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

WORKING PAPER

AIM/FPL/AIDC — WP/06
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Aeronautical Information Management (AIM), Flight Plan (FPL) Error Management and Air Traffic Services Inter-facility Data Communication (AIDC), Meeting (AIM/FPL/AIDC/1)

Tegucigalpa, Honduras, 30 October to 3 November 2017

Agenda Item 8: **Discussion of Data Collection in regards to FPL**

2017 DATA COLLECTION ANALYSIS

(Presented by the FPL Monitoring Group Rapporteur)

EXECUTIVE SUMMARY	
This working paper presents the results of the data collection done in 2017 by the ad hoc group members to measure the level of duplication in flight plans.	
Action:	Suggested actions are presented in Item 5.1
Strategic Objectives:	• Safety • Air Navigation Capacity and Efficiency
References:	• none

1. Introduction

1.1. The FPL Monitoring group carried out a data collection as had been previously scheduled during the period from April 10 to April 30. The purpose was to measure the level of duplicate flight plans being detected by the different NAM/CAR FIRs, and analyse this data to suggest mitigation actions.

2. Methodology

2.1. The methodology used to collect the data was as following:

a) All members would take a sample of the flight plan data during one hour everyday during the collection period.

b) Those members that had difficulty obtaining just a sample could submit the complete data of the collection period.

c) The data was collected using the agreed data collection form, as presented in **Appendix A**.

d) Members were urged to provide the total number of flight plans processed during the sample period, as a means of providing a base for comparison with future data collections and to take into account the difference in volumes of flight plans processed by each FIR.

3. Analysis

3.1. The graphs on which the analysis is based can be found in **Appendix B**.

3.2. First of all, not all States provided the number of accepted FPLs during the collection period. Mexico, Dominican Republic and PIARCO did provide this data. For the rest of the States (COCESNA, United States and Haiti) this number was estimated based on the average accepted FPLs of the three that did provide this quantity:

3.3. Estimated accepted FPLs (State i) = sum(accepted FPLs Mex, DR, Piarco) / sum(duplicates Mex, DR, Piarco) x duplicates(State i)

3.4. Graph 1 shows the ratio of duplicates/accepted FPLs by reporting State. In most cases the duplicate flight plans represent a relatively low percentage of the total flight plans processed. A future data collection could be compared with this one based on the ratio of good/bad flight plans, which has been impossible in practical terms with the previous collections.

3.5. Graph 2 shows the distribution of duplicate flight plans produced by ATS units, operators or both. This data was determined by the originating address, as ATS units have predetermined suffixes (ZQZ, ZPZ, etc). As can be seen, operators have originated a significant number of duplicate flight plans, and very few by both.

3.6. Graph 3 shows duplicates by company/originator type. The top ten companies whose flights have duplicates reported are shown, as well as the breakdown of these quantities by originator type (ATS unit, operator or both). The company GA represents general aviation. Although in most cases the operators generate the most duplicates for each company, there are notable cases of ATS units generating more than the operator (in particular, CMP, SLI, TAM). This will help direct the mitigation actions to the party that is mostly responsible for the number of duplicates.

3.7. Graph 4 shows the top 15 originating addresses that generated duplicates during the collection period. These are absolute values, for reference. Airlines and ATS units from the NAM/CAR region as well as other regions (Europe, South America) appear in this graph with different levels.

3.8. The next graph (Graph 5) shows the same data but relating duplicates with accepted flight plans. Again, the percentages are relatively low and fairly uniform, although the absolute quantities keep the occurrences of duplicates in perspective.

4. Conclusions

4.1. From the present data collection analysis, it can be concluded that:

a) Duplicates represent a relatively small percent of all flight plans processed, and nonetheless pose a serious problem. To set an acceptable level, a very low percentage should be considered, much lower than presently observed.

b) Operator still contributes a significant number of error in flight plans, although there have been good collaboration in that sense and a reduction of errors reported in teleconferences.

c) Most flight plan duplicates are produced by a single entity, not usually by both an operator and ATS unit.

d) Procedures should be revised in those cases of significant generation of flight plan duplicates, and errors in general. A homogeneous, uniform procedure should be established for all actors in flight plan processing.

5. Suggested Actions

5.1. The Meeting is invited to:

a) consider the information presented in this working paper;

b) discuss the action items that may be derived from the conclusions presented in item 4.1; and

c) any other action deemed necessary.

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APPENDIX A

Flight Plan Error Reporting Form

State:		Total Flight Plans Processed:		
Date (dd-mm-yy)	Call Sign	Originating addresses	Multiplicity	Comments

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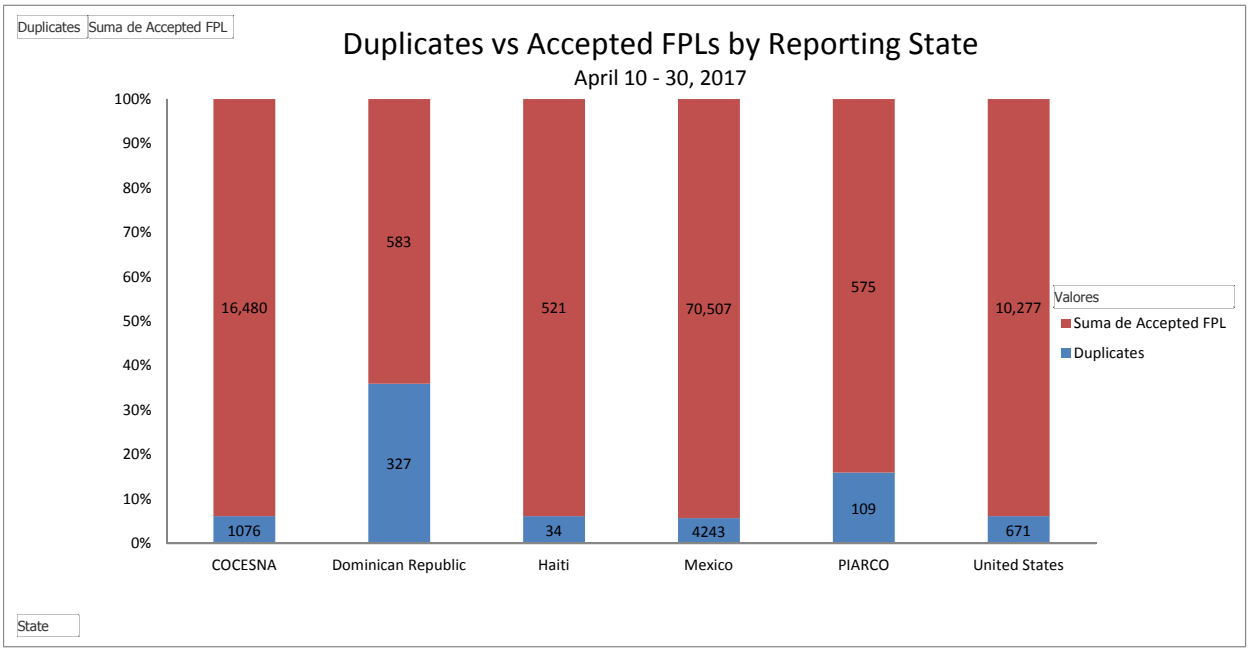
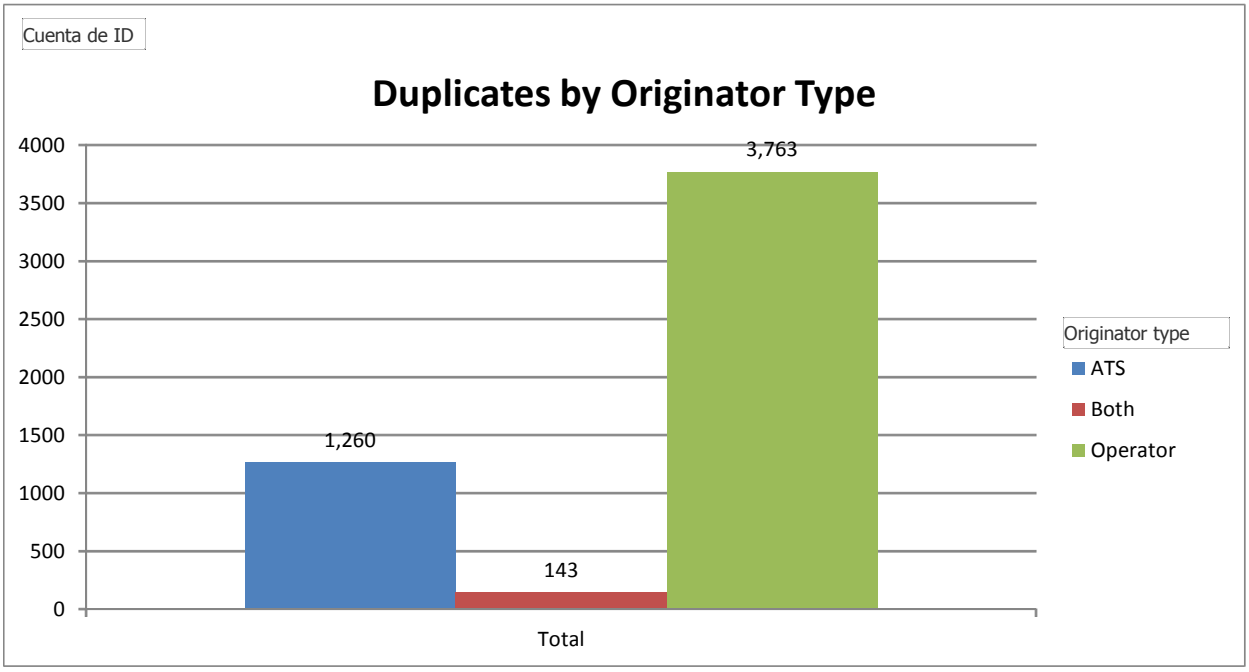
APPENDIX B

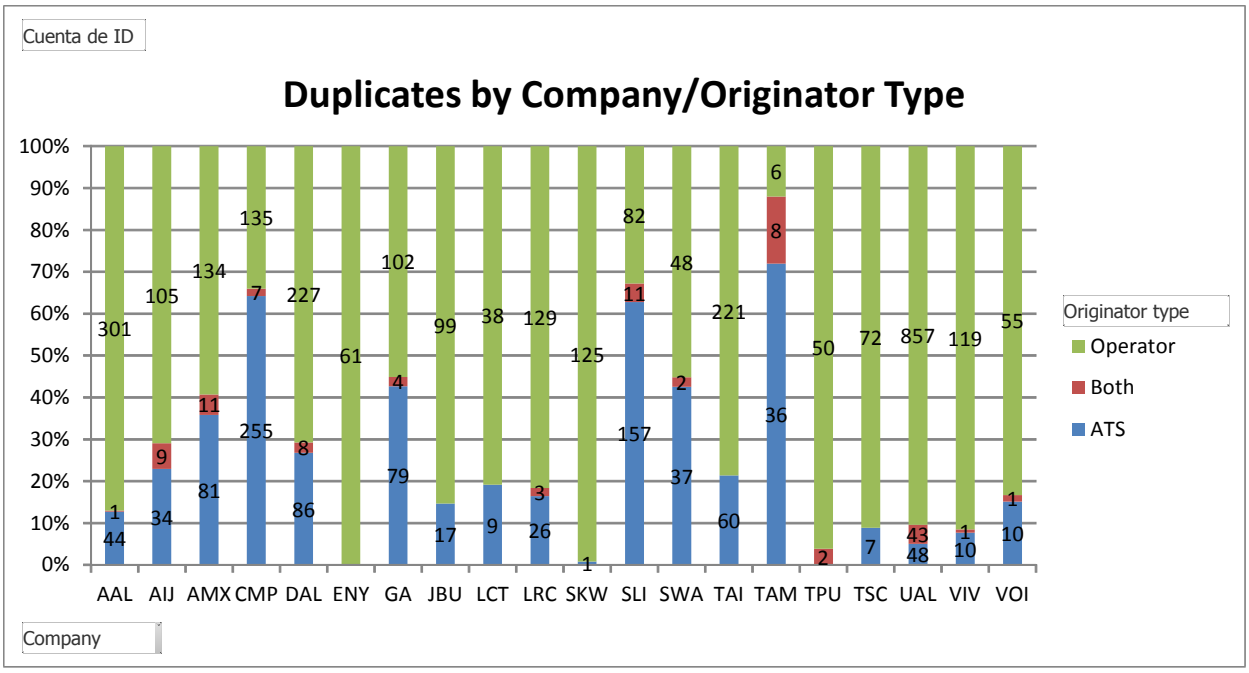
DATA COLLECTION ANALYSIS



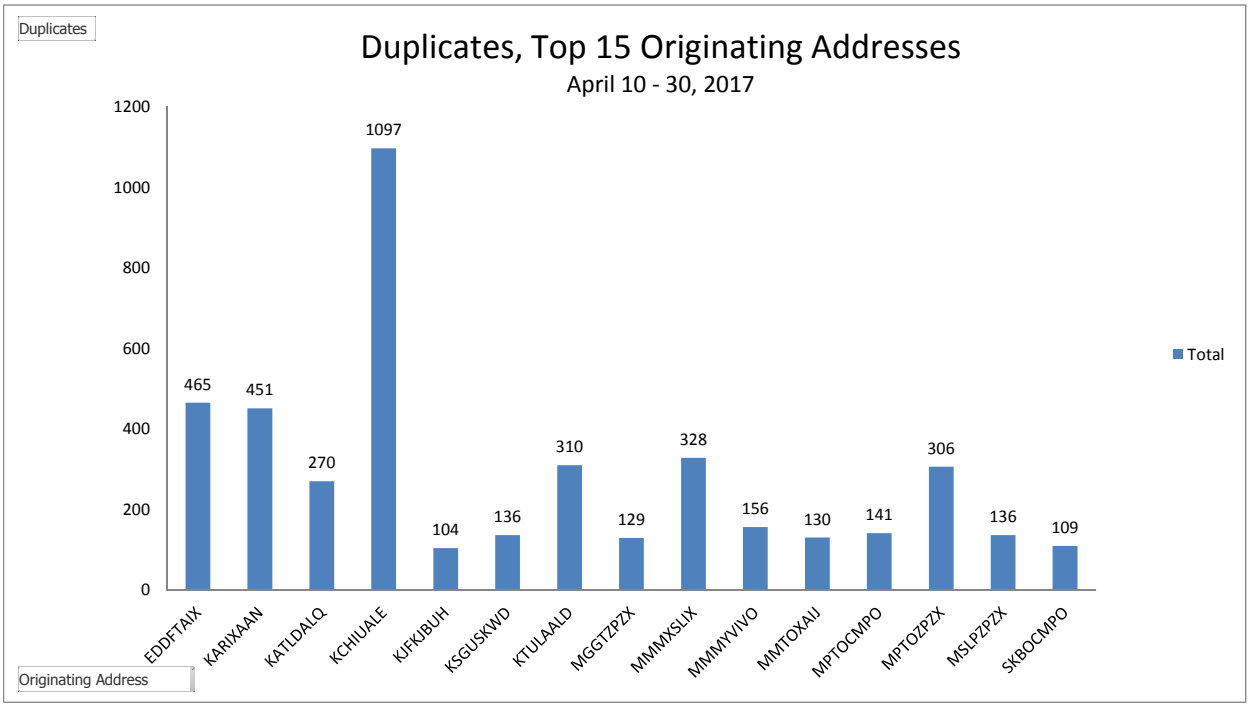
Graph 1



Graph 2

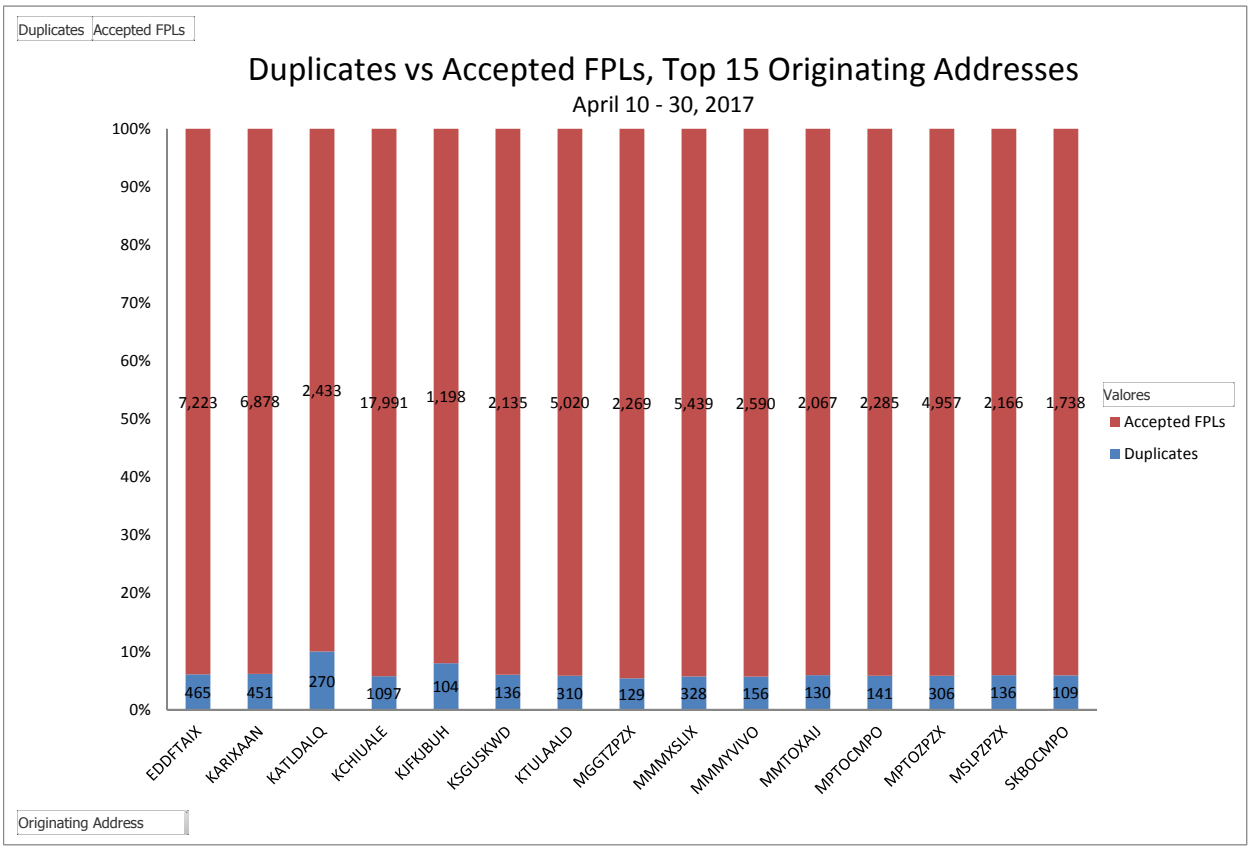


Graph 3



Graph 4

— A3 —



Graph 5

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