

# **GISCAD-OV : Galileo High Accuracy Service : a Contribution of Surveyors to GNSS**

**Maurice Barbieri (Switzerland)**

**Key words:** Cadastre; Engineering survey; GNSS/GPS; Low cost technology; Positioning; Remote sensing; Galileo; High Accuracy Service

## **SUMMARY**

The finalisation of the satellite constellation of the European satellite positioning system Galileo offered the surveying profession the opportunity to design a new system dedicated to its needs for cadastral works and demonstrating its expertise in the area of accuracy of measurement.

The main scope of the GISCAD-OV project is to design, develop and validate an innovative and cost-effective High Accuracy Service for cadastral and property surveying applications, based on GPS and Galileo High Accuracy Services (HAS) and advanced techniques of Precise Point Positioning-Ambiguity Resolution quick convergence (PPP-AR).

A Europe-wide pilot project campaign was carried out for validating the implemented solution, applying single countries cadastral regulations. These tests are conducted with the contribution of benevolent local surveyors who help in selecting survey sites for each required cadastral scenario (division / sub-division of parcel, empty plot or building) and environmental condition (rural, peri-urban, dense urban,...).

Last, the ending topic of the meeting was focused on new technical and commercial opportunities that may appear in the future thanks to the deployment of GISCAD-OV solution.

The high-accuracy positioning market is very dynamic, currently driven by emerging applications such as autonomous vehicles and drones, but also by technological evolution (e.g. dual-frequency chipsets for the mass-market) and the market situation (cheaper or free-of-charge services in some countries), all of which is leading to the democratisation of high accuracy. Therefore, high accuracy is not only a domain for professional applications but is becoming a widespread commodity for a wide array of emerging applications.

---

GISCAD-OV : Galileo High Accuracy Service : a Contribution of Surveyors to GNSS (12293)  
Maurice Barbieri (Switzerland)

FIG Working Week 2023  
Protecting Our World, Conquering New Frontiers  
Orlando, Florida, USA, 28 May–1 June 2023