



ASSEMBLY — 40TH SESSION

TECHNICAL COMMISSION

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

FLIGHT PLANS AND NEW ENTRANTS

(Presented by Saudi Arabia)

EXECUTIVE SUMMARY

On 15 November 2012, the new ICAO Flight Plan (FPL) format was implemented globally. The change was required to update the ICAO model flight plan form in order to meet both the needs of modern aircraft with advanced capabilities and the evolving requirements of automated air traffic management (ATM) systems, while taking into account compatibility with existing systems human factors, training, cost and transition aspects.

The current structure and contents of flight plan cannot describe the capabilities and flights of new entrants using advanced technologies. The AN-Conf/13 recognized the need for the definition and development of the unmanned aircraft systems (UAS) traffic management (UTM) system that must be interoperable with existing ATM systems.

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| <i>Strategic Objectives:</i> | This information paper relates to the Safety and Air Navigation Capacity and Efficiency Strategic Objectives. |
| <i>Financial implications:</i> | The activities referred to in this paper will be undertaken subject to the resources available in the 2020-2022 Regular Programme Budget and/or from extra budgetary contributions. |
| <i>References:</i> | Annex 11 — <i>Air Traffic Services</i> Doc 10075, <i>Assembly Resolutions in Force (as of 6 October 2016)</i> Doc 10115, <i>Report of the Thirteenth Air Navigation Conference (AN-Conf/13)</i> Doc 4444, <i>Procedures for Air Navigation Services — Air Traffic Management (PANS-ATM,)</i> |

1. INTRODUCTION

1.1 On 15 November 2012, the new ICAO Flight Plan (FPL) format was implemented globally. The change was required to update the ICAO model flight plan form in order to meet both the needs of modern aircraft with advanced capabilities and the evolving requirements of automated air traffic management (ATM) systems, while taking into account compatibility with existing systems human factors, training, cost and transition aspects.

1.2 The amendment to ICAO PANS-ATM were considered as an important enabler for the use of advanced communications, navigation and surveillance (CNS) capabilities, whereby aircraft can be distinguished on the basis of their specific capabilities, and allow for improved traffic and flow management processes and procedures, which enhanced overall network capacity and efficiency.

1.3 The changes to data structures and syntax of flight planning messages affected a number of ATM systems as well as some operational procedures and required a significant collaborative effort on the part of all stakeholders to implement.

1.4 Considering the complexity of the upgrades to implement globally of the new flight plan, ICAO, together with the International Air Transport Association (IATA) and the Civil Air Navigation Services Organization (CANSO) established a global coordination centre at ICAO Headquarters. The collaborative engagement by ICAO with industry in the implementation of FPL2012 was a significant change in the way the industry responds to and manages the implementation of new or revised Standards and Recommended Practices (SARPs) and amendments to the Procedures for Air Navigation Services (PANS). This approach may serve a best practice for future changes that will come about with the introduction of such concepts as Flight and flow information for a collaborative environment (FF-ICE).

2. CURRENT FLIGHT PLANNING AND NEW ENTRANTS

2.1 The flight plan covers essential and critical information that must be provided to an air traffic services to allow automatic extraction of data items that are used mainly for identification and traffic and flow management. The flight plan contents cover mainly:

- a) aircraft identification (item 7): This consists of the aircraft registration letters or the company designator followed by the flight number which are to be used by air traffic services for radiotelephony communication and coordination;
- b) flight rules and type of flight (item 8): This item indicates both flight rules and type of flight (scheduled or non-scheduled air service, general aviation, military etc.). Flight rules are important due to different regulations, weather and separation minimums for instrument flight rules (IFR) and visual flight rules (VFR) flights.
- c) number and type of aircraft and wake turbulence category (item 9);
- d) equipment (item 10): The COM/NAV/SSR equipment on board and its serviceability must be inserted by adding the appropriate suffixes. The first suffixes will denote the COM/NAV equipment, followed by an oblique stroke, and another suffix to denote the SSR equipment;

- e) departure aerodrome and time (UTC) (item 13): Location indicators are used or if no location indicator is specified, as is the case in water aerodromes or many of the land VFR aerodromes, insert “ZZZZ” and specify the full name of the aerodrome in Item 18 preceded by “DEP”;
- f) cruising speed, altitude/level and route (item 15): This is the most complex item. It contains very important information from the point of view of ATS therefore a careful and correct completion of this field is required;
- g) destination aerodrome, total estimated elapsed time and alternate aerodrome(s) (item 16); and
- h) other information (item 18): This item is for all other additional, important or helpful information (not all are presented here; only those mostly used by general aviation (GA) pilots).

2.2 Currently the flight planning is covering mainly air transport and general aviation and the ATM systems can process the data and information associated with these flights. However, the contents and structure of the data items are not convenient for new entrants’ flights.

2.3 The AN-Conf/13 held in October 2018 recognized the opportunities and challenges related to:

- a) the emergence of a range of aviation activities in very low altitude airspace, typically at 1 000 feet above ground level (AGL) and below, in particular in urban or suburban environments. These activities include the operation of small unmanned aircraft (UA), as well as new developments referred to as “flying taxis”;
- b) the operation of remotely piloted aircraft systems (RPAS) and described ICAO’s activities in the development of the regulatory framework to support the integration of remotely piloted aircraft (RPA) into non-segregated airspace and aerodromes;
- c) two new types of operations: commercial space transport (CST); and the reintroduction of supersonic transport (SST) for civil use; and
- d) high-altitude, long-endurance operations and their impact on ATM system.

2.4 The current structure and contents of flight plan cannot describe the capabilities and flights of new entrants using advanced technologies. The AN-Conf/13 recognized the need for the definition and development of the UAS traffic management (UTM) system that must be interoperable with existing ATM systems.

3. CONCLUSION

3.1 The current flight plan structure and contents is mainly used for air transport and general aviation operations. The main focus on identification of aircraft capabilities and equipage and automatic processing the data and information to improve traffic and flow management.

3.2 The transition to FL2012 demonstrated that the large-scale changes must be supported by appropriate level of awareness and early engagement and ownership by the relevant stakeholders. Therefore, any change to flight planning organization must be supplemented by flexible transition with an effective management of activities at regional and global levels to achieve a harmonized implementation across flight information regions (FIRs).

3.3 With the on-going development of emerging flying activities and new entrants, there is a need for revision of flight planning processes and procedures and flight and flow management considering formulation and implementation of technical and regulatory solutions for UAS and new entrants operations.

3.4 The Assembly is invited to direct ICAO to:

- a) review the current form, processes and procedures for flight plans to accommodate emerging and new entrants' flights allowing the existing ATM systems to evolve and use the capabilities of the new entrants; and
- b) review and propose amendments to all affected ICAO Provisions Standards and Recommended Practices (SARPs) and Procedures for Air Navigation Services (PANS) associated with the new entrants' flight planning and operations.

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