



Interagency Cooperation in Global Space Governance: The Case of ICAO and ITU

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The International Civil Aviation Organization (ICAO)

Promotes Standards and Recommended Practices (SARPS) regarding the safety of international civil aviation, including the Global Navigation Satellite System (GNSS) whenever it is used for aviation-related purposes.



The International Telecommunication Union (ITU)

Responsible for providing international protection from harmful interference of ITU registered assignments in the Master International Frequency Register (MIFR), including GNSS.

Global Navigation Satellite System



Source: esplab.epfl.ch

GNSS is especially vulnerable to harmful interference because the GNSS signals received from satellites are very low in transmission strength, thus making them susceptible to interference.

Harmful Interference (HI)

- “Interference which endangers the functioning of a radionavigation service or of other safety services or seriously degrades, obstructs or repeatedly interrupts a radiocommunication service operating in accordance with the Radio Regulations.”
- Since radio waves do not stop at State boundaries, HI is a transnational problem that can affect any country.



The difficulties in dealing with HI with GNSS used for Air Navigation

- ITU lacks an Independent International Monitoring System.
- There are no sanctions within the ITU regulatory system.
- ITU lacks expertise on aeronautical services.
- The work of ICAO and ITU regarding the avoidance of HI on GNSS is necessarily interconnected.



Source:kidspot.co.nz

Global Governance

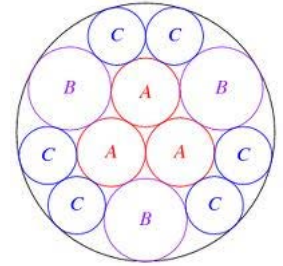


Source: blog.civicus.org

Global Governance deals with solutions to transnational problems which go beyond the capacity of a single state to address.

One aspect of GG is intergovernmental organizations acting together to resolve transnational problems which are so interconnected that interagency cooperation is essential to properly address them from a global perspective.

Global Space Governance



- The focus here is on a narrow, but important perspective of GG: the interaction of two intergovernmental organizations
- We must rethink their role and especially their cooperation in order to timely respond to current global challenges.
- The defence of the public interest in outer space, in this case through the avoidance of HI, also justifies a Global Space Governance approach.
- One example of Global Space Governance initiative is the Memorandum of Cooperation (MoC) between ICAO and ITU.

Interagency cooperation in Global Space Governance

- The need to address global space applications which may negatively impact international civil aviation such as HI compel ICAO and ITU to work jointly.
- ICAO A 36-25: the safety of the international civil aviation could be jeopardized if there is not proper protection from HI.
- ITU Constitution: it should act in cooperation with other international organizations.
- All ITU members States are under obligation to cooperate with others in the elimination of harmful interference.
- Preamble to the Chicago Convention recognizes the desire of promoting cooperation among states.

ICAO-ITU MoC



Source:en.trend.az

- The MoC is a framework for enhanced cooperation regarding the protection of GNSS from HI on aviation safety services.
- The MoC established a cooperation procedure to be followed by both agencies involving cases of HI which threaten the safety of international civil aviation.
- The purpose was to prevent duplication of efforts, and for both agencies to benefit from potential collaboration within their respective fields of responsibility.

ICAO - ITU MoC

- It was motivated by unlawful HI in the Incheon Region (South Korea) in 2011 and 2012.
- 106 airplanes of 18 airlines were affected in 2011.
- 1016 aircraft of 33 different airlines and 16 States were disrupted in 2012.
- There were missed approaches by 4 aircraft as a consequence of the Ground Positioning Warning System (GPWS) alert being activated.

Further Cooperation



Source:eurac.edu

- Both ICAO and ITU complement each other's work regarding GNSS.
- The increased development of satellite applications for aviation purposes will make the international civil aviation community more and more dependent on satellite applications for safety and other services.
- ICAO-ITU cooperation should go beyond their MoC.
- The current international effort to find a solution to track commercial aircraft in real time.

Examples of Further Cooperation

The ICAO Universal Safety Oversight Audit Program (USOAP):

- Focuses on the State's capability for providing safety oversight and SARPS implementation.
- A similar program could be performed at space stations that are part of the IMS or that provide safety services, assisting ITU to build an independent IMS.
- Further studies should be carried out.

USOAP
Continuous Monitoring Approach



Promoting global aviation safety
by continuously monitoring and updating
the safety oversight capabilities of all ICAO Member States.



Source: icao.int

Harmonization of the ITU MIFR and ICAO COM Lists



Source:ilrt.bris.ac.uk

- ICAO coordinates aeronautical frequencies in exclusive bands (ICAO COM lists).
- The ICAO COM lists have no legal status within ITU.
- Some exclusive aeronautical bands may share their bandwidth with other space services in the future.
- Implementation can be done either through ITU Member States or directly by ICAO.
- Current limitations need to be overcome before harmonization is completed.

The Beijing Convention on the Suppression of Unlawful Acts Relating to International Civil Aviation

- Criminalizes IHI that is likely to endanger the safety of aircraft in flight by damaging or interfering with air navigation facilities.
- The criminalization of such acts could be of great assistance to ITU.
- The extension of criminalization to other types of IHI which threats public safety should be considered.
- ITU could provide an international forum for this discussion.



Conclusions

- Further exploration of ICAO/ITU cooperation through the use of a global governance approach, as the mandates of the two agencies are necessarily interconnected.
- Their cooperation should go beyond their MoC.
- The MoC and further cooperation could be used as a model for other organizations.
- Any civil space activity depends on ITU jurisdiction.
- ITU should be encouraged to work closely with other related organizations for the promotion of the global public interest in outer space.

**Thank you for your kind
attention!**