

Recommendation for Committee Decision

Prepared by: Working Group B
(Working Group, or individual Members or Associate Members)

Date of Submission: October 12, 2022

Issue Title: Inclusion and Coordination of Lunar Search and Rescue in Lunar PNT Architecture

Background/Brief Description of the Issue:

During Earth-Moon transit and for portions of lunar operations, lunar PNT assets and signals will be utilized for transmission of distress alerts and receipt acknowledgement to ensure protection of life on the lunar surface (Lunar Search and Rescue). To ensure that search and rescue is an integral part of PNT service architectures and is developed as an interoperable capability with multiple systems, the intent for integration of SAR should be discussed and documented appropriately among GNSS partners.

Discussion/Analyses:

Historically, interoperability among Earth-based search and rescue services has been a focus of both ICG and Cospas-Sarsat discussions of the medium Earth orbit SAR (MEOSAR) system. The MEOSAR system is comprised of several GNSS providers that utilize agreed-upon specifications to ensure interoperability. Currently, several space agencies are independently developing search and rescue capabilities at the vicinity of the Moon, including the lunar surface, as they develop PNT services. Ensuring that search and rescue as a service is included in discussions of interoperability, compatibility and availability will be essential to ensure search and rescue services are maintained consistently among providers intending to offer such services.

Recommendation of Committee Action:

Considering the successful collaboration between international GNSS providers in providing interoperability within the MEOSAR system, and the importance of search and rescue around and on the surface of the moon, the ICG recommends that developers of lunar communication and navigation services consider the integration of search and rescue services, and that they be developed to be interoperable and easily accessible.

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

Chairperson Signature: _____ **Date:** _____