



## **Fifth Meeting of the International Committee on Global Navigation Satellite Systems (ICG)**

**Hosted by the European Commission on behalf of the European Union and Italy**

**Turin, Italy  
18 – 22 October 2010**

### **AGENDA**

#### **Sunday, 17 October**

---

16:00 – 18:00	<b>On-site registration (International Training Centre (ITC-ILO))</b>
16:00 – 17:00	<b>Meeting with the Working Groups Co-Chairs</b>
17:00 – 18:00	<b>Providers' Forum Meeting</b>

#### **Monday, 18 October**

---

**08:00**                      **On-site registration (International Training Centre (ITC-ILO))**

**09:00**                      **FIRST PLENARY SESSION OF THE ICG**

*Co-Chairs: Mr. Mario Caporale, Italian Space Agency and Mr. Michel Bosco, European Commission*

Attended by all. The primary purpose is for Providers to present the status and future plans for their systems, and for associate members and observers to also provide updates. All presenters will identify issues for discussion in the ICG and/or Working Groups

**09:00 – 09:30**                      **Welcome/Opening Remarks**

*Minister Maurizio ZANINI, Ministry of Foreign Affairs, Italy*

*Mr. Cosimo La ROCCA, Assistant of the President of the Italian Space Agency, Italy*

*Mr. Dario ARRIGOTTI, Deputy Director of the ITC-ILO Training Centre, Italy*

*Mr. Rodolfo ZICH, President of Consorzio Torino Time, Italy*

*Mr. Paul WEISSENBERG, Director, Space, Security and GMES, DG Enterprise and Industry, European Commission*

*Ms. Sharafat Gadimova, Office for Outer Space Affairs, United Nations Office at Vienna*

**09:30 – 09:40**

**Adoption of Agenda**

**Providers System and Service Updates**

09:40 – 10:00 Galileo/EGNOS Status Update, *Mr. Edgar Thielmann, European Union*

10:00 – 10:20 US Systems Status and Service Provision, *Mr. Anthony Russo, United States of America*

10:20 – 10:40 GLONASS Status and Development, *Mr. Grigory Stupak, Russian Federation*

10:40 – 11:00 BeiDou Navigation Satellite System Development, *Mr. Ran Chengqi, China*

11:00 – 11:20 *Coffee Break*

**Regional Providers Updates**

11:20 – 11:40 Overview of GAGAN and IRNSS Programme, *Mr. Narayanaswamy Neelakantan, India*

11:40 – 12:00 QZSS and MSAS Status and Development, *Mr. Mikio Aoki and Mr. Satoshi Kogure, Japan*

12:00 – 12:15 Interagency Operations Advisory Group (IOAG) introduction, *Mr. James Miller, NASA*

**12:15 – 15:00**

**Presentations by Associate Members and Observers on Matters of Interest to ICG**

Attended by all. Opportunity for Associate Members and Observers to present recent developments in their organizations and associations with regard to GNSS services and applications

12:15 – 12:30 Programme on GNSS, *Ms. Sharafat Gadimova, United Nations Office for Outer Space Affairs*

12:30 – 12:45 What do Surveyors and Other Spatial Professionals need from an Interoperable GNSS System of Systems, *Mr. Matt Higgins, International Federation of Surveyors*

12:45 – 13:00 Recent developments in the IGS, *Mr. John Dow, International GNSS Services*

13:00 - 14:00 *Group photo*  
*Lunch*

**Presentations by Associate Members and Observers on Matters of Interest to ICG (continues)**

14:00 – 14:15 Recent developments in CGSIC, *Mr. Stephen Rick Hamilton, Civil GPS*

*Service Interface Committee*

- 14:15 – 14:30 COSPAR's Contribution to the Scientific Application of GNSS, *Mr. Janusz Zielinski, Committee on Space Research*
- 14:30 – 14:45 ITU-R RNSS Progress Report, *Mr. Attila Matas, ITU*
- 14:45 – 15:00 Universal-SBAS: A Worldwide Multimodal Standard, *Mr. Cyril Botteron, European and Canadian GNSS laboratories*

**15:00 – 18:00 GNSS technology in the era of multi-systems receivers**

*Co-Chairs: Mr. Ignacio Fernández Hernández, European Union and Mr. Kenneth Alexander, United States of America*

Attended by all. The primary purpose is for participants or invited presenters to raise awareness of issues and/or opportunities in user applications and GNSS technology for consideration by the ICG and/or Working Groups

- 15:00 – 15:15 Multi-GNSS receiver trends for consumer devices, *Mr. Greg Turetzky, United States of America*
- 15:15 – 15:30 Benefits from multi-GNSS receivers and approaches for deployment, *Mr. Hiroaki Maeda, Japan*
- 15:30 – 15:45 Beidou/Compass and its unique contributions to GNSS, *Mr. Shaowei Han, China*
- 15:45 – 16:00 Multisystem receivers for GNSS users, *Mr. Oleg Lopatko, Russian Federation*
- 16:00 – 16:15 *Coffee Break*
- 16:15 – 16:30 Software radio as technology brick for the development of GNSS multi-system receivers: results made in Torino, *Mr. Paolo Mulassano, Italy*
- 16:30 – 16:45 GNSS receivers for timing applications, *Ms. Pascale Defraigne, European Union*
- 16:45 – 17:00 Benefits of GNSS Receiver in the era of multi-systems, *Ms. Xiaorui Huang, China*
- 17:00 – 17:15 Overview of Regional Navigation Receivers (IRNSS), *Mr. Narayanaswamy Neelakantan, India*
- 17:15 – 17:30 Seamless GNSS through integrated user equipment: A joint evaluation of US and EU systems, *Mr. Kenneth Alexander, United States of America and Mr. Ignacio Fernández Hernández, European Union*
- 17:30 Questions and Answers; Panel Discussion

18:00 Adjourn

**Tuesday, 19 October**

---

**09:00 – 11:00**

**FIRST SESSION OF PROVIDERS' FORUM**

Attended by only the providers.

**(in parallel) Meeting of Associate Members and Observers – as needed**

The purpose is to discuss issues of common concern that have emerged during earlier sessions.

*11:00 – 11:30*

*Coffee Break*

**11:30 – 16:00**

**WORKING GROUP MEETINGS**  
*(parallel sessions of WG A and WG C)*

**WG A – Compatibility and Interoperability**

*Co-Chairs: Mr. Sergey Revnivykh, Russian Federation and Mr. David Turner, United States of America*

**(in parallel) WG C – Information Dissemination and Capacity Building**

*Co-Chairs: Ms. Sharafat Gadimova and Ms. Antonella Bini, United Nations Office for Outer Space Affairs and Ms. Letizia Lopresti, Italy*

*13:00 – 14:00*

*Lunch*

**16:00**

Adjourn

*16:00 – 16:30*

*Coffee Break*

**16:30**

***CULTURAL TOUR***

**21:00**

***GALA DINNER***

**Wednesday, 20 October**

---

**09:00 – 13:00**

**WORKING GROUP MEETINGS**  
**(parallel sessions of WG B and WG D)**

**WG B – Enhancement of performance of GNSS services**

*Co-Chairs: Mr. Narayanaswamy Neelakantan, India and Mr. Rafael Lucas Rodriguez, European Space Agency*

**(in parallel) WG D – Interactions with national, regional authorities and international organizations**

*Co-Chairs: Mr. John Dow, International GNSS Services, Ms. Ruth Neilan,*

*International Association of Geodesy and Mr. Matt Higgins, International Federation of Surveyors*

- 11:00 – 11:30*      *Coffee Break*
- 13:00 – 14:00*      *Lunch*
- 14:00 – 17:00**      **GNSS technology in the era of multi-systems: the impact of GNSS interoperability on timing and other user applications**
- Co-chairs: Prof. Elio Bava, Italy and Prof. Wlodzimierz Lewandowski, BIPM*
- Attended by all. The primary purpose is for participants or invited presenters to raise awareness of issues and/or opportunities in user applications and GNSS technology for consideration by the ICG and/or Working Groups
- 14:05 – 14:25*      *Applications of GPS provided time and frequency, Mr. Edward D. Powers, United States of America*
- 14:25 – 14:45*      *GLONASS time system scale, Mr. Arkady Tyulyakov, Russian Federation*
- 14:45 – 15:05*      *Time metrology in navigation systems: the experience of INRIM in the Galileo project, Ms. Patrizia Tavella, Italy*
- 15:05 – 15:25*      *The Consorzio Torino Time scientific and industrial activities, Mr. Luigi Bragagnini, Italy*
- 15:25 – 15:45*      *QZSS Time management and UTC, Mr. Shin'ichi Hama, Japan*
- 15:45 – 16:05*      *Overview of the Timing system being planned for India's IRNSS, Mr. Narayanaswamy Neelakantan, India*
- 16:05 – 16:25**      *Coffee Break*
- 16:25 – 16:45*      *Impact of multi-GNSS on international timekeeping, Ms. Felicitas Arias, BIPM*
- 16:45 – 17:05*      *Development of timing GPS/GLONASS/Galileo receivers at Astrodynamical Observatory in Borowiec, Mr. Jerzy Nawrocky, European Union*
- 17:05 – 17:20*      *Questions and Answers*
- 17:20**              *Adjourn*

***TECHNICAL TOUR - INRIM***

**Thursday, 21 October**

---

**09:00 – 10:30**

**WORKING GROUP PARALLEL SESSIONS**

Primary purpose is to prepare conclusions and recommendations for full committee consideration.

10:30 – 11:00 *Coffee Break*

**11:00 – 16:00** **SECOND PLENARY SESSION OF THE ICG**

*Co-Chairs: Mr. Mario Caporale, Italian Space Agency and Mr. Paul Verhoef, European Commission*

Attended by all. The primary purpose is for Working Groups to present results of their meetings or any meetings held since the Fourth Meeting of the ICG. Presentations will include any draft recommendations to the ICG.

11:00 – 12:00 **Presentation by WG A and Discussion**

12:00 – 13:00 **Presentation by WG C and Discussion**

13:00 – 14:00 *Lunch*

14:00 – 15:00 **Presentation by WG B and Discussion**

15:00 – 16:00 **Presentation by WG D and Discussion**

16:00 – 16:30 *Coffee Break*

**16:30 - 17:30** **Round Table Discussions (Italian Industries)**

Attended by all. The Italian Space Agency is organizing a round table of the major Italian industries involved in satellite navigation activities to discuss the European GNSS in the frame of the international cooperation. The following themes will be addressed: compatibility, interoperability and transparency among the GNSS systems; benefits of GNSS to society; effective use of energy and other resources, including time; support to disaster management through warning and/or rapid response; protection of natural resources; improvement in emergency, search and rescue; improvement in maritime situational awareness; seamless transportation systems.

17:30 **Adjourn**

***GALA NIGHT***

**Friday, 22 October**

---

**09:00 – 11:00** **SECOND SESSION OF PROVIDERS' FORUM**

Attended by only the providers. The primary purpose is to discuss any draft recommendations to the ICG from the Working Groups and to develop response or suggest amendments to the draft recommendations.

**(in parallel) Meeting of Associate Members and Observers – as needed**

The purpose is to discuss issues of common concern that have emerged during earlier sessions

11:00 – 11:30 *Coffee Break*

**11:30 – 13:00**

**THIRD PLENARY SESSION OF THE ICG**

*Co-Chairs: Mr. Mario Caporale, Italian Space Agency and Mr. Paul Verhoef, European Commission*

Attended by all. The primary purpose is to consider final recommendations as considered by the Providers' Forum. This session will also consider other ICG-related issues.

**Consideration of proposed ICG recommendations**

**Review and approval of meeting conclusions (joint statement, press release, etc.)**

**Announcement for the Sixth Meeting of the ICG in 2011**

**Discussion of Venues and Dates for ICG-7 (2012) and ICG-8 (2013)**

**Closing Statements**

13:00

**Adjourn**