



International Committee on
Global Navigation Satellite Systems

AGENDA

Thirteenth Meeting of the International Committee on Global Navigation Satellite Systems

Xi'an, China

4 – 9 November 2018

Venue: Wyndham Grand Xi'an South Hotel

| Sunday, 4 November 2018 | |
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| 12:00 – 18:00 | On-site Registration |
| Twenty-first Meeting of the Providers' Forum | |
| 13:00 – 15:40 | First Providers' Forum Meeting <i>Co-Chairs: Ms. Xiaochun LU, China and Mr. Satoshi KOGURE, Japan</i> |
| 15:40 – 16:00 | <i>Coffee Break</i> |
| 16:00 – 17:00 | Meeting with the Working Groups Co-Chairs |
| 17:00 – 18:00 | Providers' Forum Meeting (to be continued as needed) |
| 5 – 9 November 2018 ICG PLENARY SESSIONS | |
| Monday, 5 November 2018 | |
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| 07:30 – 18:00 | On-site Registration |
| | First Plenary Session of ICG <i>Chair: Chengqi RAN, CHINA</i> |
| | <i>Attended by all. The primary purpose is for the GNSS system and augmentation providers to present the status and future 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</i> |
| 08:30 – 10:00 | Welcome and Opening Remarks |
| 08:30 | <i>Video: The Future Will be Changed Because of You</i> <i>Zhaoyao WANG, China Satellite Navigation System Committee</i> <i>Shaanxi Provincial People's Government</i> <i>Libin XIANG, Chinese Academy of Sciences</i> <i>Luc ST-PIERRE, United Nations Office for Outer Space Affairs</i> |

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| | <p><i>UNISPACE +50: Building a System of Systems Through the Short Term “Action Team” to a long-term “International Committee on GNSS”</i></p> <ul style="list-style-type: none"> - <i>Co-chairs of the Action Team on GNSS, Mario CAPORALE, Italy and Kenneth HODGKINS, United States</i> - <i>The “Interoperable GNSS Space Service Volume” booklet, James MILLER, NASA and Werner ENDERLE, ESA</i> |
| 10:00 – 10:10 | <i>Coffee Break</i> |
| 10:10 -10:15 | Adoption of Agenda |
| 10:15 – 12:15 | Providers System and Service Updates |
| 10:15 | Update on the BeiDou Satellite Navigation System, <i>Jiaqing MA, China</i> |
| 10:35 | Global Positioning System (GPS) Program and Policy Update, <i>Harold MARTIN, United States of America</i> |
| 10:55 | Global Navigation Satellite System (GLONASS) Status, <i>Ivan REVNIVYKH, Russian Federation</i> |
| 11:15 | Status Update on the European Satellite Navigation System (GALILEO), <i>Dominic HAYES, European Commission</i> |
| 11:35 | Navigation with Indian Constellation – NavIC Status, <i>Nilesh DESAI India</i> |
| 11:55 | Status Update on the Quasi-Zenith Satellite System (QZSS), <i>Masaharu KUGI, Japan</i> |
| 12:15 – 13:20 | <i>Lunch Break/Group Photo</i> |
| 13:20 – 15:00 | Presentations by Members, Associate Members, Observers and Invited Observers on Matters of Interest to ICG |
| 13:20 | EUREF Activities, <i>Markku POUTANEN, EUREF</i> |
| 13:30 | GALILEO System Performance, <i>Peter BUIST and Hillar TORK, European Commission</i> |
| 13:40 | High Fidelity 3-D Ionosphere Models for Precise-Point Positioning, <i>Raul Orus PEREZ and Daniel BLONSKI, ESA</i> |
| 13:50 | ESA’s on-going Initiative on Support to GNSS Navigation for cis-Lunar Missions and GNSS Scientific Exploitation, <i>Werner ENDERLE, Javier VENTURA-TRAVESET and Daniel BLONSKI, ESA</i> |
| 14:00 | The GENESIS project, towards an SSV, <i>Matteo PAONNI, European Commission</i> |
| 14:10 | ITU’s Role in GNSS, <i>Hon Fai NG, ITU</i> |

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| 14:20 | GNSS Precise Point Positioning: From Users' Perspective, <i>Suelynn CHOY, FIG</i> |
| 14:30 | Adapting to UAVs, <i>Bernald SMITH, FAI</i> |
| 14:40 | GNSS based Innovation Selected Activities/Programmes in Italy, <i>Alberto TUOZZI, Italy</i> |
| 14:50 | IAIN proposed contribution to ICG, <i>Mario CAPORALE, IAIN</i> |
| 15:00 – 15:10 | <i>Coffee Break</i> |
| 15:10 – 17:50 | Applications and Experts Seminar: GNSS+ <i>Co-Chairs: Jingnan LIU and Jun SHEN, CHINA</i> |
| | <i>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.</i> |
| 15:10 | The Status of GNSS-Based Meteorological Applications in China, <i>CAO Yunchang, Meteorological Observation Center of China Meteorological Administration, China</i> |
| 15:25 | Exploring the Moon with GNSS: Applications of GNSS Within and Beyond the Space Service Volume, <i>Benjamin W. ASHMAN, National Aeronautics and Space Administration, United States of America</i> |
| 15:40 | Testing of GNSS Dual-Frequency with Smartphones, <i>P. CROSTA, G. GALLUZZO, R.LUCAS, J.REDELKIEWICZ, ESA/GSA</i> |
| 15:55 | Realization the High-precision Positioning and Timing Provision as a Public Service, <i>GUAN Zhijun, Qianxun Spatial Intelligence Inc., China</i> |
| 16:10 | Multi-GNSS Software Radio Waveform Developed for the International Space Station, <i>Obed (Scott) SANDS, National Aeronautics and Space Administration, United States of America</i> |
| 16:25 | Training and Outreach with Galileo App Competition for Smartphones, <i>N. SIRIKAN, P. CROSTA, G. GALLUZZO, R.LUCAS, ESA</i> |
| 16:40 | The BDS/GNSS Applications in the Intelligent Transportation, <i>ZHANG Jiantong, China Transport Telecommunications & Information Center, China</i> |
| 16:55 – 17:05 | <i>Coffee Break</i> |
| 17:05 | eCALL, the EU's emergency alert system, <i>Matteo PAONNI, European Commission</i> |
| 17:20 | APSCO-IGMA, <i>Byambasuren ERDENE, Asia-Pacific Space Cooperation</i> |

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| | <i>Organization</i> |
| 17:35 | Application of BDS in Phongsaly Safe City Project, <i>HOUANGSANASAY PING, Phongsaly Safe City Project, Laos</i> |
| 17:50 | Adjourn |
| 18:00 | <i>The buses will leave for the City Ceremony</i> |
| 19:00 – 20:00 | Welcome to the City Ceremony |
| Tuesday, 6 November 2018 | |
| 08:00 – 18:00 | On-site Registration |
| 09:00 – 18:00 | Working Groups Meetings (Parallel Sessions) |
| 09:00 – 11:00 | WG S – Systems, Signals and Services <i>Co-chairs: David TURNER, United States of America and Sergey REVNIVYKH, Russian Federation</i> |
| 09:00 – 11:00 | (in parallel) WG C – Information dissemination and capacity building <i>Co-chairs: Sharafat GADIMOVA, UNOOSA and WENG Jingnong, China</i> |
| <i>11:00 – 11:20</i> | <i>Coffee Break</i> |
| 11:20 – 13:00 | WG S – Systems, Signals and Services (continues) |
| 11:20 – 13:00 | (in parallel) WG C – Information dissemination and capacity building (continues) |
| <i>13:00 – 14:00</i> | <i>Lunch Break</i> |
| 14:00 – 15:40 | WG S – Systems, Signals and Services (continues) |
| 14:00 – 15:40 | (in parallel) WG C – Information dissemination and capacity building (continues) |
| <i>15:40 – 16:00</i> | <i>Coffee Break</i> |
| 16:00 – 18:00 | Working Group B - Enhancement of GNSS Performance, New Services and Capabilities <i>Co-chairs: Nilesh DESAI, India, Xingqun ZHAN, China and Daniel BLONSKI, European Space Agency</i> |
| 16:00 – 18:00 | (in parallel) WG D – Reference Frames, Timing and Applications |

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| | <i>Co-chairs: Chris RIZOS, International Association of Geodesy (IAG), Suelynn CHOY and Mikael LILJE, International Federation of Surveyors (FIG)</i> |
| 18:00 | Adjourn |
| Wednesday, 7 November 2018 | |
| 08:00 – 12:00 | On-site Registration |
| 08:30 – 12:00 | Working Groups Meetings (Parallel Sessions) |
| 08:30 – 10:30 | WG B – Enhancement of GNSS Performance, New Services and Capabilities (continues) |
| 08:30- 10:30 | (in parallel) WG D – Reference Frames, Timing and Applications (continues) |
| <i>10:30 – 10:50</i> | <i>Coffee Break</i> |
| 10:50 – 12:00 | WG B – Enhancement of GNSS Performance, New Services and Capabilities (continues) |
| 10:50 – 12:00 | (in parallel) WG D – Reference Frames, Timing and Applications (continues) |
| <i>12:00 – 13:00</i> | <i>Lunch Break</i> |
| 13:00 | Technical Tour followed by Banquet |
| Thursday, 8 November 2018 | |
| 08:30 – 11:00 | Working Groups Parallel Sessions <i>Working groups to prepare conclusions and recommendations for the ICG consideration.</i> |
| | 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 |
| <i>11:00 – 11:20</i> | <i>Coffee Break</i> |
| 11:20 – 15:00 | Second Plenary Session of ICG (Presentations by Working Groups) <i>Chair: Chengqi RAN, CHINA</i> |

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| | <i>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 Tenth Meeting of the ICG. Presentations will include any draft recommendations to the ICG.</i> |
| 11:20 | Presentation by WG S and Discussions |
| 12:00 | Presentation by WG B and Discussions |
| <i>12:40 – 13:40</i> | <i>Lunch Break</i> |
| 13:40 | Presentation by WG C and Discussions |
| 14:20 | Presentation by WG D and Discussions |
| <i>15:00 – 15:30</i> | <i>Coffee Break</i> |
| 15:30 | Second Session of the Providers' Forum <i>Co-Chairs: Ms. Xiaochun LU, China and Mr. Satoshi KOGURE, Japan</i> |
| | <i>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.</i> |
| 15:30 | (in parallel) Meeting of Associate Members, Observers and invited observers (as needed) <i>The purpose is to discuss issues of common concern that have emerged during earlier sessions.</i> |
| 18:00 | Adjourn |
| Friday, 9 November 2018 | |
| 09:00 – 13:00 | Third Plenary Session of ICG <i>Chair: Chengqi RAN, CHINA</i> |
| | <i>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.</i> |
| | Report of the co-chairs of the 21 st meeting of the Providers' Forum <ul style="list-style-type: none"> - Consideration of proposed ICG recommendations (as needed) - Providers' Forum Statement: Joint Development of GNSS |
| | Membership of ICG: <ul style="list-style-type: none"> - The request for Member status of Australia |

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| | <ul style="list-style-type: none"> - Overviewing Australia's SBAS Programme, <i>John DAWSON, Australia</i> ▪ The request for change status of the International Association of Institutes of Navigation (IAIN) <ul style="list-style-type: none"> - IAIN proposed contribution to ICG, <i>Mario CAPORALE, IAIN</i> |
| | <p>Review and approval of meeting conclusions</p> <ul style="list-style-type: none"> - Joint Statement |
| <i>11:00 – 11:20</i> | <i>Coffee Break</i> |
| 11:20 | <p>Other matters</p> <ul style="list-style-type: none"> ▪ Nigerian Satellite Augmentation System (NSAS) Role/Contributions to GNSS, <i>Salami Lasisi, LAWAL, Nigeria</i> <p>INDIA: Announcement for the Fourteenth Meeting of the ICG in 2019, <i>K.K. SOOD, Indian Space Research Organization, India</i></p> <p>EXPRESSION OF INTEREST to host the ICG meetings in 2020 (Office for Outer Space Affairs), in 2021 (United Arab Emirates) and in 2022.</p> |
| 12:20 | Closing Statements |
| 13:00 | Adjourn |