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**International Civil Aviation Organization
South American Regional Office**

**SECOND WORKSHOP/MEETING OF SAM IMPLEMENTATION GROUP (SAM/IG/2)
REGIONAL PROJECT RLA/06/901**

Lima, Perú, 3 to 7 November, 2008

Agenda

Item 7:

Impact in ACCs due to multiple reception of the same flight plan

FLIGHT PLANS DUPLICITY RECEIVED IN CONTROL CENTRES

(Presented by Secretariat)

Summary

In this working paper, existing problems related to the duplicity/multiplicity of flight plans received by Area Control Centres of the Region and their impact in the operational security, are presented. It is proposed that the Meeting analyse this situation in South American Region, review actions taken up to date in this subject, and if it is the case, take some actions in order to solve this difficulty.

References:

- Colombian Aeronautical Authority Report
- AP/ATM/13 Meeting Report
- ATM/CNS/SG/6 Meeting Report

ICAO Strategic Objectives

A: Safety
D: Efficiency

1

Background

1.1 During the AP/ATM/13 Meeting (Bogota, Colombia, July 2007), United States presented to the Meeting information related to ICAO Multiple/Duplicate Flight Plans received in Control Centres and how this was affecting international flight management causing concern with regard to safety.

1.2 The meeting also took note that this matter occurs in some States of CAR/SAM Region and noticed that such States could obtain solutions through the application of some of the following measures:

- a) encourage the operators to avoid mix/duplicate CPL and/or RPL messages; only one should have effectiveness for specific flight plans;
- b) establish a programme for flight plans coordination purposes and to update related changes;
- c) follow-up to provisions related to the delivery of ATC clearances established in ICAO Doc. 4444, for flights that operate from a FIR to another adjacent FIR;
- d) Initiate interphase among automated ATS systems, according to Interphase Control Document (ICD) approved by GREPECAS.

1.3 In order to find a regional solution for this problem, Colombia expressed to South American Regional Office its concern for the increase in the duplication of flight plans in its Control Centres. This issue was also widely discussed during the Sixth Meeting of ATM/CNS Subgroup (Re. Agenda Item 2, paragraph 2.3 of Report of ATM Committee of the Sixth Meeting of GREPECAS ATM/CNS Subgroup).

2 Discussion

2.1 As previously informed, flight plan is the basic document by which is explained to all ATS units along the flight route, pilot's intentions. In this document it should be pointed out with accuracy, the information that is usually included in flight plan form. Consequently, flight plan constitutes the most important link between the pilot and the ATC regarding the decision of the way the flight will be preformed.

2.2 The multiple reception of flight plans has generated a great concern in several States of the Region because this could represent a potential danger for safety, due that in many occasions in such flight plans, presented for the same flight, information of destination, route and even flight level required, is shown different in each one of them, creating or possibly creating confusion in air transit control system.

2.3 Taking into consideration all the aforesaid, and particularly the impact in operation security matters due to data exchange of flight plan (FPL) among adjoining ACCS, the ATM/CNS/SG/6 Meeting considered that States, Territories and CAR/SAM International Organizations should adopt additional measures to the aforesaid:

- a) inform and document the duplicate FPL and the mistakes in the FPL data transmission to adjacent installation and/or to the operator, as convenient, within 24 hours of taking knowledge of such event;

- b) take Safety Management System (SMS) measures, in order to investigate, track and apply appropriate mitigation measures;
- c) coordinate investigation results and/or supporting measures with adjacent ACC operators, as may corresponds;
- d) send tracking information and corrective actions to ICAO Regional Offices for its processing and monitoring; and
- e) ICAO acting as focal point for data collection and supervising activities within CAR/SAM Regions.

2.4 After conversations held by FAA with airlines and with IATA in order to find an appropriate solution, we can conclude that at present there is no immediate solution, however, some proposals that might deserve a detailed analysis by the Meeting, were identified. For a better reference, **Appendix A** to this working paper shows a document developed by FAA, which was presented during AP/ATM/13.

3 **Suggested Action**

3.1 The meeting invites to:

- a) Analyse the information presented in this working paper in order to determine the scope of problem within the Region;
- b) Assess proposed measures in different events where flight plans duplicity/multiplicity were examined; and
- c) Take appropriate measures in order to face and/or solve, by putting into practice solutions that could involve suppliers of ATS services, States, airlines, IATA and ICAO.

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APPENDIX A

SAFETY CONCERNS WITH MULTIPLE/DUPLICATE INTERNATIONAL FLIGHT PLANS

1. Introduction

1.1 Multiple/duplicate international/ICAO flight plans is an issue, which is global in nature and affects many border facilities handling international flights. This is not a new issue. This paper speaks to one example of one facility handling flights in the Western Hemisphere regions. Miami Air Route Traffic Control Center (ARTCC) and FAA ARTCC's have recently experienced a large increase of ICAO multiple/duplicate flight plans in their respective databases to a level which is causing a safety concern. Several ATS incidents have occurred in the Miami and/or New York FIRs as a result of aircraft changing course and joining ATS routes not indicated on the flight plan as transmitted to the ARTCC. This paper presents information on the safety concerns, possible causes, and recommendations, as a result of the follow-up investigation of these incidents.

1.2 The number of duplicate flight plans entering the Miami Flight Information Region (FIR) from Central and South America has reached a point where the workload is excessive and has an impact on safety for the overall system operation. Duplicate flight plans increase the risk that air traffic service providers have a different flight plan from what the aircraft has in the Flight Management System (FMS) and could result in an incident.

1.3 Multiple/duplicate flight plans were identified as an issue in 1994, but an acceptable solution to all operators and ATS/AIS providers was never developed and implemented. The following are learned information items:

- ICAO requires that flight plans be filed, but not who must file the flight plan.
- The ICAO rules for filing flight plans to fulfill the filing requirement were developed to meet the operational flight processing systems at that time and have not changed.
- The automated flight processing systems for each ATC/AIS are at different automation levels.
- Some States require operators to file Repetitive Flight plans (RPL) every six months as permission to operate in and out of that State.
- Some States require a local flight dispatcher to file the flight plan locally at the AIS office.
- A flight plan for one flight may be submitted by three different sources: 1) by Repetitive /RPL flight plan; 2) locally at the AIS office; and/or 3) from the operators dispatch centers, which does not include any amended flight plans.

2. Discussion

FAA has been conferring with the airlines and IATA to identify a possible solution. Most, if not all, possibilities for a solution have resulted in a negative counter response. At present, there is no immediate solution. However, several proposed future fixes show merit and could be further explored.

2.1 Proposed Solutions:

- Unique identification number inserted into the remarks section of the flight plan. The number could be referenced as to the validity of the appropriate flight plan in an aircraft's FDM and filed flight plan. The suggestion was not acceptable to all parties due to the complexity of use and tracking.
- European filing of flight plan information using field 18 of the ICAO filing format. The suggestion was discussed but did not fit all the different scenarios that each operator uses.
- Unique address when filing an ICAO flight plan to indicate whether the flight plan was received from the Operator or was the locally filed flight plan. The main point was to have a unique address identifier from the Air Carrier operations to indicate the most accurate filed flight plan. Again, the suggestion did not fit the various customer operations.
- The pilot filing the flight plan as received from Operations. The filed flight plan would match the aircraft's FMS to reduce "duplicate" filed flight plans. The suggestion was not adopted because the pilot is not a licensed dispatcher, which is a requirement for flight plan filing.

2.1 Known AFTN and ICAO issues

- AFTN Processing: The assumption is that the latest filed flight plan should be the most valid. However, when the AFTN circuit is heavy, the circuit will delay processing. When processing is resumed, the flight plan may not be the latest updated version.
- Multiple versus duplicate flight plans: Multiple flight plans could be filed and accepted into the automation system because a change to any part of the ICAO filed flight plan does not constitute an exact "duplicate". The term "duplicate" is a misnomer in that an exact duplicate flight plan is rejected by FAA automation systems, but a slight change to the flight plan is accepted as a "duplicate" but is actually an additional multiple flight plan/s.
- ICAO use and application of message Identifiers: The "FPL", "CPL", "CHG", "DLA" messages identify the appropriate state of filing. Discussions indicated that these messages are not being applied appropriately.

2.2 The following items are possible actions to be taken in the future as a result of the discussions from the conference calls:

- IATA on a case-to-case basis will work with the Air Carriers to resolve the filing of multiple flight plans. This will be a continuing effort to reduce the percentage of multiple filings keeping in mind the filing requirements as dictated to the Air Carrier by law and the "States".
- The issue has grown from multiple-duplicate flight plan problem to an issue of safety. Multiple flight plans with multiple routes, results in the determination of which is the correct route to process. The wrong route can result in an Operational Error or incident.
- ICAO Rules for Filing: The rules that were created by ICAO in the past were developed to match the automation of the times. With the advances of technology the current rules do not enhance the technological capabilities of the users. With the updating of the rules to match user capabilities, duplication problems can be reduced.
- Implementation of the "CPL" messaging: Allowing "CPL" processing with adjacent facilities will reduce duplicate flight plans in that the "CPL" flight plans would be the most accurate (active movement) flight plan to be processed.

3. Conclusions

3.1 Multiple/duplicate flight plans is a safety concern that causes confusion and could result in an ATS incident, AIRPROX, or other major event. The flight plan sitting in the flight progress strip bay or automated systems (electronic strips) may be incorrect, giving the air traffic controller a false sense of security.

3.2 This problem has been identified by several FAA air traffic facilities such as Miami, Houston, San Juan, and New York ARTCCs. The problem is not isolated to US FAA Air Traffic facilities, other ATS units in the CAR/SAM regions may be experiencing the same issues and the extent of the problem needs to be determined.

3.3 There are too many sources (airline dispatch office, local dispatch office, repetitive flight plans, etc.) for flight plans to be submitted and/or amended. Therefore, limiting the sources and finding a method to determine the latest and most accurate flight plan is important.

3.4 States in the region may have different flight plan filing requirements for airlines to provide service to/from that country. These requirements may be contributing to the multiple/duplicate flight plan issues being experienced by ATS service providers.

3.5 The extent of the problem needs to be determined and solutions developed and implemented that may involve ATS service providers, States, Airlines, IATA, and ICAO.