



International Committee on  
Global Navigation Satellite Systems

## **AGENDA**

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

**Hosted by the  
United States of America**

**Pasadena, California  
December 8 – 12, 2008**

*Sunday, December 7*

**16:00 – 18:00**      **Registration, 2<sup>nd</sup> Floor Westin Hotel Pasadena**

**18:00**                      **FIRST SESSION OF PROVIDERS' FORUM**

**Attended by only the Providers.** The primary purpose is to discuss the proposed Providers Forum Terms of Reference, review the agenda and meeting procedures for ICG-3, draft recommendations to the ICG from the Working Groups and to develop response or suggest amendments to the draft recommendations, and address any other business as required.

*San Marino Room*

*Monday through Wednesday, December 8 – 10*

**09:00 - 17:00**      **GNSS EXHIBITS**

*Plaza room*

*Monday, December 8*

**08:00**            **On-site Registration**

**09:00 – 14:30**    **FIRST PLENARY SESSION OF THE ICG**

**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

*Fountain Ballroom, all day*

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

09:00            ICG-3 Chair, *Mr. Kenneth HODGKINS, Director, Office Of Space And Advanced Technology U.S. State Department*

09:10            NASA, Jet Propulsion Laboratory, California Institute of Technology, *Dr. Charles ELACHI, Director*

09 :20            United Nations Office for Outer Space Affairs, *Dr. Mazlan OTHMAN, Director*

**09:30**            **Keynote Presentation**

09:30            Looking Ahead for GPtS, *Prof. Brad PARKINSON, Stanford University*

**Presentation by ICG Secretariat**

09:50            ICG 2008 activities, *Ms. Sharafat Gadimova, United Nations Office for Outer Space Affairs*

**10:00**            **Adoption of Agenda**

*10:10*            *Coffee Break*

**10:40**            **Providers: System and Service Updates**

U.S. Space-Based PNT Policy and Systems Update, *Mr. Mike SHAW, Director, US National Coordination Office for Position, Navigation, and Timing; David GOLDSTEIN, USAF; Leo ELDREDGE, FAA; and John MERRILL, DHS*

GLObal NAVigation Satellite System (GLONASS) and Wide-area System of Differential Corrections and Monitoring (SDCM), *Mr. Sergey REVNIVYKH, Roscosmos, Russian Federation*

European Satellite Navigation System (Galileo) and European Geostationary Navigation Overlay Services (EGNOS), *Mr. Paul VERHOEF, Galileo Unit,*

*European Community*

***Group Photo, just prior to lunch***

**12:40**

***Lunch, hosted by Lockheed Martin***

**13:45**

**Providers: System and Service Updates**

COMPASS/BeiDou, *Ms. Jun LU, China Satellite Navigation Project Center, China*

GAGAN and IRNSS, *Dr. Suresh KIBE, Indian Space Research Organization, India*

Current Status of Quasi-Zenith Satellite System Development, *Mr. Koji TERADA, Japan Aerospace Exploration Agency, Japan*

**15:40**

***Coffee Break***

**16:00**

**Presentations by Members, 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

***Fountain Ballroom***

International GNSS Service & ICG: Status Update, *Prof. John DOW, IGS*

The economic benefits of precise positioning in agriculture, construction and mining, *Mr. Matt HIGGINS, FIG*

International Association of Institute of Navigation - Contribution to International Navigation, *Dr. Elizabeth KLAFFENBOECK, IAIN*

**17:00**

**ADJOURN**

**18:00**

**Welcoming Reception hosted by Trimble Navigation Pasadena Jazz Institute, within 5 minute walking distance from meeting venue, see accompanying map.**

*Tuesday, December 9*

**09:00 – 10:30**

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

Nigerian GNSS Activities, *Dr. Jerry Sonny UGOKWE, Permanent Mission of Nigeria to the United Nations, Austria*

Country report on Status of GNSS Infrastructure and Applications, *Dr. Mustafa DIN SUBARI, National Space Agency of Malaysia*

EUPOS status and future plans, *Mr. Gerd ROSENTHAL, EUPOS*

COSPAR and ICG, *Dr. Petrus VISSER, COSPAR*

AFREF and TRIGNET, *Mr. Richard WONNACOTT, Survey Services, AFREF*

European project HARRISON, *Dr. Luigi BRAGAGNINI, Director of Consortium Torino Time, Italy*

*Others as may be accommodated on this agenda...*

**10:30**

***Coffee Break***

**11:00**

**Science and Innovative GNSS Applications: Invited Presentations**

***Fountain Ballroom***

11:00

Automobile Services, *Mr. Timothy NIXON, OnStar by GM*

11:20

Earthscope, *Dr. Kaye SHEDLOCK, U.S. National Science Foundation*

11:40

GNSS Meteorology and Satellite Radio Occultation, *Dr. Chris ROCKEN, UCAR*

12:00

GPS Applications in Aviation, *Captain Joe BURNS, United Airlines*

12:20

Cutting Edge Science Applications, *Dr. Stephen LICHTEN, JPL/Caltech*

**12:45**

***Lunch hosted by Rockwell Collins, Inc.***

**14:00**

**Industry-focused presentations, ICG3 Meeting Supporters**

14:00

Triumph Technology, *Dr. Javad ASHJAEI, Javad GNSS*

14:20

User-driven Benefit in a World of Multiple GNSS, *Dr. Stuart RILEY,*

*Trimble Navigation*

- 14:40 Impact of Multi-MEO GNSS on Consumer Products, *Mr. Greg TURETSKY, SiRF*
- 15:00 GNSS in the news and ICG, *Mr. Glen GIBBONS, InsideGNSS Magazine*
- 15:40** *Coffee Break*
- 16:00** **GNSS Science and Technology Applications**
- 16:00 Improving GNSS for Future Natural Disaster Reduction: Earthquakes and Tsunamis, *Dr. Kenneth HUDNUT, US Geological Survey, USA*
- 16:15 Space Weather, *Prof. Jonathan MAKELA, University of Illinois, USA*
- 16:30 GNSS Signals Use on a Mission to the Moon, *Prof. Giovanni PALMERINI, University of Rome, Italy*
- 16:45 The integration of SatNav/SatCom technologies for environmental monitoring and management of emergencies, *Prof. Raffaella CEFALO, University of Trieste, Italy, TBC*
- 17:00 COMPASS Application in the Sichuan Earthquake Relief, *Ms. Tang Jing, China National Administration of GNSS and Applications, China*
- 17:15 COMPASS – A New Method on Marine Fishery Ship Security and Disaster Relief and Rescue, *Mr. Hu GANG, Beijing BDStar Navigation Co., China*
- 17:30 IMES (Indoor Messaging Systems), Proposal for New Indoor Positioning System, *Dinesh MANANDHAR, GNSS Technologies. Inc., Japan*
- 18:00** **Adjourn**

*Wednesday, December 10*

**09:00 – 17:30**

**WORKING GROUP MEETINGS**

*Fountain Ballroom*

**09:00**

**WG A – Compatibility and interoperability**

*Chairs: Mr. David TURNER, USA and Mr. Sergey REVNIVYKH, Russian Federation*

*Co-chairs Opening Remarks, Mr. Sergey REVNIVYKH, Russian Federation and Mr. David TURNER, USA*

*U.S. Views on Compatibility and Interoperability, Lt.Col. Patrick HARRINGTON, USAF, USA*

*Russian Federation Views on Compatibility and Interoperability, Pror. Grigory STUPAK, RNIKP, Russian Federation*

*Galileo Perspectives on Compatibility and Interoperability Issue, Mr. Frederic BASTIDE, European Commission*

*Aviation Considerations for Multi-Constellation GNSS, Mr. Leo ELDREDGE, FAA, USA*

*Working Group Discussion of 2009 Work Plan*

**10:30**

***Coffee Break***

**11:00**

**WG C – Information Dissemination**

*Chairs: Mr. Hans HAUBOLD, UN OOSA and Ms. Sharafat GADIMOVA, UN OOSA*

**Presentations and Discussions**

*GNSS Activities of the Regional Centres for Space Science and Technology Education, Dr. Sergio CAMACHO, CRECTEALC, Mexico*

*Educational Tools for GNSS, Prof. Letizia LO PRESTI, Politecnico di Torino, Italy*

*GNSS Curriculum Development, Prof. Chris RIZOS, Australia*

*ICG Glossary of GNSS Terms, Mr. Thomas vonDEAK, USA*

*Asia Pacific Economic Cooperation (APEC) Promoting GNSS*

applications, *Ms. Karen VANDYKE, USA*

Youth Promoting GNSS Cooperation and Education, *Ms. Stephanie WAN, SGAC*

UN Regional Centres for Space Science and Technology Education and ICG Information Centres

ICG 2009 Activities

ICG Information Portal

GNSS curriculum

Other Matters

**12:30** *Lunch hosted by Northrop Grumman*

**14:00** **WG D – Interactions with national, regional authorities and international organizations**

*Chairs: Ms. Ruth NEILAN, IAG, Prof. John DOW, IGS, and Mr. Matt HIGGINS, FIG*

IGAG Components Supporting ICG Goals. *Prof. Chris RIZOS, IAG*

Satellite Laser Retroreflectors for GNSS satellites: ILRS International Standard, *Dr. Michael PEARLMAN, IAG/IERS/ILRS*

Use of International References for GNSS operations and applications, *Dr. E. Felicitas ARIAS and W. LEWANDOWSKI, BIPM*

Development of the EUREF GNSS Services and Reference Networks–*Dr. Johannes IHDE, IAG/IERS/EUREF*

SIRGAS: reference Frame for GNSS Applications in Latin America– *Ms. Ruth NEILAN, IAG/IGS/SIRGAS*

The Africa Reference Frame Project - AFREF, *Mr. Richard WANNACOTT, IAG/IGS/IERS/AFREF*

Discussion

**15:30** *Coffee Break*

**16:00** **WG B – Enhancement of performance of GNSS services**

*Chair: Dr. Suresh KIBE, India*

**Discussions**

**17:30**

**Adjourn**

**Exhibits Close**

**18:30**

**ICG Dinner hosted by Javad GNSS**

**Café Santorini – Rococo Room**, *Walking distance from hotels and meeting venue, see accompanying map.*

*Thursday, December 11*

**09:00 – 10:30**

**WORKING GROUP PARALLEL SESSIONS**

Working Groups to prepare conclusions and recommendations for full committee consideration.

*Fountain Ballroom WG A, San Gabriel WG B, San Pasqual WG C, San Marino WG D*

**10:30**

*Coffee Break*

**11:00 – 12:30**

**SECOND PLENARY SESSION OF THE ICG**

**Attended by all.** The primary purpose is for Working Groups to present results of their meetings on Wednesday, December 10 or any meetings held since the Second Meeting of the ICG. Presentations will include any draft recommendations to the ICG.

*Fountain Ballroom*

11:00

**Presentation by WG A and Discussion**

11:20

**Presentation by WG B and Discussion**

11:40

**Presentation by WG C and Discussion**

12:00

**Presentation by WG D and Discussion**

**12:30**

*Lunch*

**13:30 – 21:00**

**PARALLEL SESSIONS OR JPL TOUR**

**14:00**

**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.

*Fountain Ballroom*

**Meeting of Associate Members and Observers – as needed**

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

*San Gabriel, San Pasqual, San Marino*

**15:00**

*Coffee Break*

**13:30**

**Depart for JPL Tour from Westin – Group 1, return to Westin 16:30**

**14:00**

**Depart for JPL Tour from Westin – Group 2, return to Westin 17:00**

*Tour group assignments will be posted outside ICG Office in the Santa Rosa Room*

**17:30 – 21:00**

**PARALLEL SESSIONS MAY CONTINUE AS NEEDED**

*Friday, December 12*

**08:00**

**PARALLEL SESSIONS – AS NEEDED**

*Additional time for parallel sessions in preparation for final plenary as needed – schedule for Closing and Adjournment of Third Plenary may adjust.*

**Third Session of Providers’ Forum (if required)**

**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.

*Madera Room*

**Meeting of Associate Members and Observers – as needed**

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

*San Pasqual, San Marino*

**10:00**

**THIRD PLENARY SESSION OF THE ICG**

**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.

*Madera Room*

Consideration of proposed ICG recommendations

Review and approval of meeting conclusions (joint statement)

Announcement for the Fourth Meeting of the ICG

Discussion of Venues and dates for ICG-5 (2010) and ICG-6 (2011)

Proposed dates:

December 6-10, 2010

December 5-9, 2011

Closing Statements

**Adjourn**

*Coffee Break as schedule permits*