

Developing sustainable and relevant community services for Seismology in Europe under the EPOS umbrella

Florian Haslinger (1), Rémy Bossu (2), Laurentiu Danciu (1), Aurélien Dupont (2), Tom Garth (3), Lucia Luzi (4), Alberto Michelini (4), Andreas Rietbrock (3), Reinoud Sleeman (5), Angelo Strollo (6), Stefan Wiemer (1), and EPOS-Seismology Consortium (7)

(1) ETH Zürich, Schweizerischer Erdbebendienst, Zürich, Switzerland (haslinger@sed.ethz.ch), (2) EMSC-CSEM, France, (3) University of Liverpool, United Kingdom, (4) INGV, Italy, (5) KNMI, Netherlands, (6) GFZ Potsdam, Germany, (7) www.epos-ip.org/data-services/community-services/seismology

Since the initial formulation of the idea to establish the European Plate Observing System EPOS as a comprehensive research infrastructure for solid earth science in Europe, Seismology played a key role in this initiative. Starting from the long established European infrastructures ORFEUS and EMSC, and including more recent developments emerging from EC-sponsored European research infrastructure development projects, EPOS-Seismology is currently building up the next generation of services within the EPOS Implementation Phase project.

While to a large extent the technical developments (upgrades of existing and implementation of new services) are straightforward, with well defined scope and content, we also face a number of challenges. Among them are: i) For which services (data and products) are ‘authoritativeness’ concepts relevant or even required, and how can these be implemented appropriately; ii) how do we address the apparent (?) conflicts between free and open access vs. commercialization of services towards the private sector and demonstration of relevance by user tracking; iii) how do we implement identifiers and metadata structures that are relevant and interoperable within Seismology globally as well as within EPOS; iv) how do we engage the seismological research community as primary users and contributors to the services, and ensure their appropriate representation in the governance of EPOS-Seismology.

A further significant challenge in the build-up of EPOS-Seismology is how to ensure that services can be sustained in the foreseeable future, and how changes in service content (due to changed needs) or in service provision (by changing contributors / hosts) shall be managed.

In this contribution we present the current technical developments in EPOS-Seismology and discuss how we intend to address the challenges on the way.