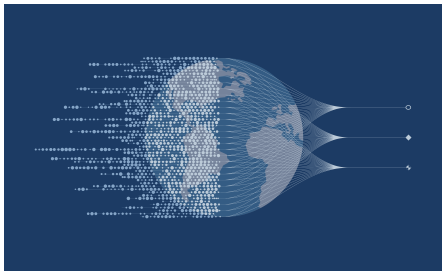

ID: **O4.4-156** Type: **Oral**

# of mass position monitoring and auto centering on Indonesian seismic networks

Effective maintenance strategies and quality assurance are critical for sustaining the performance of seismic networks. The optimal mass position of seismic sensors directly impacts the quality of seismic signals, yet the diverse interfaces provided by various digitizer manufacturers complicate consistent monitoring and state of health evaluations. In Indonesia's extensive seismic network, these challenges are exacerbated by the network's geographic scale and diversity of deployed systems. This study presents a systems integration approach to optimize maintenance processes and enhance monitoring capabilities. A Web based unified dashboard aggregates mass position data from multiple digitizer interfaces, streamlining quality assurance and state of health tracking. Coupled with an integrated controller, the system enables predictive and preventative maintenance by automating mass re-centering, reducing the need for manual interventions and reactive repairs. The solution improves operational efficiency, ensures high quality seismic data, and supports optimization efforts in multi-vendor environments. By prioritizing enhanced monitoring and predictive maintenance, this approach minimizes downtime and ensures the long term reliability of seismic instruments. This presentation will detail the development, implementation, and benefits of this integrated system, offering a blueprint for advancing maintenance strategies and optimizing seismic network operations on a global scale.

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Session Classification: O4.4 International Monitoring System Sustainment into the future

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