



AGENDA

Sixteenth Meeting of the International Committee on Global Navigation Satellite Systems

(HYBRID FORMAT)

Abu Dhabi, United Arab Emirates

9 – 14 October 2022

Venue: Hotel Conrad Abu Dhabi Etihad Towers

Sunday, 09 October 2022	
<i>Time: Abu Dhabi (UAE) Local Time (UTC+4 hours)</i>	
12:00 – 18:00	On-site Registration
13:00 – 14:00	Ad-hoc Working Group meeting: ICG Terms of Reference
Twenty-six Meeting of the Providers' Forum	
14:00 – 18:00	First meeting of the Providers' Forum
	<i>Attended by only the Providers. The primary purpose is: (i) to discuss the agenda and meeting procedures for ICG-16 and the 26th Meeting of Providers' Forum; (ii) to develop response or suggest amendments to the Working Groups draft recommendations; (iii) to address any other matters; (iv) to compose a temporary drafting group on the preparation of the Providers' Forum report</i>
<i>16:00 -16:20</i>	<i>Coffee Break</i>
16:20 – 17:20	Meeting with the Working Groups Co-Chairs
	<i>Attended by only the Providers and the co-chairs of the Working Groups. The primary purpose is: (i) to identify issues for discussion in the working groups; and (ii) to consider their reports on the status of the implementation of the agreed recommendations from the previous ICG meetings.</i>
17:20	Providers' Forum Meeting (to be continued)
18:00	Adjourn
10 – 14 October 2022 ICG PLENARY SESSIONS	
Monday, 10 October 2022	
<i>Time: Abu Dhabi (UAE) Local Time (UTC+4 hours)</i>	
8:00 – 18:00	On-site Registration
10:30 – 11:00	Opening Session
	<ul style="list-style-type: none"> - United Arab Emirates National Anthem symphony - H.E. Salem AL QUBAISI, <i>United Arab Emirates</i> - Sharafat GADIMOVA, <i>United Nations Office for Outer Space Affairs</i>
	<i>Group Photo</i>
11:00	First Plenary Session of ICG
	<i>Chair: Abdulla AL MARAR, United Arab Emirates Space Agency</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, observers and invited 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>
	Adoption of Agenda

11:00– 13:15	Providers System and Service Updates
11:00	Global Positioning System (GPS) Program and Policy Update, <i>Harold MARTIN, National Coordination Office for Space Based PNT (NCO), United States of America</i>
11:20	Global Navigation Satellite System (GLONASS) Status, <i>Ivan REVNIVYKH, Roscosmos, State Space Corporation, Russian Federation (virtual)</i>
11:40	Galileo: Programme Status including System Performance, <i>Dominic HAYES, European Commission (virtual)</i> Galileo: Evolution, <i>Joerg HAHN, European Space Agency (ESA)</i>
12:15	BeiDou Navigation Satellite System Construction and Development, <i>Zuohu LI, China Satellite Navigation Office, China</i>
12:35	Navigation with Indian Constellation (NavIC) and GAGAN Status, <i>Hemanth REDDY, Indian Space Research Organization (ISRO), India</i>
12:55	Status Update on the Quasi-Zenith Satellite System (QZSS), <i>Kenji NUMATA, National Space Policy Secretariat, Cabinet Office, Japan</i>
<i>13:15 – 14:15</i>	<i>Lunch Break</i>
14:15 – 17:40	Presentations by Members, Associate Members, Observers and Invited Observers on Matters of Interest to ICG
14:15	Southern Positioning Augmentation Network (SouthPAN), <i>Matt AMOS, New Zealand and Martne WOLF, Australia</i>
14:30	Korean Positioning System (KPS) and Korean Augmentation Satellite System (KASS) Status Update, <i>Taegyung KIM, Ministry of Science and ICT, Republic of Korea</i>
14:45	Update on frequency bands for lunar in-situ PNT/GNSS constellations, <i>Jean-Luc ISSLER, National Centre for Space Studies (CNES), France (virtual)</i>
15:00	Distress Notification and Tracking for Lunar Exploration's Next Generation, <i>Anthony FOSTER, United States of America</i>
15:15	Lunar Navigation activities, <i>Javier VENTURA-TRAVESET, European Space Agency (ESA)</i>
15:25	GDGPS High Accuracy Service updates, <i>Attila KOMJATHY, Jet Propulsion Laboratory (JPL), United States of America</i>
15:35	Protecting the RNSS Spectrum, <i>Hon Fai NG, International Telecommunication Union (ITU) (virtual)</i>
15:45	GNSS-based natural hazards early warning system through near-real-time high-rate ionospheric monitoring, <i>Léo MARTIRE, Siddharth Krishnamoorthy, Panagiotis Vergados, Larry J. Romans, Béla Szilágyi, Angelyn W. Moore, Attila Komjáthy, Yoaz E. Bar-Sever, Allison B. Craddock; Jet Propulsion Laboratory (JPL), United States of America</i>
15:55	COSPAR's Contribution to the Scientific Applications of GNSS, <i>Heike PETER, Committee on Space Research (COSPAR) (virtual)</i>
<i>16:05– 16:20</i>	<i>Coffee Break</i>

16:20	The International Terrestrial Reference Frame (ITRF): An update, <i>Zuheir ALTAMIMI, International Association of Geodesy (IAG) (virtual)</i>
16:30	New GENESIS mission for ITRF improvement: potential scientific cooperation, <i>Javier VENTURA-TRAVESET, European Space Agency (ESA)</i>
16:40	Towards a consensus on a continuous UTC and update on BIPM activities related to GNSS, <i>Patrizia TAVELLA, International Bureau of Weights and Measures (BIPM)</i>
16:50	International Maritime Organization: The latest developments, <i>Javier YASNIKOUSKI, International Maritime Organization (IMO) (virtual)</i>
17:00	The International Association of Institutes of Navigation, <i>Mario CAPORALE, International Association of Institutes of Navigation (IAIN)</i>
17:10	Statement, <i>HE Aftab Ahmad KHOKHER, Pakistan</i> Pak SBAS Update, <i>Amer Sarfraz AHMAD, Space and Upper Atmosphere Research Commission (SUPARCO), Pakistan</i>
17:20	Precise Orbit Determination results for Sentinel 6A based on combined Galileo/GPS data processing, <i>Werner ENDERLE, European Space Agency (ESA)</i>
17:30	Activities on Earth-Orientation Parameters – status update, <i>Erik SCHOENEMANN, European Space Agency (ESA)</i>
17:40– 18:40	Applications and Experts Seminar: Low Orbit Positioning, Navigation and Timing (LEO-PNT) <i>Chair: Abdulla AL MARAR, United Arab Emirates Space Agency</i> <i>Attended by all. The primary purpose is to offer views and vision for the future. The audience will have an opportunity to ask the panel members questions.</i>
17:40	BDS LEO Satellite Constellation PNT Services, <i>Jun LU, China</i>
17:55	Constellation studies for LEO PNT, <i>R. BABU, Indian Space Research Organization (ISRO), India</i>
18:10	Standalone PNT using broadband satellite constellations, <i>Vijay BHADOURIYA, Indian Space Research Organization (ISRO), India</i>
18:25	GNSS Augmenting System Programme Overview, <i>Hassan AL-ALI, National Space Science & Tech. Center, United Arab Emirates</i>
18:40	Adjourn
19:30	Reception
Tuesday, 11 October 2022	
8:00 – 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: Sergey REVNIVYKH, Russian Federation (online) and Jeffrey AUERBACH, United States of America</i>

	<p>Working Group B - Enhancement of GNSS Performance, New Services and Capabilities</p> <p><i>Co-chairs: Nilesh M. DESAI, India, Xingqun ZHAN, China and Daniel BLONSKI, European Space Agency (ESA)</i></p>
	<p>WG C – Information dissemination and capacity building</p> <p><i>Chair: Sharafat GADIMOVA, United Nations Office for Outer Space Affairs (UNOOSA) and Fatema AL HAMELI, United Arab Emirates Space Agency (UAESA), United Arab Emirates</i></p>
	<p>WG D – Reference Frames, Timing and Applications</p> <p><i>Co-chairs: (virtual)Zuheir ALTAMIMI, International Association of Geodesy (IAG), Allison CRADDOCK, International GNSS Service (IGS) and (virtual) Suelynn CHOY, International Federation of Surveyors (FIG)</i></p>
11:00 – 11:20	Coffee Break
11:20 – 13:00	Working Groups Meetings – Parallel Sessions (continued)
13:00 – 14:00	Lunch Break
14:00 – 16:00	Working Groups Meetings – Parallel Sessions (continued)
16:00 – 16:20	Coffee Break
16:20 – 18:00	Working Groups: Joint Meeting
18:00	Adjourn
Wednesday, 12 October 2022	
09:00 – 11:00	Working Groups: Joint Meeting
11:00 – 11:20	Coffee Break
11:20 – 13:00	Working Groups Meetings – Parallel Sessions (continued)
13:00 – 14:00	Lunch Break
14:00 – 18:00	Technical Tour
Thursday, 13 October 2022	
09:00 – 11:00	<p>Working Groups Meetings – Parallel Sessions (continued)</p> <p><i>Working groups to prepare conclusions and recommendations for ICG’s consideration.</i></p>
11:00 – 11:30	Coffee Break
11:30 – 15:30	<p>Second Plenary Session of ICG (Presentations by Working Groups)</p> <p><i>Chair: Abdulla AL MARAR, United Arab Emirates Space Agency</i></p> <p><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 15th Meeting of ICG. Presentations will include any draft recommendations to ICG.</i></p>
11:30 – 12:15	Presentation by WG B and Discussions
12:15 – 13:00	Presentation by WG C and Discussions
13:00 – 14:00	Lunch Break

14:00 – 14:45	Presentation by WG D and Discussions
14:45 – 15:30	Presentation by WG S and Discussions
<i>15:30 – 16:00</i>	<i>Coffee Break</i>
16:00 – 18:00	Second meeting of the Providers' Forum
	<i>Attended by only the Providers. The primary purpose is (i) to discuss any draft recommendations to ICG from the working groups; (ii) to develop response or suggest amendments to the draft recommendations; (iii) to adopt the report</i>
	(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, 14 October 2022	
09:00 – 11:00	Third Plenary Session of ICG <i>Chair: Abdulla AL MARAR, United Arab Emirates Space Agency</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 26th meeting of the Providers' Forum <i>Consideration of proposed ICG recommendations (as needed)</i>
	Membership of ICG: <ul style="list-style-type: none"> - The request for member status of Pakistan <ul style="list-style-type: none"> o Statement, <i>Pakistan</i> - The request for observer status of Radio Technical Commission for Maritime Services (RTCM)
<i>11:00 – 11:20</i>	<i>Coffee Break</i>
11:20 – 13:00	Review and approval of the ICG-16 meeting conclusions <ul style="list-style-type: none"> - Joint Statement
	Other matters <ul style="list-style-type: none"> - European Commission: Announcement for the 17th Meeting of ICG in 2023 - Expression of Interest to host the 18th meeting of ICG in 2024 (New Zealand/Australia) and the 19th meeting of ICG in 2025
	Closing Statements