## The future of telematic services for Italian Surveyors

## Antonio Bottaro, Cromwell Manaloto, Alessandro Dalmasso, Daniele Brancato and Luca Dal Buono (Italy)

**Key words:** e-Governance; GNSS/GPS; Low cost technology; Positioning

## SUMMARY

Sogei, the in-house technological partner of the Ministry of Economy and Finance of Italy, is carrying out, since more than 10 years, R&D projects on GNSS within the framework of European Commission and European GNSS Supervisory Authority Programmes.

Sogei is also a shareholder of Geoweb, a company of the National Board of Surveyors, that provides telematics services for professionals. Through such services, surveyors can access online from their offices to National Cadastral and Land Registry Databases and submit electronic version of their Land and Building Registries Update Documents.

In the last international workshop IGAW2016 (International GNSS Advances Workshop), hold in Rome on January 2016, the state of the art of GNSS (Global Navigation Satellite System) multi constellation positioning techniques has been presented. At the workshop attended as speakers distinguished Universities representatives (e.g. Stanford, Calgary, Samara, Roma Tre and the Institute for Scientific Interchange). Within such framework, Sogei presented some of its relevant R&D pillars:

• An advanced GNSS Augmentation Network RTK Infrastructure, named GRDNet (GNSS R&D Network), able to provide RTK correction services based on MRS (Multi-Reference Station)/VRS (Virtual Reference Station) techniques and to integrate any kind of Reference Receiver

• A Software Defined Radio single frequency real-time GNSS receiver, whose hardware component is reduced to the simple sampler, while all the signal processing is performed via software on a program running on a PC or a

## Tablet

• A Web Community Cartographic Framework, named GEOPOI® (Geocoding Point Of Interest) for the intensive exploitation of the location data devoted to the design of Land Administration activities and to the Business and Location Intelligence

Within such Workshop, the common intention of Sogei and Geoweb to perform a demonstration campaign of Sogei's R&D assets has been presented. Relevant Professional Surveyors will be involved in thee above activities.

The streaming of the Sogei representative Roberto Capua speech, presenting the relevant R&D activities of the company, is available at the following link (English language):

 $https://www.youtube.com/watch?v=Pos5L_cNusQ\&list=PLnkQoyGMXSFE9AwWwBazve6-7AWBXLqk1&index=8$