Geophysical Research Abstracts, Vol. 9, 08104, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-08104

Dissemination of seismic hazard data in Italy through a WebGIS application

F. Martinelli (1) and C. Meletti (1)

(1) Istituto Nazionale di Geofisica e Vulcanologia, Milano Dept., Italy (martinelli@pi.ingv.it / Phone: +39-050.83.11.964)

In the last 3 years Italian seismologists were involved in a big project for the definition of the seismic hazard of the whole Italian territory in order to define seismic zones where to apply new building code. The released seismic hazard map (MPS Working Group, 2004) were adopted as new reference map by Italian government: the official source for data, as reported in the Official Gazette, is the web site "http://zonesismiche.mi.ingv.it", where the map is available for download. The reference map represents the PGA value with a 10% probability of exceedance (PE) in 50 years. In the following, the same framework was used to assess the values for additional 8 probabilities of exceedance of PGA and, for all the PEs, the spectral accelerations for 10 spectral periods. This elaboration resulted in a comprehensive hazard model based on 297 parameters evaluated on a regular grid containing more than 16000 points.

To allow the maximum dissemination of the information, addressed not only to scientific community but also to designers and regulating authorities, a web-based application was developed. It offers a GIS interface to visualize the data of single parameter in the form of maps. Graphs, representing hazard curves and Uniform Hazard Spectra, can be generated on groups of index values for single grid points to allow alternative views of the same seismic hazard parameters.

The application is fully based on open and free software. The core of the application rely on geo-referenced data. The selection of a relational database to store all the geographical and technical data came from considerations about both maintenance and scalability performance. The proposed solution presents many positive features that will be presented and discussed: the simplicity in managing and updating geo-

referenced data through a relational database, the simple and friendly user interface, the responsive time and others. The presentation also explores the possibility for the application to easily include in the same geo-database new additional data on seismic hazard that could be available in the future.