

## **IDIRA Alerts for Earthquake Disasters in Europe**

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IDIRA is a consortium project funded by the European Union to organize international response to disasters such as floods, forest fires and earthquakes in Europe. The abbreviation stands for **I**nteroperability of **D**ata and procedures **I**n large-scale multinational disaster **R**esponse **A**ctions. In this project, a system of technologies and guidelines is constructed, which helps in optimal resource planning and operations across national and organizational borders. It includes a Mobile Integrated Command and Control Structure (MICS), consisting of hardware and software, which can be brought on site. It focuses on a standardized interface to ensure interoperability e.g. CAP (Common Alerting Protocol) for incidents. The solution is built on, and integrated with, local command & control infrastructures. In case of damaging earthquakes, the information on source parameters from three agencies (Geoforschungszentrum, US Geological Survey and European Mediterranean Seismological Center) is combined and reviewed by WAPMERR. Based on this information, maps showing the intensity of shaking and the expected mean damage in the affected settlements are constructed and made available as shape-files, such that the damaged settlements can be plotted on a background map of the users choice, like an open street map or a more detailed map of the affected area. The standard CAP message contains information such as type of emergency, source of information, level of severity, location, and extent of disaster. A link to detailed information, for example state of damage and numbers of casualty for all settlements affected and coordinates of the nearest airports is provided in the CAP message. The first of these alerts is usually distributed within 40 minutes of any earthquake with magnitude larger than 5.4 in Europe. As more information becomes available, updates are generated. The main advantage of using a standard like CAP is the possibility to allow automatic processing of the information. Within IDIRA the CAP message provided by WAPMERR can be used to prepare the MICS for a potential deployment without the need of human interaction within the first few hours after a disaster. It is envisioned that all of this information will be transmitted to first responders electronically, again providing this in a standardized way allows easy interpretation by users, who can then design an appropriate response.