensive step by step documentation and communication improved over time. Benefits consisted of less travel and associated costs by the US engineers and increased capabilities by station personnel. These benefits have continued even as COVID-19 related travel restrictions have been lifted. Recommendations for the future include increased remote training.

## E-mail

rmellors@ucsd.edu

## Promotional text

New ways to decrease seismic network operational costs and enhance regional and local cooperation.

## Oral preference format

in-person

**Primary author:** Mr MELLORS, Robert (University of California, San Diego)

**Co-authors:** EBELING, Carl (University of California, San Diego); Mr SITES, Chris (University of California, San Diego); Mr AUERBACH, Dan (University of California, San Diego); Mr ELLIOTT, Don (University of California, San Diego); Mr KLIMCZAK, Erik (University of California, San Diego); Mr WUHRMANN, Heinz (University of California, San Diego); DAVIS, J. Peter (University of California, San Diego); Mr CONLEY, Jim (University of California, San Diego); Mr BERGER, Jon (University of California, San Diego); Mr BARGABUS, Scott (University of California, San Diego); Ms WILSON, Sonya (University of California, San Diego); Mr HATFIELD, William (University of California, San Diego)

**Presenter:** Mr MELLORS, Robert (University of California, San Diego)

**Session Classification:** Lightning talks: P2.1, P2.3, P4.4

**Track Classification:** Theme 4. Sustainment of Networks, Performance Evaluation, and Optimization: T4.4 International Monitoring System Sustainment