



International Civil Aviation Organization

ICAO Twenty-Eighth Meeting of the Regional Airspace Safety Monitoring Advisory Group (RASMAG/28)

Bangkok, Thailand, 21 – 24 August 2023

Agenda Item 5: Airspace Safety Monitoring Activities/Requirements in the Asia/Pacific Region

BILATERAL MEETING BETWEEN FUKUOKA AND MANILA ACC

(Presented by Japan and Philippines)

SUMMARY

This paper presents efforts to prevent transfer errors at the Flight Information Region (FIR) interface between Fukuoka FIR and Manila FIR.

1. INTRODUCTION

1.1 The Flight Information Region (FIR) boundary between Fukuoka and Manila FIRs has been identified as a part of Hot Spot D since 2015. The designated Regional Monitoring Agencies (RMAs) are Japan Airspace Safety Monitoring Agency (JASMA) and Monitoring Agency for Asia Region (MAAR), relevant Air Traffic Control (ATC) units are Fukuoka Area Control Center (ACC) Fukuoka Air Traffic Management Center (ATMC) and Manila ACC.

1.2 Although the five parties have been discussing and considering improvement of the airspace safety around the Hot Spot, Large Height Deviations (LHDs) have occurred constantly at the FIR boundary, and it causes the interface remains to be a Hot Spot.

1.3 At the Twenty-Seventh Meeting of the Regional Airspace Safety Monitoring Advisory Group (RASMAG/27) that was held virtually in September 2022, the sidebar meeting was held to focus on Hot Spot D. The meeting mainly discussed the rise in occurrences of LHDs, Large Lateral Deviations (LLDs) and Large Longitudinal Errors (LLEs) with more transfer errors of aircraft from Manila FIR to Fukuoka FIR despite of traffic decrement due to pandemic.

1.4 Fukuoka ACC and ATMC, and Manila ACC participated in both plenary and sidebar meetings and joined discussions with Manila ACC on transfer error prevention. At the sidebar meeting, it was discussed that the major cause of transfer errors was a lack of transfer information on altitude revision from Manila ACC.

2. DISCUSSION

First Meeting

2.1 The Air Traffic Control Officer (ATCO) at Fukuoka ACC, who is a member of the Japan Federation of Air Traffic Controllers (JFATC), had an opportunity to participate in the International Federation of Air Traffic Controllers' Associations (IFATCA) Asia Pacific Regional Meeting (APRM) which were held in Cebu, Philippines in October 2022. During the APRM, the ATCO could visit Manila

ACC and share information with the ATCO at Manila ACC regarding the specifications of ATC equipment, systems, ATC procedures and operational issues and discuss that matter briefly.

2.2 Fukuoka ACC ATCO proposed Manila ACC ATCO and reached an agreement to hold a virtual meeting between Fukuoka ACC and Manila ACC regularly in the hope that sharing information to understand the traffic flow and ATC procedures of both ATC units would contribute to the prevention of transfer errors.

2.3 The first virtual meeting was held on 14 December 2022. There were approximately 20 participants who were not only ATCOs from Fukuoka and Manila ACC but also headquarters personnel of the Japan Civil Aviation Bureau (JCAB) and the Civil Aviation Authority of Philippines (CAAP) as observers. Fukuoka ACC explained the sector structure of Fukuoka ACC, traffic flow and ATC equipment, mainly focusing on screens and windows for exchanging transfer information.

2.4 Manila ACC explained the sector structure, traffic flow and ATC equipment (Thales Top-Sky-HE) in Manila ACC as well. **Figure 1** shows the ACC sector structure around the FIR boundary between Fukuoka and Manila FIRs, and **Table 1** shows the Flight Level Orientation Schemes (FLOS) applied in Manila FIR.



Figure 1: ACC sector structure around FIR interface between Fukuoka and Manila FIRs

| Flight Level Orientation Schemes(FLOS) | | | |
|--|-----------------------------------|------------------------|-------------------------|
| Direction/Airway | L625/B462 | N884 | A582 |
| North East bound | FL290.310.320. 350.360.390.400 | Available (Odd ALT) | Unusable |
| South West bound | FL300.340.380 | Unusable | Available (Even ALT) |

Table 1: Flight Level Orientation Schemes (FLOS) in Manila FIR

2.5 As the example of ATC operations in Manila ACC, it was highlighted that CENTRAL NORTH Sector was responsible for changing the altitude of aircraft flying northeast bound for MEVIN and LEBIX at non-FLOS Flight Level (FL) to FLOS FL then NORTH WEST Sector would send transfer information of the aircraft to Fukuoka ACC though the aircraft was still flying in the airspace controlled by CENTRAL NORTH Sector.

2.6 The reason for the above operation is that the time to send transfer information is agreed upon 30 minutes prior to the estimated time of crossing the FIR boundary between Fukuoka and Manila FIRs based on the Letter of Agreement (LOA) between Fukuoka and Manila ACCs. Therefore, NORTH WEST Sector is required to send the transfer information when the aircraft is still in CENTRAL NORTH Sector.

2.7 Manila ACC also explained that there were some issues of sharing information and situation awareness between CENTRAL NORTH Sector and NORTH WEST Sector by using Top-Sky-HE due to the specification of the ATC equipment.

Review of First Meeting

2.8 After the first meeting, Fukuoka ACC supposed that the time when NORTH WEST sector was performing the transfer information, the aircraft was still in the CENTRAL NORTH sector, which might be the factor causing the transfer error mentioned above.

2.9 Fukuoka ACC also considered the mitigation measures for reducing the number of transfer errors by comprehending the ATC operations at Manila ACC.

2.10 After the consideration, it was reached a conclusion that altering the time of exchanging transfer information to 20 minutes instead of 30 minutes prior to crossing the FIR boundary would have a positive effect on Manila ACC to prevent altitude revision lapses.

2.11 Fukuoka ACC proposed that Manila ACC conducts an operational trial to change the transfer time from both sides at the Fifteenth East-Asia Air-traffic Management Coordination Group (EATMACG/15) in March 2023. The proposal was accepted by Manila ACC, and it was agreed that further detailed discussion and coordination would be made through bilateral virtual meetings.

Second Meeting

2.12 The second meeting was held on 31 May 2023 and discussed the impact on ATC operations for both ACCs if the transfer time was changed to 20 minutes instead of 30 minutes.

2.13 Manila ACC commented that the transfer information could be sent after the northeast-bound aircraft enter NORTH WEST sector sending transfer information to Fukuoka ACC, as shown in **Figure 2**. It was also informed that this change would significantly contribute to reducing the missing of sending the altitude revision.

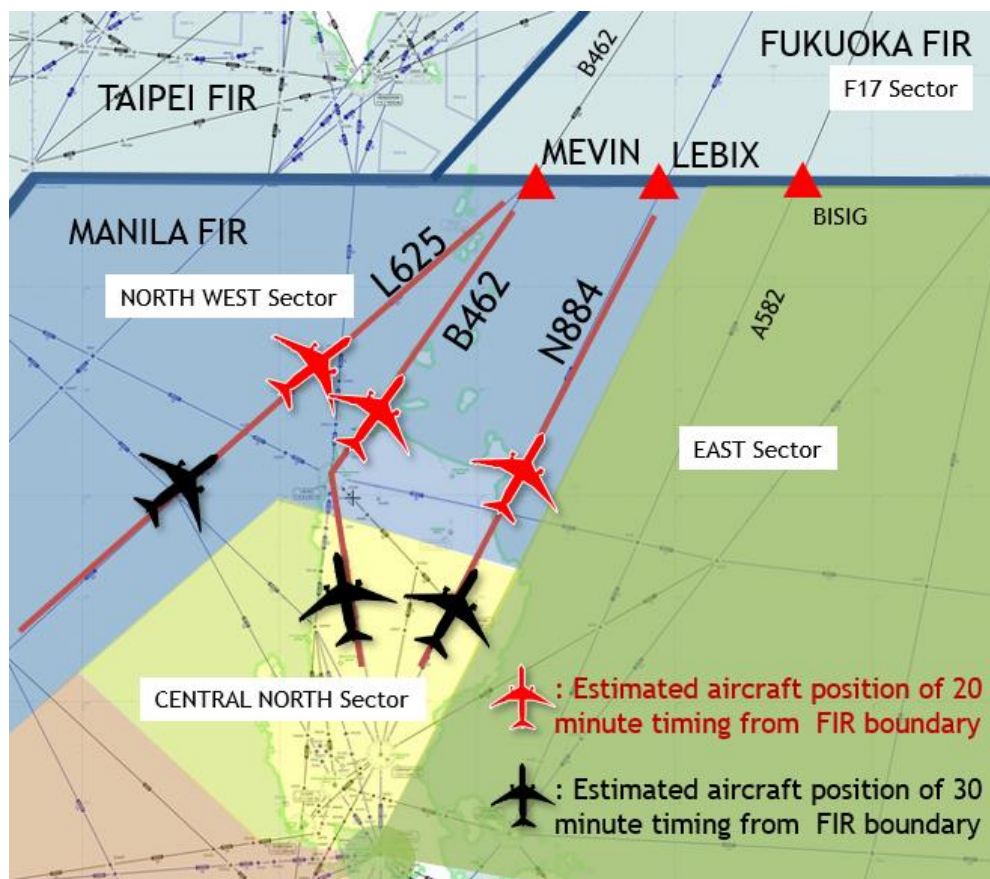


Figure 2: Reference of ACC sector and aircraft position

2.14 This change would also allow Fukuoka ACC to have more spare time until sending transfer information. Consequently, it would reduce the Fukuoka ACC ATCO’s workload for responding to the altitude change requests from the southwest-bound aircraft heading to BISIG and the coordination process to Manila ACC.

2.15 At the second meeting, Fukuoka ACC and Manila ACC agreed to conduct an operational trial to change the transfer time to 20 minutes from the current 30 minutes. The start date is expected in the 4th quarter of 2023 as should be paperwork and sign on an additional MOU to supplement the current LOA.

2.16 The trial period is expected for at least one year. The periodical review would be conducted during the operational trial, and it would also be discussed to implement the revised time of sending transfer information as a usual operational procedure. Besides, the status and review of the trial would be shared with each headquarters of the Civil Aviation Authority of Philippines (CAAP) and JCAB, and relevant RMAs, accordingly.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper; and
- b) discuss any relevant matters as appropriate.

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