

Calibration of the IMS Seismic and Hydroacoustic Stations Using Standard Station Interface (SSI) Software

Standard Station Interface (SSI) calibration module is a tool for execution of instrumental calibrations and review of calibration results. SSI supports main digitizers used by the IMS network: Guralp DM24, Nanometrics Europa-T and Quanterra Q330 and MariPro hydroacoustic station. SSI Calibration Command Line Interface (CLI) is a collection of 17 comprehensive programs which allow a user to execute calibrations from the Unix console and via IMS2.0 protocol, compare waveforms and responses from multiple calibrations and channels, update channel calibration value in SSI and digitizers. SSICalibrationGUI is an intuitive front end to CalibrationCLI which allows users execute calibrations locally and remotely, view waveforms and calibration responses, and generate IMS2.0 calibration messages. Calibration Module supports the Station Operator over the whole operational procedure of calibration, including the timely exchange of authenticated Command and Control messages, definition of a calibration scenario, performance of calibration task, and evaluation and publication of calibration results. Main purpose of SSICalibration Module is to support the operationalization / standardization of both scheduled and un-scheduled calibration of IMS Seismic and T-phase stations. Module was deployed at a few pilot stations in 2016, and PTS plans on deploying it at many other stations in 2017/2018. The module undergoes continuous improvements.

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