



EPOS-GNSS - Current status of service and product implementation

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Europe is covered by dense networks of GNSS CORS (Continuous Operating Reference Station) maintained by many agencies with different technical and scientific objectives. In fact, many of these networks have been installed to provide support for geo-referencing applications, mainly surveying. These independent and uncoordinated efforts differ from other regions of the globe, like Japan and Western USA, where dedicated GNSS networks were installed using centralized and consistent projects with the main objective of producing information to study and monitor natural phenomena associated with Solid Earth processes.

Consequently, the optimized use of the data from the Europeans GNSS networks creates additional challenges from an organizational and technical point of view. We detail here the efforts carried out by the members of the EPOS-GNSS, one of the Thematic Core Services (TCS) of the EPOS-IP (European Plate Observing System - Implementation Phase) to design and establish dedicated products and services that benefit of the existence of national and pan-European infra-structures (in particular EUREF), optimized for Solid Earth applications.

We focus on the three main components being implemented: (a) Governance - with the aim that the entire community, from data providers to end-users, will be represented and their efforts recognized; (b) GLASS - a new software package for the dissemination of GNSS data & products; (c) Products - internally consistent GNSS solutions associated with the dedicated products (time-series, velocities and strain-rates) to be created from a big data set using state-of-art methodologies adapted to take up the upscaling challenge, that can be used to improve the understanding of the different Solid Earth mechanisms taken place in European region.