



# GNSS Issues Discussed at the United Nations in 2017

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# ICG proposal to STSC on spectrum protection

International Spectrum Protection (presented in June):

The Scientific and Technical Subcommittee of COPUOS (Feb. 2017), welcomed the **ICG proposal** that beginning in 2018, Member States of the UN should be invited to report on a voluntary basis on:

- (a) National RNSS Spectrum Allocations and Consistency with ITU Allocations;
- (b) Regulations regarding Non-licensed emissions limits From Radio-frequency (RF) emitters and non-emitters;
- (c) Planned or Existing Laws and Regulations related to the manufacture, sale, export, import, purchase, ownership, and use of GNSS jammers; and
- (d) Domestic efforts to detect and mitigate GNSS interference, with the overall goal of promoting effective use of GNSS open services by the global community



# Spectrum Protection and IDM - Report of the Scientific and Technical Subcommittee (2017)

The Subcommittee welcomed the proposal by ICG for the Subcommittee to consider

- GNSS spectrum protection; and
- Interference detection and mitigation

The Subcommittee noted that the intent was to raise awareness of the issue among States members of the Committee on the Peaceful Uses of Outer Space (COPUOS) to promote the effective use of GNSS open services by the global community.

Expect that GA omnibus resolution for 2018 will include invitation for States to inform on their practices.



# Report of the Scientific and Technical Subcommittee of COPUOS (2017)

Two countries already reported in 2017.

- “GNSS spectrum protection and Interference Detection and Mitigation (IDM) **activities in China**” – China Satellite Navigation Office

Report included:

1. National RNSS spectrum allocations
2. Regulations regarding non-licensed emission limits from RF emitters and non-emitters
3. Existing or planned laws regarding GNSS jammers
4. Domestic efforts to detect and mitigate GNSS interferences



# Report of the Scientific and Technical Subcommittee of COPUOS (2017)

- “GNSS Interference Detection and Mitigation” - Mr. Rick Hamilton, CGPSIC, U.S. Coast Guard Navigation Center

The problem and its importance for 5 elements

- Spectrum Management in the U.S.
- Status of IDM research in the U.S.
- Spectrum Enforcement Actions
- IDM Reporting
- IDM activities through the ICG

My view: This presentation could serve as a template to be adapted by other countries



# Satellite-aided search and rescue programme

The Subcommittee noted that:

- Cospas-Sarsat, for which the Medium-altitude Earth Orbit Search and Rescue (MEOSAR) distress signals relayed by GNSS satellites were in early operational capability, had been used in search and rescue efforts.
- The MEOSAR system was using upgraded GPS satellites as well as GLONASS and Galileo satellites and provided near-instantaneous distress alerts and locations as well as significantly more satellites compared with the current constellations used in search and rescue.



## Work at the ICG-11

The Subcommittee noted that 11th ICG meeting covered:

- Compatibility and interoperability of satellite navigation systems;
- Reference frames and timing;
- Enhancement of GNSS performance; and
- Development of new navigation services and capabilities.

Noted that ICG was progressing significantly in i) establishing an interoperable GNSS space service volume, and ii) that exploiting the interoperability between all systems had allowed achievement of GNSS signal availability of very close to 100 per cent.



# ICG Information Centres

The Subcommittee noted that

- ICG information centres, hosted by the regional centres for space science and technology education, affiliated to the UN, are establishing a network of institutions involved or interested in GNSS.
- The main objective is to enhance the capabilities of member States in using GNSS and related applications to advance their scientific, economic and social development.
- The centres coordinate their activities closely with ICG and its Providers' Forum through the Office for Outer Space Affairs.



Comments, Questions?