

WP 18: EMSC felt report webservice

M. Landès, R. Steed, R. Bossu

Keywords

Macroseismology, felt report, felt intensity, web service

Figure

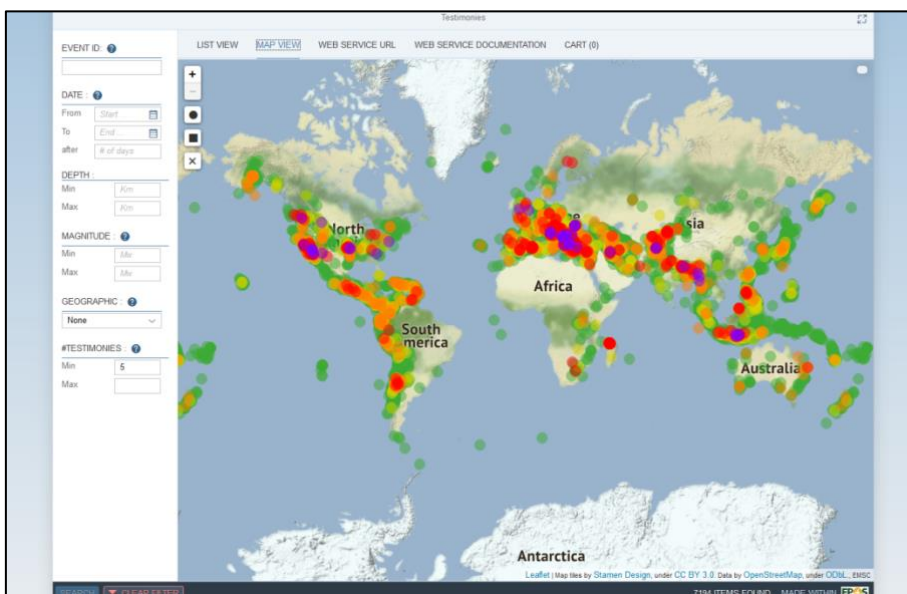


Figure 1. Map view of the felt report service. The left panel allow users to select felt events in time, in space, with magnitudes and by number of collected reports. The map facilitates spatial searches and plots the filtered events.

Main Results

Within the SERA project, the EMSC has developed and maintained a service that provides access to the eyewitness data collected in real time by EMSC.

People who feel an earthquake and want to share their experience have the opportunity to evaluate the level of shaking via EMSC's services by selecting from a collection of thumbnail images (felt reports). Bossu et al. 2016 gives a complete description of this collection system. This approach using cartoons replaces the more traditional online questionnaire on our mobile application LastQuake and on our mobile website (e.g. Bossu, et al., 2015). It is based on 12 thumbnail-sized images conceptualized by a professional cartoonist that aim to depict each level of the EMS-98 macroseismic scale in a culturally neutral way. These thumbnails are available to anyone who wants to integrate them in their collection system offering the chance to homogenize data collection amongst institutes. In addition to the felt intensity, each felt report has an individual geographical location either provided by the mobile device when the user has allowed it to be shared or estimated from a postal address given by the user.

Felt reports are collected in real time and associated to seismic events received by the EMSC. Moreover, due to the popularity of the EMSC, felt reports are collected from all continents and, generally, almost 50 % of felt reports are collected only 10 minutes after the earthquake occurrence.

This service provides access to felt report data via a graphical user interface or via a web service (useful for scripting access). However, real time data is not available currently due to quality assurance concerns and a dedicated real-time service is under development for registered users.

The popularity of felt report data is increasing and beginning to interest the scientific community. Several ongoing studies are trying to incorporate felt intensities in the construction of shakemaps and to constraint rupture models. This service is a valuable resource for such endeavours.

List of Publications

Bossu R., Steed R., Mazet-Roux G., Roussel F., Etivant C., Frobert L., Godey S. The key role of eyewitnesses in rapid impact assessment of global earthquakes. (2015) Springer Natural Hazards, S. D'Amico (ed.) Earthquakes and Their Impact of Society 601-617

Thumbnail-Based Questionnaires for the Rapid and Efficient Collection of Macroseismic Data from Global Earthquakes, Rémy Bossu, Matthieu Landès, Frédéric Roussel, Robert Steed, Gilles Mazet-Roux, Stacey S.Martin, and Susan Hough. Seismological Research Letter. Oct 2016. doi: 10.1785/022016012

Access to Data and Services

All EMSC web services are available on the Seismic Portal via the “Web services” link:

(<https://www.seismicportal.eu/webservices.html>). You can also access the felt report service directly at <https://www.seismicportal.eu/testimonies-ws/>. Some documentation and tutorials can be found on the

EMSC github at <https://github.com/EMSC-CSEM/webservices101>

Liability claim

The European Commission is not responsible for any use that may be made of the information contained in this document. Also, responsibility for the information and views expressed in this document lies entirely with the author(s).