Recent developments in Global Navigation Satellite Systems

Madam Chair and Distinguished delegates,

Indian delegation is happy to note the importance attached to the topics related to global navigation satellite system by this subcommittee, and by the General Assembly. On this occasion, the Indian delegation would like to update this sub-committee on the progress of India's satellite navigation programme since the last session.

Madam Chair,

India pursues two paths as part of its satellite navigation programme: GAGAN and NavIC. GAGAN (GPS Aided GEO Augmented Navigation) is a satellite based augmentation system (SBAS), to provide increased position accuracies required for civil aviation applications. While NavIC (Navigation with Indian Constellation) is an independent regional navigation system. The capabilities of the system have been successfully tested and demonstrated in various sectors. Currently, more than 60 mobile phone models released in India are having NavIC capability and this number is rapidly increasing.

Madam Chair,

NavIC continues to provide PNT service over the coverage region. NVS-01 satellite, launched in May 2023 with an indigenous atomic clock, has been characterised exhaustively and has shown excellent in-orbit performance. Newly developed ionosphere model (NeQuick-N) is made operational for the NavIC L1 signal. NVS-02 satellite was recently launched onboard GSLV launcher. NavIC ground segment is taking care of NavIC operations on 24x7 basis. Coordination of signals and services is being conducted with the other GNSS service providers in a very cordial manner.

Madam Chair,

NavIC signals are interoperable with the other GNSS. As an effort to further improve interoperability with Galileo system, it is planned to broadcast NavIC-Galileo time offset through the NavIC signals. Activities to compute the time offset have been initiated. In October 2024, two receivers were calibrated in the Galileo precise time facility. Subsequent steps for operational broadcast are in progress.

NavIC-based solutions are being utilised in our national programmes. Some examples include Vessel Communication and Support System (VCS) in fishing vessels, Real-time Train Information System (RTIS) in locomotives, and Indian Standard Time (IST) dissemination system. All these projects are in various stages of completion. A novel pseudolite based navigation system was successfully employed for lateral guidance in an experimental mission.

Madam Chair,

India appreciates the excellent work carried out by the UN Office on Outer Space Affairs (UNOOSA), as the Executive Secretariat for the International Committee on GNSS (ICG) and for the Providers' Forum. These efforts are helping to bring synergy among the global players in satellite navigation. India participated in 18th meeting of the ICG at Wellington, New Zealand in October 2024. India also actively participated in the 29th and 30th meetings of Providers Forum held in June and October 2024 respectively.

Under the aegis of the Centre for Space Science and Technology Education in Asia and the Pacific (CSSTEAP), two Post Graduate courses on Satellite Communication (SATCOM-14) and Global Navigating Satellite System (GNSS-05) are being conducted. 20 participants from 08 different countries are participating in these two courses.

Madam Chair,

The Indian Delegation assures its continued commitment to this sub-committee and to the ICG global forum in addressing the issues of common interest for satellite navigation system providers and also in taking the benefits of GNSS to all countries, especially to the developing countries.

Thank you Madam Chair and distinguished delegates.