



SOD: Standing Order for Data

Created by the University of South Carolina, SOD is a powerful and flexible DHI data request utility. SOD automates selection and downloading of earthquake data that meet your specific parameters.



Using its own Command Line Toolkit (CLT), SOD allows you to define your data gathers based on earthquake magnitude, the location of quakes and recording stations, and the time bias around specific seismic phase arrivals. These parameters are affixed to SOD's configuration in the form of a *standing order*, which means that it does not act on the data gather parameters until an earthquake has been detected and located.

The Standing Order, in the form of an XML file, specifies the earthquakes, channels and seismograms of interest. SOD continually checks DHI event catalog services from a number of data centers and acts on earthquakes that match to the standing order. Once this occurs, SOD then contacts the DHI waveform services from these data centers and follows the standing order instructions as to the stations, channels and time parameters requested in order to collect data that the user wants. The data is transferred to the user's computer in an automated fashion. SOD is capable of post-processing operations on the data stream such as mean removal, saving data to a SAC or miniSEED file, as well as more advanced operations such as calculating signal to noise and deconvolving the instrument response. SOD is extensible, allowing custom processors and subsets to be added to accomplish specific tasks such as automatic calculation of receiver functions and storage to a database.

While SOD is a command line tool, it can generate images on the fly, as exhibited by its use in the Rapid Earthquake Viewer, REV (<http://rev.seis.sc.edu>) web application. SOD generates images of seismograms, record sections and maps behind the scenes that are viewable on the web, allowing educators and the public to see clean seismic data from a recent earthquake with a minimum of effort.



For more information on SOD please visit:

<http://www.seis.sc.edu/sod>



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