

Timing and Synchronisation Panel Discussions Results Summary

EGNSS User Consultation Platform Plenary

4th December 2018

Agenda

- Highlights of Main Trends in the Market
- Recommended Refinements of User Requirements
- User Requirements for New/Emerging Applications
- Research and Innovation Priorities
- Discussion on Enhanced EGNSS Services
- Feedback on Back-up PNT Solutions

Highlights of Main Trends in the Market

- Emerging need for high accuracy in time & synchro applications
- Increasing demand for calibration of hardware equipment delays for both scientific and industrial applications
- Robustness versus spoofing and jamming is confirmed → Galileo authentication

Recommended Refinements of User Requirements

- Resilience: Galileo already contributes with independent constellation; it needs to be addressed at application level, different back-up available (geo-stationary satellite for DVB, fibre optics for finance, caesium clocks for data centres,..)
- Integrity: additional integrity information with a certain level of confidence has to be provided by the system. This may assist end-user devices to assess the usability of the signal depending on user requirements
- Interference: legislation on jammer prevention should be promoted
- Spoofing: robustness to spoofing shall be mapped against attacker profile. Energy market most critical infrastructure

User Requirements for New/Emerging Applications

- Digital Video Broadcasting
- Autonomous cars
- 5G
- Data management centres

Common needs for calibration and robustness as for scientific applications

Different high time accuracy needs, from millisecond down to nanosecond level. Further details in the Minutes of Meeting

Research and Innovation Priorities

- Top 3 applications: automotive, 5G, finance
- Needs: Galileo authentication shall be deployed asap
- 3 main challenges: security, costs and calibration
- Technical barriers: no technical barriers but limitations due to the unavailability of standardised test procedures including calibration and stress tests
- Most relevant EGNSS Service: Galileo Open Service Authentication
- Type of calls: every two years, large size of R&D projects and shorter evaluation process and grant signature

Feedback on Back-up PNT Solutions

Back up needs may change depending on different market applications and availability requirements

Specific back-up solutions shall be included in future discussions (3rd UCP)

Thank you !