



International Committee on
Global Navigation Satellite Systems

AGENDA

Twelfth Meeting of the International Committee on Global Navigation Satellite Systems

Kyoto, Japan

2 – 7 December 2017

Saturday, 2 December 2017

Venue: *KYOTO University Yoshida Campus (View maps and get directions at: <http://icg12.jp/venue/>)*

12:00 – 17:00 **On-site Registration**

13:00 – 15:40 **First Providers' Forum Meeting**

Co-Chairs: Satoshi KOGURE, Japan and Sergey KARUTIN, Russian Federation

15:40 – 16:00 *Coffee Break*

16:00 – 17:00 **Meeting with the Working Groups Co- Chairs**

3 – 7 December 2017

ICG PLENARY SESSIONS

Sunday, 3 December 2017

Venue: *KYOTO University Yoshida Campus*

09:00 – 17:00 **On-site Registration**

10:00 – 17:00 **First Plenary Session of ICG**

Chair: Hiroshi YAMAKAWA, Japan

Attended by all. The primary purpose is for the global navigation satellite systems (GNSS) and augmentation providers to present the status and plans for their systems, and an opportunity for the ICG members, associate members and observers to provide updates on recent developments in their organizations and associations with regard to GNSS services and applications. All presenters will identify issues for discussion in the ICG plenary sessions and/or its working groups meetings

10:00 **Welcome/Opening Remarks**

Shuzo TAKADA, National Space Policy Secretariat, Cabinet Office, Japan

Toshiro IJIMA, Ministry of Foreign Affairs, Japan

Kayo INABA, Vice President of Kyoto University, Japan

Luc ST-PIERRE, United Nations Office for Outer Space Affairs

10:25 **Adoption of Agenda**

10:30 **Providers System and Service Updates**

10:30-10:50	Status Update on the Quasi-Zenith Satellite System (QZSS), <i>Go TAKIZAWA, QZSS Strategy Office, National Space Policy Secretariat, Japan</i>
10:50-11:10	Global Positioning System (GPS) Program and Advisory Board Update, <i>Harold MARTIN, National Coordination Office for Space Based Positioning Navigation and Timing, and John BETZ, United States Positioning Navigation and Timing Advisory Board Representative, United States of America</i>
11:10 – 11:30	<i>Coffee Break</i>
11:30-11:50	Global Navigation Satellite System (GLONASS) Status Update, <i>Ivan REVNIVYKH, Roscosmos Space Corporation, Russian Federation</i>
11:50-12:10	Status Update on the European Satellite Navigation System (GALILEO), <i>Christoph KAUTZ, European Commission</i>
12:10 – 13:30	<i>Group photo/Lunch</i>
13:30-13:50	Update on the BeiDou Satellite Navigation System, <i>Chengqi RAN, China Satellite Navigation Office, China</i>
13:50-14:30	Q&A session <i>NOTE: Especially, Q&A with respect to Research and Development activities for the Next Generation GNSS are to be exchanged among the audience.</i>
14:30 – 17:00	Presentations by Members, Associate Members, Observers and Invited Observers on Matters of Interest to ICG
14:30	GNSS Contribution to the New ITRF, <i>Chris RIZOS, International Association of Geodesy (IAG)</i>
14:40	United Nations Global Geospatial Information Management (UN-GGIM) subcommittee on Geodesy, <i>Mikael LILJE, International Federation of Surveyors (FIG)</i>
14:50	Civil GPS Service Interface Committee, <i>Russell HOLMES, Civil GPS Service Interface Committee (CGSIC)</i>
15:00	The Cyber Threat Impact on Aviation, <i>Bernald SMITH, Fédération Aéronautique Internationale (FAI)</i>
15:10	Perspectives of GNSS applications in Italy: Rail/road synergy as selected example, <i>Alberto TUOZZI, Italian Space Agency, Italy</i>
15:20	Fostering GNSS Science, Galileo Satellite Metadata, <i>Javier VENTURA-TRAVESET and Daniel BLONSKI, European Space Agency (ESA)</i>

15:30 Update on ICG WG-B Achievements on Interoperable GNSS Space Service Volume (SSV), *Werner ENDERLE, Stefan WALLNER, European Space Agency*

16:00 – 16:20 *Coffee Break*

16:20 EUREF Activities, *Markku POUTANEN, IAG Reference Frame Sub-commission for Europe (EUREF)*

16:30 GNSS Activities by the Joint Research Centre of the European Commission, *Matteo PAONNI, Joint Research Center, European Commission*

16:40 GNSS: The Systems Providers Versus the Non-Providers, *Refaat RASHAD, Arab Institute of Navigation (AIN)*

16:50 Australia's Programme on GNSS, *John DAWSON, Australia*

17:00 – 19:05 Applications and Experts Seminar

Chair: Hiroshi YAMAKAWA, Japan

Attended by all. The primary purpose is for GNSS experts to offer their views on GNSS today and vision for the future. The audience will have an opportunity to ask the panel members questions.

17:00 Water Vapor Analysis Over the Ocean using Shipborne GNSS Measurements for the Mitigation of Weather Disaster, *Yoshinori SHOJI, Meteorological Research Institute/Japan Meteorological Agency, Japan*

17:15 Variations of Water Vapor Observed with a Hyper-Dense GNSS Network, *Toshitaka TSUDA, Research Organization of Information and Systems (ROIS), Japan*

17:30 Earth Remote Sensing using Surface-Reflected GNSS Signals, *Steve LOWE, JPL/Caltech, United States*

17:45 Developments of GNSS Buoy for a Synthetic Geohazards Monitoring System, *Prof. Teruyuki KATO, Earthquake Research Institute, the University of Tokyo, Japan*

18:00 How the Real-Time GNSS can Contribute to Near Field Tsunami Early Warning?, *Yusaku OHTA, Research Center for Prediction of Earthquakes and Volcanic Eruptions, Graduate School of Science, Tohoku University, Japan*

18:15 Real-Time GNSS Earthquake and Tsunami Early Warning, *Gerald BAWDEN, National Aeronautics and Space Administration (NASA), United States, and*

18:30 Comprehensive application of RNSS + RDSS, *Gang HU, BDStar Navigation, China*

18:45 Early Warning Services via GNSS Signals, *Frederic DOMPS, European Commission and Yasuhiko KAWAZU, Cabinet Office, Japan*

19:05 Adjourn

19:10 Ice Breaker

Monday, 4 December 2017

09:00 – 17:00 On-site Registration

**Working Groups Meetings
(Parallel Sessions)**

09:15 – 11:00 WG S – Systems, Signals and Services

Co-chairs: David TURNER, United States of America and Sergey REVNIVYKH, Russian Federation

(in parallel) WG C – Information dissemination and capacity building

Co-chairs: Sharafat GADIMOVA, Office for Outer Space Affairs and Akio YASUDA, Japan

11:00 – 11:20 Coffee Break

11:20 – 13:00 WG S – Systems, Signals and Services (continues)

(in parallel) WG C – Information dissemination and capacity building (continues)

13:00 – 14:00 Lunch

Lunch times on Monday and Tuesday are flexible due to the WG schedule from 13:00 to 15:00

14:00 – 15:55 WG S – Systems, Signals and Services (continues)

(in parallel) WG C – Information dissemination and capacity building (continues)

15:55 – 16:15 Coffee Break

16:15 – 18:15 Working Group B - Enhancement of GNSS Performance, New Services and Capabilities

Co-chairs: Nilesh DESAI, India, Xingqun ZHAN, China and Daniel BLONSKI, European Space Agency

(in parallel) WG D – Reference Frames, Timing and Applications

Co-chairs: Ruth NEILAN, International GNSS Service (IGS), Chris RIZOS, International Association of Geodesy (IAG) and Mikael LILJE, International Federation of Surveyors (FIG)

18:15 Adjourn

Tuesday, 5 December 2017

09:00 – 14:00 On-site Registration

**Working Groups Meetings
(Parallel Sessions)**

09:15 – 11:15 Joint Working Groups Meeting

11:15 – 11:35 Coffee Break

11:35 – 14:00 WG B – Enhancement of GNSS Performance, New Services and Capabilities (continues)

(in parallel) WG D – Reference Frames, Timing and Applications (continues)

*14:00 – 15:00 Lunch
Lunch times on Monday and Tuesday are flexible due to the WG schedule from 13:00 to 15:00*

15:00 – 15:30 WG B – Enhancement of GNSS Performance, New Services and Capabilities (continues)

(in parallel) WG D – Reference Frames, Timing and Applications (continues)

15:30 City Tour followed by Banquet

Wednesday, 6 December 2017

09:15 – 11:00 Working Groups Parallel Sessions

Working groups to prepare conclusions and recommendations for the ICG consideration.

Working Group S - Systems, Signals and Services

Working Group B - Enhancement of GNSS Performance, New Services and Capabilities

Working Group C – Information dissemination and capacity building

Working Group D – Reference Frames, Timing and Applications

11:00 – 11:20 Coffee Break

11:20 – 15:00 Second Plenary Session of ICG (Presentations by Working Groups)

Chair: Hiroshi YAMAKAWA, Japan

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

11:20 Presentation by WG S and Discussions

12:00 Presentation by WG B and Discussions

12:40 Presentation by WG C and Discussions

13:20 – 14:20 Lunch

14:20 Presentation by WG D and Discussions

15:00 – 15:30 Coffee Break

15:30 – 17:00 Second Session of the Providers' Forum

Co-Chairs: Satoshi KOGURE, Japan and Sergey KARUTIN, Russian Federation

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, Observers and invited observers (as needed)

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

17:00 Adjourn

Thursday, 7 December 2017

09:15 – 13:00 Third Plenary Session of ICG

Chair: Hiroshi YAMAKAWA, Japan

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 (as needed)

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

11:00 – 11:20

Coffee Break

11:20

Other matters

- **China:** Announcement for the Thirteenth Meeting of the ICG in 2018
- **Expression of Interest** to host the ICG meetings in 2019 (India), in 2020 (OOSA) and in 2021.

12:20

Closing Statements

13:00

Adjourn