

**SUMMARY**  
**of the Twenty-Third Meeting of the Providers' Forum**  
**held in conjunction with the Fourteenth Meeting of the International Committee**  
**on Global Navigation Satellite Systems (ICG)**  
**8 and 12 December 2019**  
**Bengaluru, India**

The Twenty-Third Meeting of the Providers' Forum, co-chaired by India and China, was held in conjunction with the Fourteenth Meeting of the International Committee on Global Navigation Satellite Systems (ICG), on the 8th and 12th of December 2019, in Bengaluru, India. The meeting agenda is attached as an annex to this report. China, the European Union, India, Japan, the Russian Federation, and the United States were represented at the meeting. It was recalled that the ICG Providers' Forum had grown from its inception, with many accomplishments throughout the years.

**Open Service Information Dissemination**

The following presentations were provided:

**(a) Update of iGMAS and Preliminary Assessment of Multi-GNSS Performance**

China presented an update on its International GNSS Monitoring and Assessment System (iGMAS), including results and the iGMAS enhancement by implementing new receivers to process all GNSS open signals. In addition, it was reported that iGMAS preliminary performance evaluation of multi-GNSS showed that use of multi-GNSS has obvious advantages in terms of PDOP and convergence time for PPP. It was also reported that the routine assessment showed better performance of BDS-3 than that of BDS-2.

**(b) The Construction of China's Satellite Navigation Legal System**

China introduced its domestic laws and regulations related to satellite navigation and proposed that ICG should start similar discussions. The Providers agreed to consider discussing relevant legal issues within ICG. India requested to consider including issues related to S-band interference and jamming/spoofing in the discussion agenda.

**(c) Multi-GNSS Demonstration Project in the Asia/Oceania Region**

Japan provided an update on the multi-GNSS demonstration project in the Asia/Oceania region. Multi-GNSS Asia (MGA) is an organization that promotes the project with 57 participating organizations from 20 countries. After the ICG-13, one MGA conference was held in Bangkok on 27-29 August 2019. It was reported that the MoU between MGA and UNESCAP was signed and the joint pilot project has been implemented. It was also reported that, in 2020, MGA will adopt a new style involving one custom-made regional seminar (6-7 February 2020 in Singapore) and one full package conference (24 – 27 August 2020 in Bangkok). The MGA's objective is to strengthen the user community adoption of the "Open innovation hub," and to align more closely with ICG to support regional implementation of ICG recommendations.

#### **(d) ICG Information Centres: Regional Centres for Space Science and Technology Education (affiliated to the United Nations)**

The ICG Secretariat provided an overview of the established regional centres in each region covered by UN economic commissions (Africa, Asia and Pacific, Latin America and Caribbean, Western Asia). The ICG Secretariat explained about the nine-month courses offered by regional centres, followed by a year of independent study before students present findings to receive a certificate.

The ICG Secretariat announced the training course on GNSS in Bangkok, Thailand during 6 to 10 January 2020. A United Nations/Mongolia workshop on the application of GNSS is to be held in Ulaanbaatar during 13 to 17 April 2020. It was also noted that an African workshop on GNSS and Space Weather is to be held in Rabat, Morocco during 5 to 16 October 2020.

#### **Other Matters:**

##### **Review of Providers' Forum Terms of Reference**

The Providers' Forum discussed and agreed to proposed changes to its Terms of Reference, as reflected in the latest version. This includes the suggestion to update "Navigation with Indian Constellation (NavIC) or Indian Regional Navigation Satellite System (IRNSS)" in the ICG Terms of Reference.

##### **Request by New Zealand to join ICG as a Member**

A request for membership to the ICG from New Zealand was discussed. The Providers' Forum unanimously agreed that New Zealand should be accepted as a member of ICG.