



ORFEUS data infrastructure, services and products

EIDA => EIDA-Next Generation

More than just data and federated archive

- Coordination of data holdings and software/strategic developments
- Provides quality control of data/metadata
- Helps define seismological center 'best practice' for ORFEUS community

http://www.orfeus-eu.org/eida/eida.html







ORFEUS data infrastructure, services and products NERA key products: Station Inventory, RRSM and ESM NERA

Station inventory: up-to-date station information ("Station Book") for strong motion and broad-band stations operational in Europe (station metadata, site characterization). <u>www.orfeus-eu.org/stationbook</u>

Rapid Raw Strong Motion database (RRSM): a high-quality, automatically and rapidly filled database build on state-of-the-art data collection and processing software to provide near real-time (web) access to open (unrestricted) strong motion data after a significant earthquake in Europe.

http://www.orfeus-eu.org/rrsm

Engineering Strong Motion database (ESM): a single, high quality database with historical and present time strong motion waveforms and carefully reviewed metadata, dynamically updated with manually processed data when significant new events occur. <u>http://www.orfeus-eu.org/esm</u>





ORFEUS data infrastructure, services and products

NERA key products: Station Inventory, RRSM and ESM

NERA

RRSM Rapid Response SM

Collection of accelerometric data from EIDA immediately after an earthquake

- Magnitude threshold: 3.5
- since 2005
- wfs are processed automatically (software scwfparam module of SeisComP3)
- Station and event metadata are not revised
- Input for SHAKEMAPS provided

At 2015-06-15:

- 3700 events
- >50000 waveforms,
- only digital instruments
- raw wf, DS and PSA (5%-dam.) comp. up to 10s
- PGA and PGV, SA @ 0.1s 0.3s and 1s

ESM Engineering SM

Collection of accelerometric data from EIDA and/or offline data

- Magnitude threshold: 4
- since **1969**
- wfs are processed manually (Paolucci et al. 2011)
- Station and event metadata are periodically revised

At 2015-06-15:

- 2345 events
- 2500 stations
- 14800 waveforms including records from analog instruments
- Unpr. acc, vel, DS and PSA (5% damping) PGA, PGV, PGD





Observatories and Research Facilities for European Seismology

Digital Object Identifiers for seismic networks

"... to ensure that permanent seismic networks and individua experiments undertaken by small groups or individuals are reliably identified in citations b researchers or monitoring networks that make use of their data ..."

FDSN recommendations for seismic	network DOIs
and related FDSN services	
Adam Clark (1), Peter L. Evans (2), Angelo Strollo (2)	
1. Incorporated Research Institutions for Seismology (IRIS), 1200 New York	Automa MM Tulke 450
Washington, DC 20005, 202-682-2220. adam@iris.washington.edu	Arease any, sere see,
2. Deutsches GeoForschungsZentrum GFZ, Telegrafenberg, 14473 Potsdam, (perann,strollo)@gfz potsdam.de	Germany,
Version 1.0	
21 July 2014	
0. Preamble and overview	
 FDSN recommendations for metadata fields, citation format an 1.1 FDSN Metadata Field Recommendations 	d landing page
Mandatory (Citation) Fields	
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Recommended Fields	
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1.2 Citation Format	
1.3 Landing Page	
2. DOI services to be offered by FDSN	
2.1 DOI Mapping Service	
1. Single Value Lookup	
2. Temporary Network Listing	
3. Full Data Retrieval	
Virtual Networks	
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http://www.fdsn.org/services/doi/

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Related Reference(s): 1. Hanka, W.; Kind, R.: The GEOFON Program. Annals of Geophysics v. 37, n. 5, Nov. 1994. ISSN 2037-416X. doi:10.4401/ag-4196 [+]

Network Station List (Network Code: GE)

#	Station Code	Station description	Begin	End	Loc	Channels	
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FDSN plenary session, Prague, June 26. 2015

UC Sente Cruz

HELIS: United

US: Uniter

B (2014-2014) Sweetwater Array

Seismic Characterization of Menenga

Whillans/UCSC

1C (2009-2010) Urban Seisr

D (2014-2014) MSH Node Array





Digital Object Identifiers for seismic networks

ResearchGate		GFZ	GEOFON			
		Helmholtz-Zentrum	GEOFON Program		GEOF	DEUTSCHE ForschungsZentru
Article		Mission Earthquake Info	Waveform Access	Software	Contribute C	ontact Hor
Development and Operation of a Regional Moment Tensor Analysis System in the Philippines: Contributions to the Understanding of Recent Damaging Earthquakes		Basic Network In Network code: GE Restricted: No Network KUIL file: % (X)	Type: Permanent Archived at: GFZ	Identifier: doi:10.1 (Citation ite metadata: [HTML]	information)	
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Available from: Nelson Pulido, Feb 03, 2015		opera	ted jointly with more than 50 international partners and i	n 2014 consists of ab	out 80 active stations	s on all
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REFERENCES (23) CITED IN (0) So	orted by Appearance in publication +		frequency local earthquakes to the largest global earthq tributed in real-time for earthquake monitoring and tsun			uisition
Article: Estimation of the magnitudes and epicenters of Philippine historical earthquake Maria Leonia P Bachta, Kasso Olike	ies.	at the Modu	GEOFON data centre via wired or satellite links. Archin lar Earth Science Infrastructure (MESI) housed at GFZ. ription is taken from seismic metadata, and may not matc	ved data is also availa	ible. GEOFON is pai	rt of the
[Show abstract] Technophysics 02(2000; 317:137-160, DOI:10.1016/S0040-1951(99)00272-3 - 2.87 Impact Factor		For instructions on retrie	ving waveform data and metadata for this and other seis	smic networks, see he	re.	
Performance of Broadband Selsmic Network of the Philippines. AA Melosantos, K.V.C.Soriano, P.C.M.Alcones, J.U.Pantig, J.D.Bont Innov. Journal of Dip-aster Research 19 2015.	ta, I C Narag H Kumagal, H		lorth	n Mongola Chas	Jupan	đ
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[Deven shafted] Journal of Geophysical Research Atmospheres 011579; 84:3063-3014 DOI 10.1029/30504857p23009 - 3.44 Impact Factor		Related Reference(s)	Other/Seismic Network. doi:10.14470/TR560404. 1. Hanka, W.; Kind, R., The GEOFON Program. Anna 2037-416X. doi:10.4401/ag-4196 [+]	als of Geophysics v. 3	7, n. 5, Nov. 1994. ISI	SN
The authors of this publication are on ResearchGate and have made the full-text available on their profiles. Life full-text	free account to access tt version from them.	× Network Station List # Station Code Station		End Loc	Channels	
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