

Status and Applications of the Community-Created Seismological Data Exchange Standard



ETH

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EQ Catalog Formats

- many existing formats
- all have common elements, but differ in details (are specialized)
- need a format that allows to merge common features, has enough flexibility to account for individual peculiarities

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Why XML?

- Character-based, thus (hopefully) future-proof
- Machine- and Human-readable
- Semantics can be coded in <tag> names
- Tree-like structure, maps hierarchy of elements
- Many open-source processing tools exist
- Extensible; local extensions do not break standard
- Ubiquitous in modern
 information technology,
 e.g., Web Services,
 RSS feeds, ...



QuakeML Elements



2002	First QuakeML experiments started
Fall 2006 C	Collaborative development initiated (ETH & GFZ)
Early 2007	opean meeting on XML formats (Paris, Jan 2007) Input from wider community: USGS, IRIS, EMSC, ORFEUS, ISTI Public web site & internal Wiki on-line
December 2007	Proposed Recommendation, QuakeML Version 1.0 www.quakeml.org/Documents Request for Comments process started
Early 2008	Public Wiki, www.quakeml.org
November 2008	Request for Comments for QuakeML 1.0 ended
December 2008	QuakeML Version 1.1 released
now	QuakeML Version 1.2 / Release Candidate

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About QuakeML				English (USA)		
To see the collection of prior postings to the list, visit the QuakeML /	Archives.					
Using QuakeML						
To post a message to all the list members, send email to quakeml@	<u> @intensity.usc.edu</u> .					
You can subscribe to the list, or change your existing subscription, ir	n the sections below.					
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Your name (optional):						
You may enter a privacy password below. This provides only mild security, but should prevent others from messing with your subscription. Do not use a valuable password as it will occasionally be emailed back to you in cleartext.						
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Reenter password to confirm:						
Which language do you prefer to display your messages?	English (USA)					
Would you like to receive list mail batched in a daily digest?	🖲 No 🔾 Yes					

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o see the collectio	n of prior postings to the list, visit the <u>Quake</u>	ML Archives.					
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sen	Technical documents						
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Using Qua	equest for Comment	QuakeML—An XML Representation of Seismological Data
You can sut <u>RF(</u>	C_BED_1.0 QuakeML 1.0 RFC Overview	Basic Event Description
Subscribir		Version 1.1
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rec	or Title	Editors:
the	m QuakeML - Basic event description	F. Euchner, D. Schorlemmer
The	QuakeML - Resource metadata	Authors:
	QuakeML - Inventory	Danijel Schorlemmer ¹ (ds@usc.edu) Joachim Saul ³ (saul@gfz-potsdam.de)
36 36	er ^{er} Technical documents	Fabian Euchner ² (fabian.euchner@sed.ethz.ch) Jan Becker ³ (jan.becker@gfz-potsdam.de) Ray Buland ⁴ (buland@usgs.gov)
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QuakeML Applications



QuakeML Applications



QuakeML Applications



QuakePy

48°N

46°N

44°N

42°N

40°N

38°N

- Object-oriented Python toolkit for seismicity analysis
- Based on QuakeML data model
- www.quakepy.org (public Wiki)
- Getting QuakePy:

www.quakepy.org/GettingQuakePy

Subversion repository:

https://quake.ethz.ch/svn/quakepy









QuakePy: Catalog Import/Export

QuakeML (native)	import/export	-34'
Global CMT (ndk)	import/export	-36'
ZMAP	import/export	-40'
SCSN "stp phase"	import	-42
ANSS/unified	import	-46'
PDE "compressed"	import	-48 [°]
JMA "Deck"	import	-50° 164* 166* 168* 170* 172* 174* 176* 178* 180*
GSE2.0 Bulletin	import	
OGS HPL	import	
http://magma.gstartDates	geonet.org.nz/services/quake/se =2007-10-10&endDate=2007-12-13	earch? QuakePy

Finis

QuakeML is a community-driven project! Your help and

collaboration is highly appreciated!

Thanks for your attention!



