



ICAO

International Civil Aviation Organization

**TENTH MEETING OF SPECTRUM REVIEW
WORKING GROUP (SRWG/10)**

Bangkok, Thailand, 04 – 06 February 2026

Agenda Item 6: Frequency Interference in the Region

6.2 GNSS interference

**PROGRESS UPDATE FROM THE PROCEDURES FOR GLOBAL NAVIGATION
SATELLITE SYSTEM (GNSS) AND DATA LINK DISRUPTION AD HOC GROUP**

(Presented by Singapore, on behalf of the Procedures for GNSS
and Data Link Disruption Ad Hoc Group)

SUMMARY

This paper presents the update on the progress of the work by the
Procedures for GNSS and Data Link Disruption Ad Hoc Group.

1. INTRODUCTION

1.1 At the Twelfth Meeting of the Air Traffic Management Sub-Group (ATM/SG/12, Bangkok, Thailand, 23 – 27 September 2024) of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG), two working papers on GNSS and Radio Frequency Interference (RFI) were presented.

1.2 Recognizing the need for further discussion and the development of regional guidance document on operational procedures for Air Navigation Service Providers (ANSPs) and airspace users to report GNSS and data link disruptions, as well as mechanisms for sharing information among stakeholders, ATM/SG/12 agreed to the following Decision:

Decision ATM/SG/12-8: Establish Procedures for GNSS and Data Link Disruption Ad Hoc Group

That, ATM/SG establishes the Procedures for GNSS and Data Link Disruption Ad Hoc Group, to:

1. *collect data on GNSS and data link disruption in APAC region; and*
2. *develop the procedures for GNSS and data link disruption that include (but not limited to) the need for:*
 - a) *reporting process by airspace users to ATS units; and*
 - b) *sharing of information between stakeholders.*

1.3 According to its Terms of Reference (ToR) (see **Appendix A**), the Ad Hoc Group is responsible for developing a **regional guidance document on operational procedures for ANSPs and airspace users to report GNSS and data link disruptions**, as well as **mechanisms for sharing information among stakeholders**. Technical matters such as methods for detecting and mitigating GNSS RFIs are not within the Ad Hoc Group's scope of work.

1.4 The Ad Hoc Group members currently comprised Cambodia, India, Indonesia, Japan, Malaysia, New Zealand, Republic of Korea, Singapore, Thailand, United States, IATA, ICAO and IFALPA.

1.5 Singapore is the Rapporteur of the Ad Hoc Group, with ICAO providing Secretariat support.

2. **DISCUSSION**

Review List of Recommendations from the ICAO APAC Radio Navigation Symposium

2.1 In accordance with ATM/SG/13 Action Item 13/6, the Ad Hoc Group reviewed the List of Recommendations from the ICAO APAC Radio Navigation Symposium, held in New Delhi, India, from 7 to 9 April 2025.

2.2 The recommendations outlined below were pertinent to the scope of work of the Ad Hoc Group as defined in its ToR, and would be considered and addressed accordingly:

- a) paragraph 1.1.5: *States should also consider submitting reports to the respective ICAO Regional Office, which can then forward those reports to the ITU Satellite Interference Reporting and Resolution System (SIRRS) for further action;*
- b) paragraph 1.3: *All stakeholders need to contribute to the development of further ICAO guidance to strengthen the link between air operator reports, air navigation services provider (ANSP) confirmation, and spectrum regulator engagement. The coordination and reporting processes must be efficient and simplified to ensure timely and effective management;*
- c) paragraph 2.1: *ICAO should consider the necessity of standardized radiotelephony phraseologies for specific scenarios. Establishing clear, standardized communications in these situations could greatly benefit both pilots and air traffic controllers, ensuring accurate and efficient responses;*
- d) paragraph 2.3: *The symposium acknowledged IATA's initiative in providing the Turbulence Aware platform to support airline information sharing and encouraged the development of similar initiatives for GNSS RFI information exchange; and*
- e) paragraph 4.1.1: *ensure timely and effective communication regarding GNSS RFI incidents. A warning could be issued via NOTAM, Aeronautical Information Publication (AIP), and/or Automatic Terminal Information Service (ATIS) as appropriate.*

GNSS and Data Link Disruption Data in APAC Region

2.3 To facilitate the presentation of a regional overview of GNSS and data link disruption, which includes trend analysis and identification of location hot spots, Ad Hoc Group members were requested to submit monthly disruption occurrence data using the template as provided in **Appendix B**.

2.4 Indonesia has volunteered to compile and collate GNSS and data link disruption occurrence data on behalf of the Ad Hoc Group members. As of 30 November 2025, six States have provided disruption occurrence data; however, certain data lacked the occurrence location coordinates. Additionally, since not all APAC States/Administrations are members of the Ad Hoc Group, this may hinder effective visualization of disruption occurrence data for the whole APAC region.

2.5 The Ad Hoc Group discussed the potential duplication of occurrence reports received from multiple States, arising from the mandatory occurrence reporting requirements applicable to their carriers, which encompass areas beyond their respective area of responsibility. The Ad Hoc Group would explore methods to sanitize the data to mitigate this issue.

Development of Regional Guidance Document for Reporting GNSS and Data Link Disruption

2.6 The primary objective of the Ad Hoc Group is to develop regional guidance document for APAC States/Administrations to have **a common process for coordinating GNSS RFI and data link disruption between air traffic controllers, pilots, airspace users and ANSPs**. To facilitate this, the members of the Ad Hoc Group shared their national requirements, reporting procedures, and experiences, which could serve as reference for best practices and the development of the common process.

2.7 Based on the information gathered, Singapore drafted the initial framework skeleton for review and feedback from the Ad Hoc Group, which was subsequently approved at its fourth meeting on 5 January 2026.

2.8 The respective members of the Ad Hoc Group agreed to contribute to the drafting of specific chapters of the regional guidance document. It is targeted that the draft regional guidance document will be available for review and endorsement by the ATM/SG, in August 2026.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) discuss and explore the collection and sharing of GNSS RFI data following the eventual dissolution of the Ad Hoc Group;
- c) encourage States/Administrations that are not yet members to participate in and contribute to the work of the Ad Hoc Group, including submitting GNSS and data link disruption occurrence data and development of the regional guidance document; and
- d) discuss any relevant matter as appropriate.

Appendix A

Terms of Reference ICAO APAC Procedures for GNSS and Data Link Disruption Ad-hoc Group	
Project Title	Procedures for Global Navigation Satellite System (GNSS) and Data Link Disruption Ad-hoc Group
Parent Group	ICAO APAC ATM/SG
Project Period	September 2025 to ATM/SG/14, 2026
Project Objective	To provide regional guidance to APAC States/Administrations on a common process for coordination of GNSS Radio Frequency Interference (RFI) and data link disruption between air traffic controllers, pilots, airspace users and air navigation service providers (ANSPs).
Project Outcomes	<ol style="list-style-type: none"> 1. Collect data on GNSS RFI and data link disruption in APAC region; and 2. Develop procedures for coordination during GNSS and data link disruption that include (but not limited to) the need for: <ol style="list-style-type: none"> a) reporting process by airspace users to Air Traffic Service (ATS) units; and b) sharing of information between stakeholders.
Membership	APAC States/Administrations, ANSPs and International Organizations
Coordination Requirements	Virtual monthly check-in meetings, adjusting frequency as the work demands
Project Terms of Reference/High-Level Tasks	<ol style="list-style-type: none"> 1. Investigate and document operational impacts of GNSS and data link disruption events in the APAC region; 2. Evaluate methods of communication between regional ANSPs during periods of GNSS RFI or data link disruption; 3. Investigate current ANSP practices and procedures to planned and unplanned degradations in network service, as well as GNSS RFI events and aircraft reporting lingering impacts of GNSS RFI, to include communication with affected flight crews and adjacent ANSPs. Analyze differences and commonalities in these practices and their application; 4. Develop recommendations for standardization in taxonomy and reporting of GNSS RFI events and data link network interruptions; and 5. Develop the draft regional guidance document, as per the Project Objective, for endorsement by the ATM/SG.
Project Rapporteur	Singapore, with support of the USA

