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EIDA: THE EUROPEAN DISTRIBUTED DATA ARCHIVE FOR SEISMOLOGY

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In 2013 ORFEUS established EIDA (www.orfeus-eu.org/eida/eida.html), a coordinated distributed data archive system, in order to expand and strengthen the availability of seismic data to the seismological community. This innovative waveform data infrastructure provides open, unified access to continuous waveform data from more than 3500 stations from 75 permanent and 42 temporary networks (status April 2014). Current EIDA nodes are: ODC, GFZ, RESIF, INGV, ETH, BGR, IPGP, LMU. Each node provides the resources for management and technical support that ensures the sustainability of this distributed archive system. Under the mandate of the ORFEUS Board of Directors and Executive Committee, the EIDA group is responsible for steering and maintaining the technical developments and organization of EIDA and the integration within multidisciplinary frameworks like EPOS. As the open, standardised archive for European seismology, EIDA is a core service pillar for the emerging EPOS-Seismology. Current developments are directed towards ensuring coordination and compatibility with future EPOS thematic and integrated services; the integration of strong motion data; improving data quality for research; standardizing and expanding data collection; and developing quality parameter standards. EIDA also intends to integrate seismic data from mobile experiments by European organizations and other types of data (e.g. infrasound, sequences from induced earthquakes, ground motion synthetics) in its archives.

A common, uniform web interface (WebDC3) provides transparent access to EIDA (<http://145.23.252.222/eida/webdc3/>), while each node may additionally provide unique, restricted data and additional services. Web services are being installed to provide complimentary data access and compatibility with international standards within FDSN. With this distributed infrastructure ORFEUS expands its archives with open broad-band (BB) data from European networks and research infrastructures and creates a robust long-term archiving system. Most permanent networks in Europe are currently being archived within EIDA (www.orfeus-eu.org/eida/eida_network_lists.html). With Romania and Turkey joining EIDA in the near future we expect to provide open access to approximately 300 new real-time broadband stations.

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