International Civil Aviation Organization
North American, Central American and Caribbean Office

WORKING PAPER

FPL Ad hoc Group Missing/duplicated/erroneous Filed flight plan /Flight plan (FPL) evaluation meeting (FPL/AD/MON)
Mexico City, Mexico, 24-26 February 2015

Agenda Item 9   **Data Analysis procedure discussion**

DATA ANALYSIS PROCEDURE

(Presented by FPL Ad hoc Group Rapporteur)

EXECUTIVE SUMMARY
The FPL Monitoring group is an Ad-hoc group created by the AIDC Task Force to address the problem of erroneous, missing and duplicated flight plans, as a pre-requisite to successful implementation of AIDC. As part of its tasks, the Monitoring Group has collected data with respect to the errors encountered by each State. This working paper describes the procedure used to analyse the data collected.

Action:	The meeting is invited to comment on the information provided and suggest improvements to the data analysis procedure.
Strategic Objectives:	• Safety • Air Navigation Capacity and Efficiency

1.   Introduction

1.1   The FPL Monitoring group is an Ad-hoc group created by the AIDC Task Force to address the problem of erroneous, missing and duplicated flight plans, which has been a long-standing problem in civil aviation. For the successful implementation of AIDC, it is of utmost importance that the errors in flight plans be reduced to a minimum.

1.2   As part of the effort to reduce errors in flight plans, the Monitoring Group defined a strategy to address the problem, which can be outlined as follows:

a)   updating and publishing the relevant information.
b)   collect information for analysis.
c)   analyse the data, identifying the source of the errors.
d)   create action items to address the errors detected.
e)   follow-up on action items.

1.3   The first phase of data collection was completed from July to August 2014. This data was analysed and some interesting data was obtained. The procedure for the analysis process will be described in this paper.

2.   **Discussion**

        Background

2.1   Goals of analysis: The analysis procedure has the goal of identifying the sources of error. The source can be internal to the State (errors committed by AROs, systems errors, inconsistency of data between local systems), or external (flight plans submitted twice of with errors by a neighboring FIR). Data analysis should permit the identification of the most frequent errors encountered by each State, if the source of these errors is internal and external, and who exactly is the source. Once this is identified, specific action can be taken for each source. States will most likely have sources different from one another; e. g. one State may have very frequent ARO mistypings, while another may experiment many missing flight plans due to incorrect addresses publish in the AIP. Thus, action plans should be defined and carried out by each State depending on what was detected for their FIR.

2.2   Logic of analysis: The data was collected using the collection form in the **Appendix**. In this form there are several fields that could identify a potential source of error:

•   Callsign, which identifies the operator.
•   ATS Unit, as originator
•   Airline, as originator

2.3   There is also the list of errors possible:

•   Missing (the flight plan was not present at the moment of coordination)
•   Duplicate (the exact same flight plan was transmitted twice)
•   Similar (two flight plans with slightly different information were transmitted)
•   Field errors (inconsistency in Fields 10 and 18, incorrect data in fields, etc).

2.4   The logic was to cross the sources with the errors; specifically, to measure the level of errors generated by each source, and identify those sources that generated the majority of errors.

        Experience in first round of collection

2.5   In the first round of collection, many tables and graphs were generated, a few with the totals for all States, but most showing each State individually. Some of the graphs including the total errors, total errors by State, total errors by company, and total errors by callsign. For each State, a graph of total errors, errors by company, errors by callsign, and errors by ATS Unit was constructed. These graphs gave an overall view of what the main errors were for each State, and who was originating them.

2.6   As observations, not all States provided data, nor the same amount of data. Some States had a great volume, while others less. Because of this, the graph for total errors was produced by percentage, instead of number of errors. As more data is produced, the sample will be more representative.

2.7   Also, in some cases the collection was done mainly from the error detection facility of the flight plan processing software (e.g., AISR). This would limit the errors to those that can be caught by the software, and those that cannot be detected will not be found (e. g., missing flight plans). Thus, the analysis could be more complete if these cases are included.

3. **Action by the meeting**

3.1 The meeting is invited to:

a) note the information contained in this paper;

b) suggest any improvements and changes to the data analysis process; and

c) discuss any relevant matters as appropriate.

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APPENDIX
FLIGHT PLAN ERROR REPORTING FORM

State:		Originator		Destination	Flight Plan Issues				Corrective Action	
Date	Call Sign	ATS Unit	Airline	Addresses	Missing	Duplicated	Similar	Incorrect Flight Plan	Doc 4444 Ref	Proposal

— END —