



ICAO

International Civil Aviation Organization

**Twelfth Meeting of the Asia/Pacific Air Traffic Flow
Management Steering Group (ATFM/SG/12)**

Video Teleconference, 13 – 16 September 2022

Agenda Item 4: Review of Current CDM/ATFM Operations and Problem Areas

ANALYSIS OF MISSING DEPARTURE (DEP) MESSAGES

(Presented by INDIA)

SUMMARY

This paper presents an analysis of missing DEP messages.

1. INTRODUCTION

1.1 ICAO Doc 4444 Procedures for Air Navigation Services – Air Traffic Management (PANS-ATM) specifies in section 11.2.1.1.1 that messages for ATS purposes (including FPL) shall be originated by the appropriate ATS units, except that, through special local arrangements, ATS units may delegate the responsibility for originating movement messages to the pilot, the operator, or its designated representative.

1.2 Section 11.4.2.2.6.1 of PANS-ATM provides that a DEP message shall be transmitted immediately after the departure of an aircraft for which basic flight plan data have been previously distributed. It further specifies in 11.4.2.2.6.2 that the DEP message shall be transmitted by the ATS unit serving the departure aerodrome to all recipients of basic flight plan data.

1.3 Air traffic flow Management (ATFM) system uses the “DEP” message received for activation of a flight plan information. The strategic demand calculated based on the estimated time of departure is updated in the tactical scenario by the “DEP” information and an updated demand is calculated for ATFM processes.

1.4 APANPIRG/27 recognized the non-compliance with the provisions of PANS-ATM 11.4.2.2 as Air Navigation Deficiency and requested the contracting States to conduct an analysis of the incidence of non-receipt of DEP messages. During ATFM/SG/11, Thailand provided the data of non-receipt of DEP messages for flights entering the Bangkok FIR during January to June 2021. In the data, non-receipt of DEP messages for 22% of flights entering the Bangkok FIR from India was observed.

1.5 Taking note of the ANS deficiency of missing DEP messages from India, suitable action was taken by Airports Authority of India in ensuring the compliance of the provisions for generation and transmission of DEP messages as per the PANS-ATM. A remarkable improvement has been observed during the analysis of the missing DEP messages during the period from November 2021 to June 2022.

2. DISCUSSION

2.1 Central Command Center (CCC) of the ATFM in India conducted an analysis of the missing DEP messages based on FPL and DEP received at C-ATFM from 1st November 2021 to 30th June 2022. ATFM system receives ATS messages via AFTN address VIDPCTFM. The FPL received in ATFM

system, gets activated mainly by the update from surveillance input or by the receipt of relevant DEP message. The analysis involved evaluation of all the active FPL and receipt of corresponding DEP messages.

2.2 AIP India ENR 1.9 and 1.10 stipulates the requirements for addressing of FPL and associated messages to VIDPCTFM in addition to concerned ATS units. Since all the AFTN messages originating in India are also addressed to VIDPCTFM in addition to the other intended recipients, therefore it was inferred that the DEP messages which are not received at ATFM might not have been originated or transmitted.

2.3 The analysis for missing DEP messages was conducted taking into consideration the active FPLs for International Flights, segregating the Arrivals and Departures at aerodromes in India.

2.4 Details of the missing DEP messages for international departures originating from India is shown in the Table-1 below:

Month	FPL received for International Departures	DEP message received	Missing DEP message	% age of missing DEP messages
Nov-21	8815	6453	2362	27%
Dec-21	9945	7415	2530	25%
Jan-22	9806	8431	1375	14%
Feb-22	8700	7983	717	8%
Mar-22	11278	10074	1204	11%
Apr-22	11463	10552	911	8%
May-22	12993	11905	1088	8%
Jun-22	13433	12262	1171	9%

Table-1: Missing DEP messages (month-wise) from 1st November 2021 to 30th June 2022 for International departures from India

2.5 It is evident from the table-1 above, DEP message was not received at ATFM for more than 25% of flights departing from India during the month of November and December 2021. However, the percentage of missing DEP messages has reduced to below 9% since April 2022.

2.6 The following issues were identified as the contributory factors for missing DEP messages in India:

- non-compliant addressing requirements;
- AFTN serviceability related issues;
- aerodromes were not defined in the automation system for sending the DEP messages (for new destination aerodromes);
- maximum number of addressee limitation with some ATM automation systems;
- VIDPCTFM was not included in DEP messages transmission address list.

2.7 The issues were addressed with suitable instructions for resolution, modification & adaptation of database in the automation systems wherever required and monitoring and follow up with the concerned ATS units.

2.8 Details of the missing DEP messages for international arrivals to India is shown in the Table-2 below:

Month	FPL received for International Arrivals	DEP message received	Missing DEP message	%age of missing DEP messages
Nov-21	8997	5733	3264	36%
Dec-21	10041	6353	3688	37%
Jan-22	9754	5958	3796	39%
Feb-22	8347	5326	3021	36%
Mar-22	10826	6641	4185	39%
Apr-22	11439	7508	3931	34%
May-22	12947	8470	4477	35%
Jun-22	13407	8679	4728	35%

Table 2: Missing DEP messages (month-wise) from 1st November 2021 to 30th June 2022 for International arrivals to India

2.9 It is evident from the table-2 above, that DEP message was not received for more than 34% of international flights landing at Indian airports consistently during all the months of observation.

2.10 The availability of FPL and DEP messages play a significant role during airspace contingency situations. Since DEP messages provide the first real-time information to update demand calculations in ATFM processes, its absence largely compromises the efficiency of central ATFM system. C-ATFM India is taking up the non-receipt of FPL and DEP messages and addressing, with concerned ATC centers.

2.11 Further, AIP India ENR 1.11: Addressing of Flight Plan Messages, has been amended to remove ZRZX for addressing of flight plan messages and include address for VFR flights to comply with 11.2.1.2.3.3 of PANS-ATM.

2.12 ATFM SG may consider reexamining the issue of accurate dissemination of FPL and DEP messages by States in order to strengthen the basic premises of cross border ATFM.

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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