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WORKING PAPER

ASSEMBLY — 40TH SESSION

TECHNICAL COMMISSION

Agenda Item 30: Other issues to be considered by the Technical Commission

ACCESS TO ESSENTIAL DATA FOR THE AUTOMATED PROCESSING OF THE NEW FLIGHT PLAN FORMAT

(Presented by Cuba, supported by Aruba, Belize, Bolivia, Brazil, Colombia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Venezuela)

EXECUTIVE SUMMARY

This working paper proposes to create an on-line database, which States and air navigation service providers need in order to access the technical parameters of the latest aircraft models, and thus facilitate and ensure the automated processing of flight plan data in the new format, for enhanced interoperability.

Action: The Assembly is invited to:

a) recommend that ICAO coordinate with industry for the possible development of an on-line database, website or similar mechanism that provides the data referred to in paragraphs 2.5 and 2.6 of this paper, for each type of aircraft, and;

b) allow States to access this tool free of charge, through focal points notified to ICAO.

Strategic Objectives:	This working paper relates to all Strategic Objectives.
Financial implications:	The development of the tool would have some financial impact. A cost-benefit analysis is required.
References:	Annex 11 – *Air Traffic Services* ICAO Doc 4444, *Procedures for Air Navigation Services — Air Traffic Management* ICAO Doc 8643, *Aircraft Type Designators*

[1] Spanish version provided by Cuba.

1. INTRODUCTION

1.1 The growing demands of air traffic between flight information regions (FIRs) are driving the need for enhanced capacity, efficiency and safety in air traffic services units (ATSUs). Hence the importance of having a site for updating databases on aircraft types and designators, so as to harmonise systems and procedures and ensure cross-border interoperability.

2. DISCUSSION

2.1 All air traffic control systems that are in any way automated have, at some point, had difficulties processing flight plans (FPL) or performing manual or automatic coordination because there were no updates to the databases for aircraft and designators, aircraft technical parameters, or for aircraft modifications and resulting designator changes.

2.2 The following is one example of this issue:

a) in a sample of 30 days of flight plan data in the Havana FIR, there were 900 rejections (ERR_FIELD_INVALID_MODEL) for different aircraft type nomenclatures, which caused an impact in the generation of REJ FPL type messages (flight plan rejection) and LRM (logical rejection message) in automatic coordination; and

b) analysis of these data identified the following causes:

1) operator error in writing the wrong aircraft type nomenclature;

2) in some cases, the entry was correct but was not found in the aircraft type and designator databases, and;

3) the TYP (type) descriptor and model were not entered in FPL field 18, and ZZZZ was not entered in FPL field 9.

2.3 Today, the technical parameters used by the systems range from standard, or the most basic, to the most complex:

a) aircraft designator;

b) wake category;

c) maximum cruising speed;

d) minimum cruising speed;

e) maximum flight level;

f) rate of ascent;

g) rate of descent, and;

h) minimum approach speed.

2.4 The most advanced air traffic control systems use these parameters in addition to other more complex variables that allow for more accurate calculations and predictions for wind and temperature conditions and flight levels, with the most accurate variables being used for predictions.

2.5 The electronic publications of ICAO Doc 8643, *Aircraft Type Designators* provide the following data:

a) manufacturer;

b) model;

c) designator;

d) description;

e) type and number of engines, and;

f) wake turbulence category (WTC).

2.6 The following parameters, which can be considered standard technical parameters, do not appear in the publication:

a) maximum and minimum cruising speed;

b) maximum flight level;

c) standard rate of ascent and descent, and;

d) minimum approach speed.

3. CONCLUSION

3.1 In view of the foregoing, for ATSUs to perform effectively and efficiently, it is of the utmost importance that they have the right tools that allow access to all of the aforementioned data in order to avoid errors, wherever possible, in the automatic coordination of flight plan messages.

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