Seismic data at the seismological division – new online services

Nof R. (1), Polozov A. (2), Wetzler N. (1), Biran G. (1), Kurzon I. (1)

1.   Geological Survey of Israel, 32 Yesha'ayahu Leibowitz, Jerusalem 9371234, Israel

2.   Geophysical Institute of Israel, 6 Habashat, Lod, Israel

ran.nof@gmail.com

The Israeli Seismic Network is operational in its digital form since the 1980's, collecting data from ~25 seismometers and ~50 triggered accelerometers, at the Seismological Division's acquisition center in Lod. Since October 2017, the network is undergoing significant upgrades and modifications, with new stations added or upgraded, using new sensors, and dataloggers, aiming for a total sum of ~120 stations country-wide, sampling data at 200 samples per second. The expected amount of seismic data requires new approaches for researchers to access the data.

Here, we will present new online services for obtaining seismological data, including raw data, stations metadata, seismic events data and seismo-engineering data. The data is available through several web-applications and protocols that will be elaborated along with common-practice methods to obtain them.

The seismological division officially stores seismological data in an in-house designed offline database. Since 2016, these data were converted to a more modern and commonly used database format and the online services were running in an experimental mode, providing access to the data to researchers at the Geological Survey and universities in Israel. This testing mode provided data to the researchers and provided data quality feedbacks to the seismological division, including missing information, errors and inaccuracies that allow constant improvement of the services.

Raw seismic data include: a) triggered events, since 1979, in which events are recorded in short time frames (of the order of several minutes), and c) continuous data, in which daily streams of full day records are recorded since 2008. Seismic events include over 5000 event records per year, from local, regional and teleseismic earthquakes, quarry blasts and other seismic sources. The Metadata include information for both historical and currently active seismic stations and the seismo-engineering database includes site parameters and classifications, response spectra, PGV, PGA, PGD associated with the seismic events.

We invite the scientific and engineering community to access the data and use it for research and to provide feedbacks in order to improve these services to the community.