



OACI

Organización de Aviación Civil Internacional  
Oficina para Norteamérica, Centroamérica y Caribe

NOTA DE ESTUDIO

DGAC/CAP/98 — NE/25REV  
27/02/15

**98ª Reunión de Directores Generales de Aeronáutica Civil de Centroamérica y Panamá  
(DGAC/CAP/98)**

Ciudad de México, México, 2 al 4 de marzo de 2015

**Cuestión 4 del  
Orden del Día:**

**4.2 Seguimiento a la implementación de la navegación aérea bajo el Plan Regional NAM/CAR de Implementación de Navegación Aérea Basado en la Performance (RPBANIP) y la Metodología de Mejoras por Bloques del Sistema de Aviación (ASBU)**

**4.2.2 Resultados y Avances del Grupo de Trabajo sobre Implementación de Navegación Aérea para las Regiones NAM/CAR (ANI/WG)**

**AVANCES EN LA SOLUCIÓN/MITIGACIÓN DE LOS PROBLEMAS  
CON PLAN DE VUELO EN CENTROAMÉRICA**

(Presentada por Secretaría)

**RESUMEN EJECUTIVO**

La nota tiene el objetivo de informar los avances y acciones ejecutadas al momento para mitigar los errores de planes de vuelo en la Región e impulsar nuevas acciones que permitan brindar una solución permanente a esta problemática.

<b>Acción:</b>	Las acciones sugeridas se presentan en la sección 3.
<i>Objetivos Estratégicos:</i>	<ul style="list-style-type: none"><li>• Seguridad Operacional</li><li>• Capacidad y eficiencia de la navegación aérea</li><li>• Protección del medio ambiente</li></ul>

**1. Introducción**

1.1 La exitosa implementación del nuevo formulario de plan de vuelo modelo OACI el 15 de noviembre de 2012 fue el resultado del trabajo de equipo, tanto a nivel de los Estados/Proveedores de servicios de navegación aérea (ANSP) como regionalmente, incluyendo un proceso continuo de capacitación, coordinación, pruebas, actualizaciones de sistemas, revisión de procedimientos de contingencia, planificación y publicaciones.

1.2 A pesar de que el nuevo formulario de plan de vuelo modelo OACI fue implementado por completo, la presentación del Plan de Vuelo (FPL) continúa generando varios problemas como información faltante, datos erróneos y duplicación de planes de vuelo, que afectan no sólo a los sistemas de Control de tránsito aéreo (ATC) manuales, sino también a los automatizados. Los Estados, ANSP y los antiguos grupos de trabajo del Caribe Central (C/CAR), Caribe Oriental (E/ CAR) y Centroamérica han estado informando estos problemas.

1.3 La Tercera Reunión del Grupo de Trabajo de Norteamérica, Centroamérica y Caribe (NACC/WG/03) examinó las pérdidas, errores y duplicación de planes de vuelo entre las unidades adyacentes que impacta la seguridad operacional y eficiencia de las operaciones, y consideró que los Estados, Territorios y Organizaciones Internacionales deberían analizar este problema y resolverlo con urgencia. Así formularon la CONCLUSIÓN 3 / 3 - *ACCIONES PARA EVITAR ERRORES, LA FALTA Y LA DUPLICACIÓN DE PLANES DE VUELO*.

1.4 Con el fin de identificar estos problemas, sus causas y proponer un plan de acción para mitigarlos, se creó un Grupo Ad Hoc de monitoreo del FPL (FPL/MON), perteneciente al Grupo de Trabajo de Comunicaciones de datos entre instalaciones de servicios de tránsito aéreo (AIDC), establecido en la Primera Reunión del Grupo de Trabajo sobre Implementación de Navegación Aérea para las Regiones NAM/CAR (ANI/WG/1).

1.5 El FPL/MON coordinó entre todos los Estados/Regiones de Información de Vuelo (FIR)/ANSP una primera fase de recolecciones de datos FPL y tras el análisis de los mismos, recomendó varias acciones para mitigar/resolver los errores de FPL, cuya difusión se dio a través de la Carta OACI a los Estados *Ref. EMX1186 (Apéndice A)* de fecha 19 de diciembre de 2014, instando a las Administraciones de las Región NAM/CAR a implementar inmediatamente las acciones sugeridas, informando de su aplicación antes del 16 de enero de 2014.

## 2. Acciones para la Mitigación y Solución a los Errores de FPL

2.1 En respuesta a la aplicación de las acciones sugeridas, por parte de Centroamérica, hasta el momento de redactar esta nota se tuvo conocimiento que Costa Rica y la Corporación Centroamericana de Servicios de Navegación Aérea (COCESNA) aportaron los datos para la Reunión del Grupo Ad hoc de FPL (FPL/AD/MON), que se indican a continuación:

### Costa Rica

- Se identificaron y analizaron las causas principales de los problemas con los FPL.
- Se identificaron las capacidades faltantes del sistema Procesamiento de datos en vuelo (FDP) de Indra, que causan los errores.
- Se están corrigiendo los nombres de Salida normalizada por instrumentos (SID) y Llegada normalizada por instrumentos (STAR) que no cumplen con los estándares de FPL establecidos en el Doc 4444 – *Gestión del Tránsito Aéreo*.
- Se impartió entrenamiento al personal de Servicio de Información Aeronáutica (AIS) para que corrijan los problemas de los FPL, en el Sistema FDP.
- Se está actualizando la base de datos del Sistema Indra, con puntos que no identificaba en Rutas ATS, SID y STAR.
- Se estableció un procedimiento, y se publicó como Circular de información aeronáutica (AIC), para aceptar los FPL de las líneas aéreas que operan regularmente desde y hacia Costa Rica.

### COCESNA

- De acuerdo a los análisis de los datos recolectados en CENAMER se determinó que la mayor cantidad de errores se debe a duplicidad de planes de vuelo, así como errores en el formato de plan de vuelo.
- Los planes de vuelos con errores causan una carga de trabajo innecesaria para los controladores y asignación de recursos, tanto personal como equipos dedicados a la corrección de mensajes de planes de vuelo en CENAMER y este fenómeno se

repite en los Controles de aproximación (APP) de los Estados miembros de COCESNA.

- Otro factor incidente es la falta de plan de vuelo, con aeronaves volando sin que los centros de control encargados de controlarlas tengan información del vuelo con el formato adecuado.
- COCESNA ha comenzado a implementar las acciones recomendadas por el grupo Ad hoc de monitoreo del FPL (FPL/MON) parte del grupo OACI para el AIDC implementando las siguientes acciones en la FIR CA:
  1. Estandarización de las bases de datos de los Centros de Control ATC de la FIR CA. Actualmente COCESNA está trabajando de forma conjunta con los Estados de El Salvador, Honduras y Nicaragua en esta estandarización y posteriormente procederá a realizar este trabajo conjunto con los Estados de Belice, Costa Rica y Guatemala,. Esta estandarización permitirá la reducción de los errores en la gestión de planes de vuelo debido a los tratamientos que da el *Flight Data Processor* (FDP).
  2. Los Estados de El Salvador, Honduras y Nicaragua están trabajando en la implementación de los procedimientos SID/STAR de acuerdo a la normativa vigente en el Doc 4444, con el compromiso de realizar la publicación de los mismos en una fecha de Reglamentación y control de información aeronáutica (AIRAC).
  3. Se ha realizado una inducción al personal Servicio de información aeronáutica/Oficina de notificación de los servicios de tránsito aéreo (AIS/ARO) del Estado de Honduras con el objetivo de fortalecer su capacidad para el envío de mensajería aeronáutica local.
  4. COCESNA está en proceso de la implementación de un sistema Sistema de tratamiento de mensajes de los servicios de tránsito aéreo (AMHS) Extendido, con el objetivo del fortalecimiento de la mensajería aeronáutica en los Estados de Centro América. Este nuevo sistema se integraran las bases de datos de los sistema ATC y tendrá los procesos de validación requeridos con lo cual se disminuirán ostensiblemente los errores en la mensajería. Dentro del Proyecto está planificada la capacitación de los usuarios AIS/ARO incluyendo los ítems necesarios para lograr este fin.
- COCESNA participara en la segunda ronda de recolección de datos FPL e implementará en el proceso, las acciones necesarias para reducir los errores en planes de vuelo.

2.2 Como resultado de la Reunión del Grupo Ad hoc de FPL (FPL/AD/MON), se acordó la realización de una segunda ronda de recolección de datos FPL (Marzo-Abril 2015) con un nuevo formato de recolección, una guía de mejores prácticas y una lista de acciones sugeridas optimizada; requiriendo para una plena y efectiva recolección, establecer un punto de contacto en cada Estado, para apoyar la coordinación de las acciones de solución/mitigación de errores FPL. Con la participación de todos los Estados/ANSP y la coordinación de la información por cada FIR. En el **Apéndice B (B1 y B2)** (disponible únicamente en inglés) se presentan las acciones sugeridas y guías brindadas por el Grupo de trabajo Ad hoc de FPL (FPL/AD/MON) para el monitoreo de plan de vuelo.

**3. Acciones Sugeridas**

3.1 La Reunión es invitada a tener en cuenta lo siguiente:

- a) Que los Estados Centroamericanos impulsen las recomendaciones sugeridas por OACI para minimizar los errores en los planes de vuelo.
- b) Costa Rica y COCESNA ya han nombrado los puntos de contacto y participantes en los estudios y análisis de la información, pero es necesario la participación de todos los Estados Centroamericanos, por lo que se solicita que Belice, El Salvador, Guatemala, Honduras y Nicaragua nombren su representante para trabajar conjuntamente con el grupo Ad Hoc de monitoreo del FPL (FPL/MON),
- c) Considerar la aplicación de las acciones sugeridas lo antes posible para mitigar/solucionar los errores FPL en sus Administraciones.



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When replying please quote:

Ref.: NT- NT-N1-2.11 — **EMX1186**

19 December 2014

To: NAM/CAR States, Territories and IATA

Subject: **Missing/duplicated/erroneous Filed flight plan /Flight plan (FPL) analysis and recommended actions to mitigate errors**

Action

Required: **Immediately implement the suggested actions and inform by 16 January 2015**

Sir/Madam:

I make reference to the follow-up on the works conducted by the FPL Ad hoc Group, State Letter EMX0533 dated 2 July 2014; please find enclosed the FPL data analysis recollected from 21 July to 22 August 2014.

Based on the above mentioned analysis, the ANI/WG FPL Ad hoc Group has included a list of suggested actions to mitigate these FPLs problems. In this regard, we urged your Administration to immediately implement these suggested actions, informing of this implementation by **16 January 2014**.

If you require any further information, please contact Mr. Fernando Casso, AIDC Task Force Rapporteur (fernando.casso@idac.gov.do); Mr. Julio Siu, ICAO NACC Regional Officer, Communications, Navigation and Surveillance (jsiu@icao.int); or Ms. Lizette Morales, Assistant, (lmorales@icao.int).

Accept, Sir/Madam, the assurances of my highest consideration.

for  
Jorge Fernández  
Acting Regional Director  
North American, Central American and  
Caribbean (NACC) Regional Office

**Enclosure:**

*As indicated*

N:\N - ICAO Regions\N 1- 2.11 - New Flight Plan Format (NFPL)\Correspondence\EMX1186CNS-States-FPLactionsimplementation.docx

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## FPL DATA ANALYSIS

**Data Collected:** 21 July: 00:00 UTC - 22 August: 00:00 UTC

**Sources:** Curacao FIR, Mexico FIR, Santo Domingo FIR, San Juan and Miami FIRs, Port-au-Prince FIR and PIARCO FIR

**Missing:** Central American FIR, Kingston FIR and La Habana FIR

### Data Analysis

#### 1. *Considerations*

1.1 The data collection was conducted as agreed in the FPL Mon Group Action Plan; with an extended analysis period for the end of November.

1.2 Propose a face to face meeting for the FPL Monitoring group to discuss the first phase of mitigation and also plan the next phase (February 2015).

#### 2. *Conclusions*

2.1 For the reject of FPL, a more detailed explanation should be provided, deleting the rejected FPLs that have not been processed through the appropriate ATM System validation templates

2.2 The success in the mitigation of erroneous/duplicated FPLs can only be achieved by the collective participation in the FPL Monitoring Group. In this regard those missing FIRs (those that did not sent data), should be addressed to actively attend the next data recollection process and data analysis, requesting this in a State Letter.

2.3 RPL are not validated or updated timely and frequently by the ANSPs and users, causing more confusion (duplicated FPLs/out-of date FPLs) when the RPLs are activated.

2.4 Missing FPLs are due mainly by erroneous addressing of FPLs.

2.5 Reject FPLs are due mainly due to erroneous or inconsistent ATS Route information, field 10 and 18.

2.6 Duplicated FPLs are received three or more times, due to lack of FPL filing rules.

2.7 Regarding the alternate aerodrome issue, five States responded (Costa Rica, Cuba, Dominican Republic, Haiti, Mexico and the United States). Of these, only two do not require the alternate aerodrome to be filed, and in only one the FDP system requires this field to be filled.

2.8 The error message "Inconsistent ATS Route, SID or STAR Designator" in the error collection form should be divided into two errors: "Inconsistent ATS Route Designator" and "Inconsistent SID or STAR designator"

**3. *Recommended Actions (Action Plan) [must include who, what and for when]***

3.1 ANSPs agree to avoid the use of RPLs.

3.2 ANSPs to report any update to FPL2012 converters removal and full FPL2012 processing capability.

3.3 Consider the implementation of electronic applications for the pre-departure clearance (PDC) as necessary.

3.4 All ANSPs to verify the level of validation of their systems, based on the data analyzed, and define the necessary procedures to ensure that those fields that are not validated automatically by your systems are properly checked. **(31 January 2015)**.

3.5 All States should, to the extent possible, assign personnel to consistently check the information on flight plan issues (missing/duplicate/erroneous), and in the case of missing flight plans, to investigate the cause with originator, correct action and record the agreed solution.

***Missing FPLs***

3.6 ANSPs to verify the correctness of the address(es) that is/are published in their AIP for FPL filing (ENR. 1.11) processing, **by 31 January 2015**. Also ensure the publication in the AIP the corresponding procedures in accordance with ICAO SARPs for the coordination, validity and update of changes in flight plans.

3.7 Update domestic provisions on flight plan message transmission in accordance with ICAO Doc 4444 and the NAM Interface Control Document (ICD) for data communications between ATS units **(All ANSPs by 31 January 2015)**

3.8 Airlines/dispatchers to provide a contact method to be used in case there is a need to report a missing flight plan. FAA will provide a document with the airlines' contacts to be revised/considered **(24 February 2015)**

3.9 All ANSPs to consult Error! Reference source not found. to identify the percentage of missing flight plans identify the originator and apply the procedure described in 05

***Duplicated FPL***

3.10 ANSPs to update Letters of Agreement (LOAs) between adjacent ATS units for flights that operate from one FIR to an adjacent FIR, where deemed necessary **(31 January 2015)**.

3.11 FAA, ICAO and IATA will draft some considerations on a practical guide to best practices for the region, such that there is a uniform method of work for flight plan presentation. This draft is to be discussed later on. **(8 Dec 2014)**

3.12 All ANSPs to consult Error! Reference source not found. to identify the percentage of duplicate flight plans, identify the originator, agree on the corrective action and record the solution.



### ***Rejected/Incorrect FPLs***

3.13 All ANSPs to consult **GRAPH 2: ERROR MESSAGES BY FIR** to identify the most frequent errors for your FIR to take corrective action. For example:

- Dominican Republic has very frequent ATS Route, SID or STAR designator errors, so the corrective action should be on the lines of reviewing the designators used in the erroneous flight plans, and correcting these designators where they may be registered (databases, templates, etc).
- Several States (Anguilla, Martinique, Saint Lucia, among others) have a high percentage of ICAO Doc. 4444 issues. Suggested action is to identify the particular issue of compliance, review and correct where this data may be registered (e. g. flight plan templates), and also program training of staff where deemed necessary.
- Other States (Curaçao, Haiti) have frequent Inconsistent Item 18 errors. Suggested action is to identify the originator, if external contact and follow up on corrective action, and if internal, review personnel training requirements.

3.14 In all cases, States should use the identified flight plans to analyze the possible root causes of the error, take corrective action, register the solution and communicate any changes of procedure or published information that may result. All corrective measures will be viewed and discussed at the FPL Monitoring Group meeting in February.

3.15 Ensure harmonization of the information between FDPs and ARO FPL system databases (designators, aircraft types and performance data). Each ANSP to review their situation and inform of results (**31 January 2015**).

3.16 Ensure that the originator of a rejected message gets the feedback so the error can be corrected (see item 05 regarding dedicated personnel for correction and feedback of flight plan issues).

### **4. *State/FIR relevant actions taken for mitigating/resolving FPL problems***

4.1 In the PIARCO FIR, a Centralized Flight Planning System is being implemented by the end of first quarter of 2015 as part of the solution for the FPL duplication and errors.

4.2 Haiti has implemented a feedback process with the users to reduce the missing FPLs.

4.3 United States had a well-established coordination communication mechanism with airlines to discuss and agree on actions to resolve FPLs errors.

### **5. *Next actions***

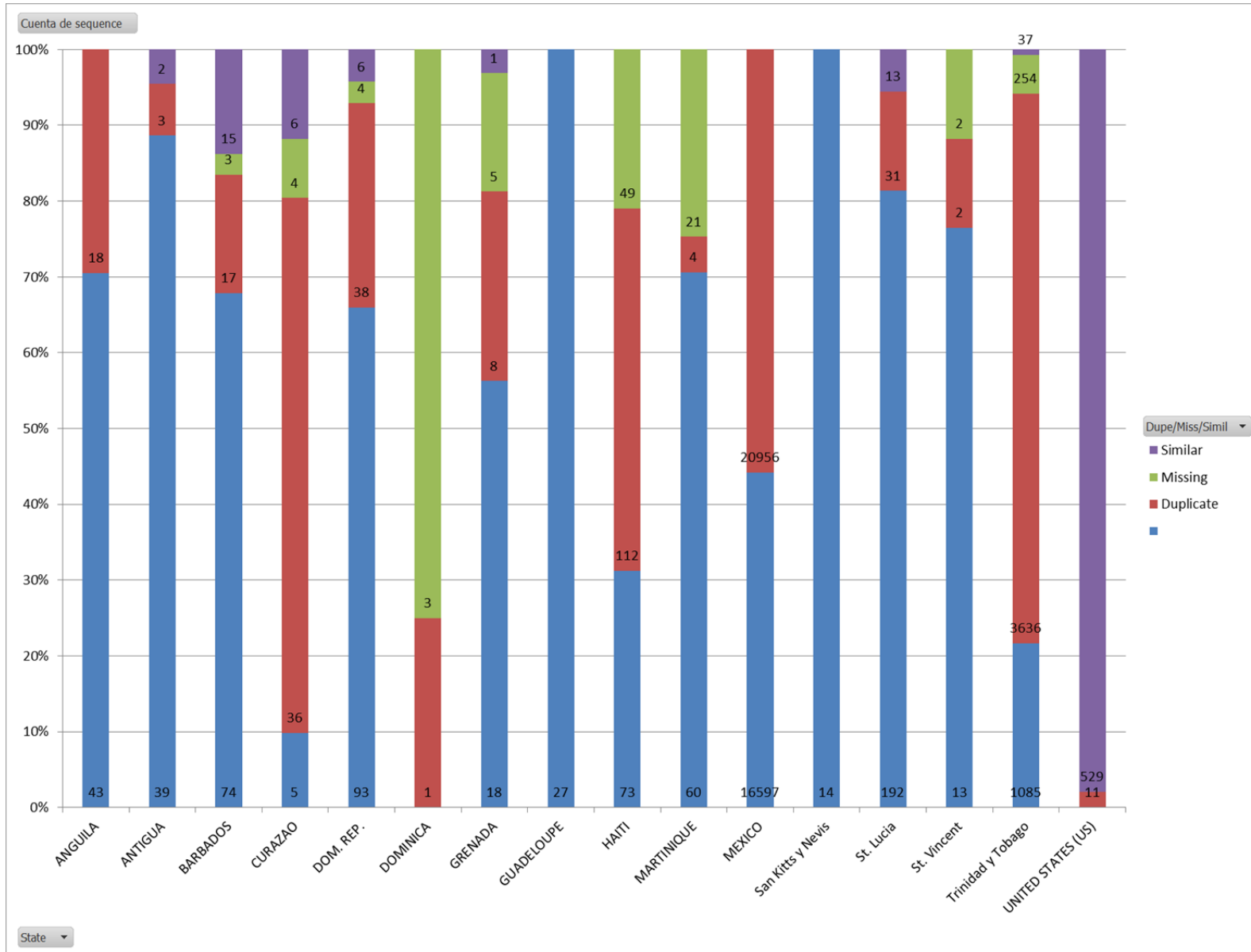
5.1 Improvement to Data recollection format: Nov.-Dec. 2014

5.2 Implementation of recommended actions: Nov. 2014-Feb. 2015

5.3 2nd Data Recollection: March 2015

- 5.4 Analysis: April-May 2015
- 5.5 Results presentation: ANI/WG/02 Meeting (June 2015)

GRAPH 1: ERROR TYPES BY FIR





**APÉNDICE B1**

***1. Recommended Actions (Action Plan) [ must include who, what and for when]***

- 1.1 ANSPs to report any update to FPL2012 converters removal and full FPL2012 processing capability.
- 1.2 Consider the implementation of electronic applications for the pre-departure clearance (PDC) as necessary.
- 1.3 All ANSPs to verify the level of validation of their systems, based on the data analyzed, and define the necessary procedures to ensure that those fields that are not validated automatically by your systems are properly checked.
- 1.4 All ANSPs should, to the extent possible, investigate the cause of error with originator, take any corrective action and record the agreed solution.
- 1.5 All ANSPs should provide a point of contact to receive and investigate any report on FPL errors within their FIR. (action item) 13 March –agenda item on planning 2nd phase.

**Missing FPLs**

- 1.6 ANSPs to verify the correctness of the address(es) that is/are published in their AIP for FPL filing (ENR. 1.11) processing. Also ensure the publication in the AIP the corresponding procedures in accordance with ICAO SARPs for the coordination, validity and update of changes in flight plans. Changes in addresses or procedures should be notified via NOTAM or other means to all relevant destinations, as also to contacts for the operators, including IATA.
- 1.7 Update domestic provisions on flight plan message transmission in accordance with ICAO Doc 4444 and the NAM Interface Control Document (ICD) for data communications between ATS units

**Duplicated FPL**

- 1.8 ANSPs to update letters of agreement (LOAs) between adjacent ATS units for flights that operate from one FIR to an adjacent FIR, where deemed necessary
- 1.9 ANSPs and operators should refer to the best practice guidance material, to avoid conditions that are favourable to the occurrence of multiple flight plans.

**Rejected/Incorrect FPLs**

- 1.10 Ensure harmonization of the information between FDPs and ARO FPL system databases (designators, aircraft types, performance data). Each ANSP to review their situation and inform of results.
- 1.11 Ensure that the originator of a rejected message gets the feedback so the error can be corrected. Refer to the contact list.

***2. Next actions***

- 2.1 2th Data Recollection: March 2015
- 2.2 Analysis: May 2015
- 2.3 Results presentation: ANIWG/02 Meeting (June 2015)

**APÉNDICE B2****RECOMMENDED GUIDANCE FOR FPL AND RELATED ATS MESSAGES**

ACI	Airports Council International
ADS	Automatic Dependent Surveillance
ADS-B	Automatic Dependent Surveillance-Broadcast
ADS-C	Automatic Dependent Surveillance-Contract
AFTN	Aeronautical Fixed Telecommunication Network
AIDC	ATS Interfacility Data Communication
AIP	Aeronautical Information Publication
ANSP	Air Navigation Service Provider
AMHS	Automatic Message Handling System
APAC	Asia Pacific
APANPIRG	Asia/Pacific Air Navigation Planning and Implementation Regional Group
ASBU	Aviation System Block Upgrade
ASIOACG	Arabian Sea Indian Ocean ATS Coordination Group
ATFM	Air Traffic Flow Management
ATM	Air Traffic Management
ATS	Air Traffic Service
AUSEP	Australian Area Navigation Operations
CHG	Modification Message
CNL	Flight Plan Cancellation Message
CPDLC	Controller Pilot Data Link Communication
CPL	Current Flight Plan
DARP	Dynamic Airborne Reroute Procedure
DLA	Delay Message
EOBT	Estimated Off Block Time
FAA	United States Federal Aviation Administration
FIR	Flight Information Region
FIRBX	Crossing FIR Boundaries
FPL	Filed Flight Plan
GANP	Global Air Navigation Plan
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IFPL	Initial Flight Plan specification (EUROCONTROL)
ISPACG	Informal South Pacific ATS Coordinating Group
LOA	Letter of Agreement
RPL	Repetitive Flight Plan
RQP	Request Flight Plan Message
SID	Standard Instrument Departure
SMS	Safety Management System
STAR	Standard Terminal Arrival
UPR	User Preferred Route

## 1. EFFECTIVE FPL FILING

The seamless and efficient flow of air traffic across FIR boundaries is achieved, in part, by ensuring that flight plans and associated messages are transmitted, processed, and transferred between FIRs in a seamless, efficient, and consistent manner.

The methods and procedures used to file and/or originate flight plans have a residual effect on the quality of the air traffic services rendered. The introduction of duplicate or multiple flight plans, or flight plans containing erroneous information, has a direct impact on the safety and efficiency of flights within the global airspace system.

Identified sources of flight planning errors include:

- A lack of quality and consistency of filed flight plans
- The use of Repetitive Flight Plans (RPL)
- Conversion of non-compliant flight plans to the ICAO Flight Plan 2012 format
- Manual entry and manual processing of FPL and associated messages

## 2. *Direct Submission of Flight Plan Messages*

- 2.1. To reduce the risk of manual input errors, ANSPs according to Doc. 4444 under 11.2.1.1.1, may implement local agreements that delegate the responsibility to operators for direct transmission of movement messages via the Aeronautical Fixed Telecommunication Network (AFTN) or the Aeronautical Message Handling System (AMHS). Movement messages include FPL, Modification (CHG), Delay (DLA) and Flight Plan Cancellation (CNL).
- 2.2. If the ANSP had delegated the responsibility to the airlines, for originating the flight plan messages, then according to the Doc. 4444 appendix 2, page A2-3, part 2.1, the airlines will have the responsibility to correctly transmit the initial FPL as well as the related messages, to all the involved ATS units, according to the Doc. 4444, 11.2.1.1.3.
- 2.3. Prior to delegating responsibility for direct submission of flight plan messages, ANSPs should consider conducting a trial with new operators, using a central AFTN/AMHS address to receive the messages for initial manual validation.
- 2.4. ANSPs should also specify in local agreements or the AIP, any required time limits for completing the submission of movement messages (DLA and CHG) for individual flights, for example, by a time parameter prior to the Estimated Off-Block Time (EOBT).
- 2.5. It is preferential to use a CNL and refile the FPL as an alternative to sending multiple CHG messages to the same FPL or several changes within the same message

### 3. Similar and Multiple Flight plans errors

#### 3.1. Similar

Improper filling procedures by resending the changed flight by the originator, instead of using the CHG or DLA, causes similar flight plans for the same flight. These causes confusion among the different ATS units that will have to select 1 flight plan (not necessarily the latest valid one consider by the airline), to update it with the surveillance information and/or on the flight transference processes.

#### 3.2. Multiple

Multiple FPLs is a source of errors when there are 2 different FPL originators (either the airlines or the ANSP).

In order to avoid that multiple FPL are occurring on the AFTN/AMHS, the airlines will only originate and transmit the FPL, if the ANSP has delegated this responsibility according to the chapter 2 of this guide.

### 4. DELAY (DLA) MESSAGES

- 4.1. The originator should only consider sending a DLA message, if the flight is expected to be delayed by more than 30 minutes after the EOBT sent on the previous FPL. (refer to Doc 4444, 11.4.2.2.3)

### 5. MODIFICATION (CHG) MESSAGES

- 5.1. The originator should take into consideration the time limit specified by the departing ANSP (as mentioned on the paragraph 2.3 of this guide) before sending the CHG message according to Doc.4444.
- 5.2. If the originator is an airline and they're required to send a CHG with less than the time specified on the 2.3 of this guide, then they should first contact the TWR or the designated ATS unit that will coordinate the changes proposed with the involved TWR.
- 5.3. Changes concerning aircraft type and wake turbulence category, speed and/or cruising level shall be notified for each individual flight as early as possible and not later than 30 minutes before departure to:
  - a) the ATS reporting office from the departing aerodrome and
  - b) only if the FPL origination responsibility has been delegated as mentioned on the part 2.1, FPL the originator should also send the CHG message, to the other ATS units that were considered on the initial FPL.
- 5.4. If the FPL originator is willing to modify the ATS route or other en-route flight level, then the CHG message shall contain all the route portion and different FLs.
- 5.5. CHG messages should include the entire field 15 including modified information for the FPL it changes to avoid improper modification.



5.6. If the CHG message have a new ATS route with FIRs not considered on the original FPL, then the FPL should be cancelled with a CNL message and then, submit a new FPL.

## **6. *AFTN Addresses***

To reduce FPL filing discrepancies that result from erroneous addressing of aeronautical messages, ANSPs should list their AFTN addressing requirements in their Aeronautical Information Publication (AIP). Guidance related to the addressing of AFTN messages is also available in ICAO Annex 10, Volume II, Chapter 4, ICAO Docs 7910 and 8585, and ICAO regional AFTN routing directories.

## **7. *Central Flight Plan Processing Unit***

ANSPs with multiple ATS centres may consider implementing a central flight planning unit for the initial processing and distribution of FPLs. An example of central flight planning is provided by the EUROCONTROL Initial Flight Plan (IFPL) specification.

Studies undertaken by EUROCONTROL and the European Commission determined that inconsistencies in the content of flight data held by different parties for the processing of the same flight had a negative impact on the efficiency of operations within the European air traffic management system.

According to the EUROCONTROL website (see the References section), the IFPL specification defines the procedures and requirements for the provision, processing and distribution of flight plans in the pre-flight phase. The improvement of the consistency of flight-planning data has contributed to more seamless operations within the environment, enhanced safety, and has also allowed for new operational concepts to be defined for the area of air traffic flow management (AFTM).

## **8. *Error Mitigation Procedures***

Appropriate procedures are necessary for the resolution of issues resulting from messages that are not received. Part of that resolution should be to ensure that duplicate or erroneous messages are not introduced into the system. For example, if a movement message is received for an unknown FPL, the receiving unit should use the Request Flight Plan (RQP) message to request the FPL from the sending unit rather than creating its own FPL.

Where ANSPs provide FPL filing capability via the internet, a validation process should be implemented to prevent the introduction of inaccurate data from movement messages. NAV CANADA provides an example of the use of internet-based flight-plan-filing with use of their Collaborative Flight Planning System (CFPS). The application allows direct flight plan filing by pilots and/or flight-plan-filing agencies, is fully Flight Plan 2012 compliant, and completes front-end error checking that requires FPL filers to correct discrepancies before the flight plan is accepted for processing.

## **9. *Review of State Regulations***

ANSPs are encouraged to partner with the State regulators to review and align existing regulations with emerging technologies. In cases where State regulations require hand-delivered FPLs in conjunction with electronic FPLs, the amendment of such regulations may reduce human-induced discrepancies in the filing process.

If, following a review, State regulations still require operators to hand-deliver filed flight plans, ANSPs should initiate appropriate quality-control measures to reduce the possibility of disparity between electronic and hand-delivered FPLs.

### ***10. Repetitive Flight Plans (RPL)***

The use of RPL is known to be a major contributor to the initiation of duplicate flight plans and can lead to the provision of less-than-optimum services and the erroneous application of separation by ANSPs.

The flight plan information contained in the RPL may differ from the actual details intended for a flight by the operator on a particular day, for example, the type of aircraft to be flown. These types of changes can impact on the services provided, and on the integrity of the application of separation or wake turbulence standards.

Consequently, direct filing of flight plan messages via the AFTN/AMHS should be the preferred method of flight plan submission by operators.

### ***11. Destination Alternate Aerodromes***

Some automated ground systems will reject flight plans that do not contain a destination alternate aerodrome, even if an alternate is not required to be filed for the specific destination. Consequently, some operators file alternate aerodromes when an alternate is not required in order to prevent the flight plan from being rejected, resulting in the economic burden of having to carry additional and unnecessary fuel.

*ICAO Annex 6, Operation of Aircraft, Part 2* provides exceptions to the requirements for filing a destination alternate aerodrome. ANSPs should ensure that the alternate field is not a mandatory field for the automated processing of flight plans, especially for flights transiting to a destination in another FIR.

### ***12. Naming of Arrival/Departure Procedures***

ANSPs should ensure that the names for any published Standard Instrument Departure (SID) or Standard Terminal Arrival (STAR) procedures permitted to be filed in flight plans comply with the naming requirements of *ICAO Annex 11, Air Traffic Services, Appendix 3*, in order to reduce the number of flight plan rejections.

ANSPs should ensure that ATM systems are able to correctly process filed flight plans that include SIDs and STARS as part of the route.

### ***13. ICAO FPL 2012 Format Conversions***

During the transition to the ICAO FPL 2012 format, converters were used by some ANSPs to convert existing flight plans to the new format.

The following issues are associated with the continued use of converters:

- The benefits of the Amendment 1 changes are not fully realised, particularly reduced separation standards relating to Performance-Based Navigation (PBN), and the provision of ADS-B services (including separation).
- The interoperability of ATS Interfacility Data Communications (AIDC) messaging would remain restricted where converter solutions were in use.

Other known issues with the ICAO FPL 2012 include:

- The indicator RVR/ in Item 18 of the FPL. This indicator should be either accepted without processing, or deleted without rejection by ATM systems.
- Rejections of FPL occur if unexpected RMK/ information is included in Item 18.

In order to reduce erroneous messages from being originated, and to obtain the maximum benefit from the new flight plan format, ANSPs should achieve full compliance with the provisions of ICAO FPL 2012 for automation and supporting systems.

#### ***14. Operator Feedback***

ANSPs should consider establishing a reporting mechanism to provide regular feedback to operators on the number and causes of flight plan rejections and errors.

Additionally, ANSPs should consider holding periodic User/Operator forums to discuss recurring discrepancies.

#### ***15. References***

ICAO Annex 6, Operation of Aircraft, Part 2 (para 2.2.2.3.5)

ICAO Annex 10, Aeronautical Telecommunications, Volume II, Chapter 4

ICAO Annex 11, Air Traffic Services, Chapter 2, Appendix 3, and Appendix 4

ICAO Location Indicators (Doc 7910)

ICAO Designators for Aircraft Operating Agencies (Doc 8585)

ICAO AFTN Routing Directory, Asia and Pacific Regions, 27<sup>th</sup> Edition, August 2007

ICAO PANS ATM, (Doc 4444) (para 11.2.1.1.1)

EUROCONTROL IFPL Specification:

- <https://www.eurocontrol.int/articles/initial-flight-plan-ifpl-specification>
- <http://www.acac.org.ma/ar/Workshop%20Presentation/IFPS%20in%20Flight%20PlanningV4.pdf>