Recommendation 2 for Committee Decision

Prepared by: Working Group B, Space Use Subgroup (SUSG)
(Working Group, or individual Members or Associate Members)
Date of Submission: October 10, 2024
Issue Title: Participation in the Joint International Committee on Global Navigation Satellite Systems (ICG) - Interagency Operations Advisory Group (IOAG) Multilateral Cislunar Positioning, Navigation, and Timing (PNT) Workshop

Background/Brief Description of the Issue:

At the 17th Annual Meeting of the ICG (ICG-17) in 2023, a recommendation on the organization of a joint ICG-IOAG Multilateral Cislunar PNT workshop to be performed in the late 2024/early 2025 timeframe was adopted.
Since that time, a joint ICG-IOAG organization committee has been established and is proceeding in preparations for this workshop, including objective, scope, date, venue, and agenda. The workshop is planned to be held at the Vienna International Centre (VIC) on 11 – 13 February 2025. The workshop will be primarily in-person, with a webinar option with moderated questions. A website with details is available at:
https://www.unoosa.org/oosa/en/ourwork/icg/working-groups/b/CislunarPNT2025.html.

The goal of the workshop is to provide an open international coordination forum for lunar PNT service providers, including Global Navigation Satellite Systems (GNSS) providers, to foster interoperable, compatible, and available lunar PNT systems of the future.

The objectives are to:

1. Outline the scope, depth, use cases, and status of lunar PNT systems being developed.
2. Identify lessons learned from the GNSS community that are applicable to lunar PNT service providers and users.
3. Foster advancement in interoperability, compatibility, and availability between lunar PNT systems, including GNSS.
4. Propose recommendations that may be taken up by the lunar PNT community.

This inaugural Joint ICG-IOAG Multilateral Cislunar PNT Workshop seeks to provide an open international coordination forum to foster interoperable, compatible, and available lunar PNT systems of the future. Its focus is on the lunar PNT systems and services planned and under development, spectrum compatibility, lunar reference systems and time systems, aspects and models for international governance, lessons learned from the Earth-based GNSS community, and driving needs from the user segment.

Therefore, the participants from the GNSS community are highly encouraged to attend in order to promote compatibility, interoperability, and availability for lunar PNT systems.

Discussion/Analyses:

Numerous lunar PNT systems are currently under development, with initial operational capabilities (IOCs) as early as the late 2020s. This includes China's Queqiao, Europe's Moonlight Lunar Communications and Navigation Services (LCNS), Japan's Lunar Navigation Satellite System (LNSS), and the United States' Lunar Communications Relay and Navigation Systems (LCRNS). Additionally, India, Italy, and the Republic of Korea have announced contributions to lunar PNT services.

This workshop is timely as Lunar PNT systems are quickly emerging and coordination on the topics of spectrum, signals, lunar time standards and lunar reference frames is critical to ensure compatibility, interoperability and signal availability for both Lunar PNT and GNSS. This workshop intends to provide an international coordination forum for all lunar PNT systems and services.

Recommendation of Committee Action:

The ICG encourages the participation of the GNSS community in the Joint ICG-IOAG Multilateral Cislunar PNT Workshop to be held at the Vienna International Centre on 11–13 February 2025. Lessons learned from the GNSS community will be needed to ensure compatibility and interoperability between GNSS and Lunar PNT systems and services. Coordination on the topics of lunar spectrum management, common lunar reference frames, and lunar time systems are essential and participation from the ICG Working Groups S and D for these aspects is highly recommended. This recommendation follows the recommendation approved at the ICG-17 (ICG/REC/2023) entitled "Joint ICG-IOAG organization of multilateral workshop on cislunar PNT."

Members Consensus Reached_____; **No Consensus Reached**_____

Chairperson Signature: _____ **Date:** _____