



International Committee on  
Global Navigation Satellite Systems

## **AGENDA**

### **Fourteenth Meeting of the International Committee on Global Navigation Satellite Systems**

**Bangalore, India**

**8 – 13 December 2019**

***Venue: ITC Gardenia Hotel***

<b>Sunday, 8 December 2019</b>	
<i>Venue: ITC Gardenia Hotel: 1, Residency Rd, Ashok Nagar, Bengaluru, Karnataka 560025</i>	
<b>11:00 – 14:00</b>	<b>On-site Registration</b>
<i>13:00 – 14:00</i>	<i>Lunch Break</i>
<b>Twenty-third Meeting of the Providers' Forum</b>	
<b>14:00 – 18:00</b>	<b>First Providers' Forum Meeting</b> <i>Co-Chairs: R. RAGHU, India and Xiaochun LU, China</i>
<b>16:20 – 17:20</b>	<b>Meeting with the Working Groups Co-Chairs</b>
<b>17:20 – 18:00</b>	<b>Providers' Forum Meeting</b> <i>(to be continued as needed)</i>
<b>9 – 13 December 2019</b> <b>ICG PLENARY SESSIONS</b>	
<b>Monday, 9 December 2019</b>	
<b>08:30</b>	<b>On-site Registration</b>
<b>09:00 – 10:30</b>	<b>Inaugural Session</b>
09:00 – 09:05	<i>Invocation</i>
09:05 – 09:10	Welcome address <i>Mr. Nilesh M. DESAI, Associate Director, SAC, Chairman of the Organizing Committee, ICG-14</i>
09:10 – 09:15	<i>Lamp Lighting Ceremony</i>
09:15 – 09:25	Keynote address <i>Dr. K. SIVAN, Chairman, ISRO &amp; Secretary, DOS, Government of India</i>
09:25 – 09:30	Opening Address <i>Mr. P. KUNHIKRISHNAN, Distinguished Scientist &amp; Director, USRC</i>
09:30 – 09:35	Opening Address <i>Mr. R. UMAMAHESWARAN, Scientific Secretary, ISRO</i>
09:35 – 09:40	Opening Address <i>Mr. D. K. DAS, Director, SAC</i>
09:40 – 09:45	Opening Address <i>Ms. Sharafat GADIMOVA, United Nations Office for Outer Space Affairs</i>

09:45 – 09:50	Vote of thanks <i>Mr. R. RAGHU, Director, SATNAV PO, ISRO HQ</i>
09:50 – 09:55	<i>National Anthem</i>
10:00 – 10:05	<i>Inauguration of Industry exhibition</i>
10:15 – 10:30	<i>Group Photo Session</i>
10:30 – 10:50	<i>Coffee/Tea Break</i>
<b>10:50 – 18:00</b>	<b>First Plenary Session of ICG</b>  <i>Chair: Nilesh M. DESAI, India</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>
<b>10:50 – 11:00</b>	<b>Adoption of Agenda</b>
<b>11:00 – 13:00</b>	<b>Providers System and Service Updates</b>
11:00	Navigation with Indian Constellation (NavIC) and GPS Aided Geo- Augmented navigation System (GAGAN) Status, <i>R. RAMASUBRAMANIAN, India</i>
11:20	Global Positioning System (GPS) Program and Policy Update, <i>Harold MARTIN, U.S. National Coordination Office for Space Based PNT, United States</i>  Purpose of US PNTAB: Assuring PNT for All and Exploiting GNSS for Future Applications, <i>Bradford PARKINSON, Stanford University, United States</i>
11:40	Global Navigation Satellite System (GLONASS) Status, <i>Ivan REVNIVYKH, Roscosmos, Russian Federation</i>
12:00	Status Update on the European Satellite Navigation System (GALILEO), <i>Dominic HAYES, European Commission</i>
12:20	Update on the BeiDou Satellite Navigation System, <i>Peng JIA, China Satellite Navigation Office (CSNO), China</i>
12:40	Status Update on the Quasi-Zenith Satellite System (QZSS), <i>Masaharu KUGI, National Space Policy Secretariat, Cabinet Office, Japan</i>
13:00 – 14:00	<i>Lunch Break</i>

<b>14:00 – 16:00</b>	<b>Presentations by Members, Associate Members, Observers and Invited Observers on Matters of Interest to ICG</b>
14:00	The Australian Satellite-based Augmentation System (SBAS) Program, <i>John DAWSON, Australia</i>
14:15	The PNT Board focus and its activities, <i>Brad PARKINSON, United States</i>
14:30	PULCHRON: A live pulsar time scale demonstration, <i>E. Garbin, R. Plitz (GMV), S. Binda, Rafael Lucas RODRIGUEZ, and Joerg HAHN, European Space Agency</i>
14:45	GNSS science activities at the European Space Agency, <i>Javier VENTURA-TRAVESSET, European Space Agency</i>
15:00	GNSS and UTC: a mutual benefit, <i>Patrizia TAVELLA, International Bureau of Weights and Measures</i>
15:15	CGSIC activities, <i>Rick HAMILTON, Civil GPS Service Interface Committee</i>
15:30	Enhancements in upcoming NavIC atellites, <i>Parimal MAJITHIYA, India</i>
15:45	Status of KPS Plans - Korea Positioning System, <i>Taegy KIM, Ministry of Science and ICT, Korea</i>
<i>16:00 – 16:20</i>	<i>Coffee/Tea Break</i>
<b>16:20 – 18:20</b>	<b>Applications and Experts Seminar: GNSS in Societal and Developmental Applications</b>
	<i>Chair: Khagindra K. SOOD and Atul P. SHUKLA, India</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>
16:20	NavIC and MSS based Messaging and Surveillance Applications, <i>G. J. DOSHI, Indian Space Research Organization, India</i>
16:35	BDS/GNSS boosts the informatization and intelligence of Chinese society, <i>Xiaofei JIA, China</i>
16:50	GAGAN and NavIC for Enhancing Safety in Public Transport Systems, <i>CHANDRAPRAKASH, Indian Space Research Organization, India</i>
17:05	S-Band Pseudolite System Configuration, <i>Dr. Ashish K. SHUKLA, Indian Space Research Organization, India</i>
17:20	NavIC based Timing Applications in India, <i>Kalpseh BORSADIYA, Indian Space Research Organization, India</i>

17:35	Vehicle Location Trackers – Certification and Deployment, <i>P. SHINKER, ARAI, India</i>
17:50	European GNSS supporting sustainable development, <i>Pieter DE SMET, European Commission</i>
18:05	Environment Monitoring Aidd by NavIC, <i>Nishkam JAIN and Abha CHHABRA, Indian Space Research Organization, India</i>
18:20	NavIC in Mobile Phones, <i>Atul SHUKLA, Indian Space Research Organization, India</i>
18:35	Development and Challenges of BDS Product: Testing and Certification Service, <i>Tao HE, JiangSu BDS Product Service Centre, China</i>
18:55 – 19:00	<i>Break (Preparations for Cultural Program)</i>
<b>19:00 – 19:45</b>	<b>Indian Traditional Cultural Program</b>
<b>19:45 – 22:00</b>	<b>Welcome Banquet</b>
<b>Tuesday, 10 December 2019</b>	
<b>08:00 – 18:00</b>	<b>On-site Registration</b>
<b>09:00 – 18:00</b>	<b>Working Groups Meetings (Parallel Sessions)</b>
	<b>WG S – Systems, Signals and Services</b>  <i>Co-chairs: Sergey REVNIVYKH, Russian Federation and David TURNER, United States of America</i>
	<b>Working Group B - Enhancement of GNSS Performance, New Services and Capabilities</b>  <i>Co-chairs: Nilesh M. DESAI, India, Xingqun ZHAN, China and Daniel BLONSKI, European Space Agency</i>
	<b>WG C – Information dissemination and capacity building</b>  <i>Co-chairs: Sharafat GADIMOVA, United Nations Office for Outer Space Affairs and Rajat ACHARYA, CSSTE-AP, India</i>
	<b>WG D – Reference Frames, Timing and Applications</b>  <i>Co-chairs: Suelynn CHOY and Mikael LILJE, International Federation of Surveyors (FIG), Allison CRADDOCK, International GNSS Service (IGS)</i>
<b>11:00 – 11:20</b>	<i>Coffee/Tea Break</i>

<b>11:20 – 13:00</b>	<b>Working Groups Meetings – Parallel Sessions (continued)</b>
<i>13:00 – 14:00</i>	<i>Lunch Break</i>
<b>14:00 – 16:00</b>	<b>Working Groups Meetings – Parallel Sessions (continued)</b>
<i>16:00 – 16:20</i>	<i>Coffee/Tea Break</i>
<b>16:20 – 18:00</b>	<b>Working Groups Meetings – Parallel Sessions (continued)</b>
<b>18:00</b>	<b>Adjourn</b>
<b>Wednesday, 11 December 2019</b>	
<b>08:00 – 13:00</b>	<b>On-site Registration</b>
<b>09:00 – 11:00</b>	<b>Working Groups Meetings – Parallel Sessions (continued)</b>
<i>11:00 – 11:20</i>	<i>Coffee/Tea Break</i>
<b>11:20 – 13:00</b>	<b>Working Groups Meetings – Parallel Sessions (continued)</b>
<i>13:00 – 14:00</i>	<i>Lunch Break</i>
<b>14:00 – 18:00</b>	<b>Technical Tour: Visit to "Karnataka Chitrakala Parishath"</b>
<b>Thursday, 12 December 2019</b>	
<b>09:00 – 11:00</b>	<b>Working Groups Parallel Sessions</b>  <i>Working groups to prepare conclusions and recommendations for the ICG consideration.</i>
<i>11:00 – 11:30</i>	<i>Coffee/Tea Break</i>
<b>11:30 – 15:30</b>	<b>Second Plenary Session of ICG (Presentations by Working Groups)</b>  <i>Chair: R RAMASUBRAMANIAN, India</i>
	<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>
<b>11:30 – 12:15</b>	<b>Presentation by WG S and Discussions</b>
<b>12:15 – 13:00</b>	<b>Presentation by WG B and Discussions</b>
<i>13:00 – 14:00</i>	<i>Lunch Break</i>
<b>14:00 – 14:45</b>	<b>Presentation by WG C and Discussions</b>

<b>14:45 – 15:30</b>	<b>Presentation by WG D and Discussions</b>
<i>15:30 – 16:00</i>	<i>Coffee/Tea Break</i>
<b>16:00 – 18:00</b>	<b>Second Session of the Providers' Forum</b>  <i>Co-Chairs: R. RAGHU, India and Xiaochun LU, China</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>
	<b>(in parallel) Meeting of Associate Members, Observers and invited observers (as needed)</b>  <i>The purpose is to discuss issues of common concern that have emerged during earlier sessions.</i>
<b>18:00</b>	<b>Adjourn</b>
<b>Friday, 13 December 2019</b>	
<b>09:00</b>	<b>Third Plenary Session of ICG</b>  <i>Chair: Nilesh M. DESAI, India</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>
09:00 – 10:00	<b>Report of the co-chairs of the 23<sup>rd</sup> meeting of the Providers' Forum;</b>  - Consideration of proposed ICG recommendations (as needed)
10:00 – 10:30	<b>Membership of ICG:</b> The request for Member status of New Zealand  - Update on SBAS programme, <i>Graeme BLICK, New Zealand</i>
10:30 – 11:00	<b>Review and approval of meeting conclusions</b>  - Joint Statement
<i>11:00 – 11:20</i>	<i>Coffee/Tea Break</i>
11:20 – 12:00	<b>Other matters</b>  <b>UNOOSA:</b> Announcement for the 15 <sup>th</sup> Meeting of the ICG in 2020  <b>EXPRESSION OF INTEREST</b> to host the ICG meetings in 2021 (United Arab Emirates) and in 2022

12:00 – 12:30	<b>Closing Statements</b>
<b>12:30</b>	<b>Adjourn</b>