International Civil Aviation Organization

MIDANPIRG Communication Navigation and Surveillance Sub-Group (CNS SG)

Sixth Meeting
(Tehran, Iran, 9 – 11 September 2014)

Agenda Item 5: Performance Framework for CNS Implementation in the MID Region

CURRENT IFPS OPERATIONS IN BAHRAIN FIR/UIR

(Presented by Bahrain)

SUMMARY

This working paper presents the current status of the Bahrain FIR/UIR - Integrated Flight Plan Processing System (IFPS) System.

Action by the meeting is at paragraph 3.

REFERENCES

- MIDANPIRG/14 para 4.6.22
- MIDANPIRG/10 Conclusion 10/18

1. INTRODUCTION

1.1 Over the last years the Bahrain FIR/UIR aircraft movement statistics shows about 100,000 arrivals and departures in Bahrain and about 500,000 over flights a year. This causes the same number of ICAO Flight Plans (FPL) messages accompanied by about 30% more of other ICAO ATS messages.

1.2 These FPL and ATS messages have been, in many cases, not according to ICAO PANS-ATM (Doc 4444) and many did not conform with required level restrictions or required routings within the Bahrain FIR/UIR as published by AIP Supplements.

1.3 Further, a large number of double distributions of FPL and sometimes ATS messages were observed especially in cases when staged flight plans have been used.

1.4 In cases of flights from Europe, double distributions have been observed due to improper usage of the European Union (EU) Network Manager (NM) IFPS System by aircraft operating agencies.

1.5 The issues mentioned above have caused additional workload and sometime confused confusing situations because of imprecise flight plans and unclear intensions of flights in Bahrain Area Control Centre (ACC), Aerodrome Control Towers (TWR), and ATS Reporting Offices (ARO).

2. DISCUSSION

BAHRAIN FIR/UIR IFPS

2.1 To overcome the issues described in item 1 above BCAA introduced an IFPS System for the Bahrain FIR/UIR in 2013.

2.2 The system is the entry system for all Bahrain FIR/UIR FPL in order to:

- Raise the quality of FPL before distributing them to ACC, TWR, and ARO;
- prevent double distribution to ACC, TWR and ARO;
- reject FPLs in case of major errors;
- send Rejection Messages (RJE) or Acknowledge Messages (ACK) to the originator of the FPL according to the system configuration based on individual configurations for each FPL originator; and
- ensure additional FPL addressing for national, non-ICAO requirements.

2.3 All FPL and ATS messages addressed to the FPL AFTN addresses in AIP Bahrain GEN 1.7 and ENR 1.10 are routed to the IFPS System and not the ACC, TWR, and ARO.

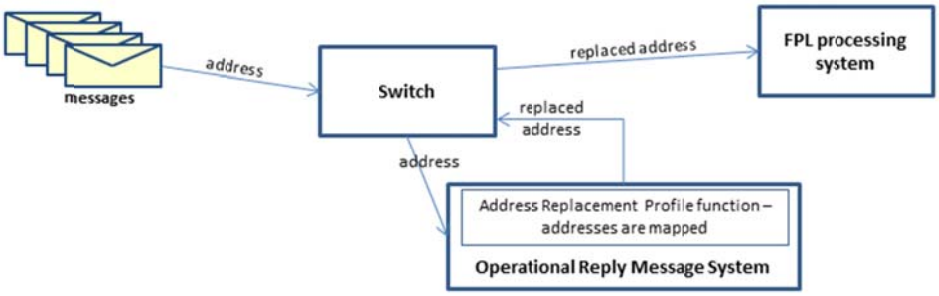

Figure 1: IFPS – Operational Reply Messages

2.4 All those messages are automatically evaluated for:

- Originator Address;
- DEP AD (item 13);
- DEST AD (item 16); and
- Route (item 15).

2.5 Addressees Replacement Tables, Originator Address Profiles, Aerodrome Profiles, and Required Routing Tables are used to determine further handling of the FPL by IFPS.

2.6 All configuration tables and profiles are supervised by an Administrator Position and the values can be changed at any time when changes are necessary. Review is done at least twice a year according to the IATA Summer and Winter Time Table Periods.

2.7 **(1) Addressees Replacement Tables** determine the AFTN address of the ACC, TWR, and ARO to which the FPL has to be sent after evaluation by the IFPS System/Operator. These addresses must be different to those published in AIP GEN and/or ENR to prevent message loops in the AFTN/AMHS network.

2.8 **(2) Originator Address Profiles** determine whether an FPL originator gets:

- ACK automatically or no ACK at all; and
- REJ automatically or after IFPS Operator confirmation or no REJ at all.

2.9 **(3) Aerodrome Profiles** are used to determine which aerodromes are under control of the IFPS. Currently all aerodromes within the Bahrain FIR are configured. Aerodromes can be marked as "not located in the FIR(s) for which IFPS is responsible". This is needed as criteria to check the FPL item 15 (Route) either against pre-determined "Overflight Routes" or pre-determined "departure/arrival routes".

2.10 (**4) Required Routing** tables are used to define required (pre-determined) Routes for "Outbound", "Inbound", and "Overflight". The configuration of the Required Routing Tables contains also a field which can store additional AFTN Addressees for ATS Units for cases where a Required Route affects airspace where the responsible ATS Units requires national, non-ICAO FPL addressing.

2.11 All Required Routes are currently published in AIP SUP 10/14. In the near future it is planned to publish Required Routes in a "Standard Route Document – SRD". This SRD will replace AIP SUP 10/14 and published twice a year according to the IATA Summer and Winter Time Table Periods.

Usage of the Bahrain FIR/UIR IFPS System for FPL 2012 Reformatting

2.12 The basic version of the Bahrain FIR/UIR IFPS System was also used for FPL 2012 reformatting and redistribution for FPL for 3 States within MID /AFI Region.

2.13 The Address Replacement Tables/Function was used for re-distribution.

Possibility that other FIR/UIR can join Bahrain FIR/UIR IFPS

2.14 The implemented functions of the Bahrain FIR/UIR IFPS are of general nature and could support the needs of other FIR/UIR as well as regional or sub-regional needs in the ICAO MID Region.

2.15 The system is expandable and can be demonstrated at any time.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note the contents of this working paper;

b) encourage States to provide the Flight Plan Data/Difficulties to Bahrain in order to carry out further studies for the Region; and

c) develop a Draft Decision indicating the need for the establishment of an IFPS unit in the Middle East Region.

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