

## **Development of an online seismic data collection network using ilabs shared architecture**

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The seismic network in Tanzania consists of independently seismic recording stations distributed over various regions. The collection of seismic data and maintenance has been routinely done through quarterly physical visitations of the remote sites. This period is undesirably long for timely analysis of earthquake data. Furthermore, the current infrastructure lacks automatic alerting mechanisms for earthquake occurrence. Recently, two studies have been conducted to address the challenges. However, the authors applied a computer-dependent framework, which is unsuitable for collecting data in harsh environments. This work proposes a new framework that uses a data logger (DR-4050P), which can tolerate weather conditions in remote site, and an iLabs shared Architecture. A user interface was designed for seismologists to download earthquake data from target ISA. The proposed framework includes an FTP server between logger and ISA to receive seismic data and forward them to central stations. This study was able to extend ISA framework together with mobile network to enable the DR-4050P at a recording station to route collected seismic data to central station which were later on shared by seismologists worldwide. Data transferring procedure results in telemetry delay (roughly 0.2s). The design network, also, provides a flexibility to manage seismologists accessing seismic data. A designed user interface using Lab VIEW was used by seismologists to display collected seismic data.