

International Civil Aviation Organization
Eastern and Southern African Office

**Eleventh Meeting of the APIRG Air Traffic Services, Aeronautical
Information Services and Search and Rescue Sub-Group
(ATS/AIS/SAR/SG/11)
[Nairobi, Kenya 26 – 30 April 2010]**

Agenda Item 10: Transition to New ICAO Flight Plan Content

Changes to the ICAO Flight Plan – 2012

(Presented by IATA)

SUMMARY

The prescribed FPL format has resided as an Appendix to the PANS ATM (Doc 4444) for well over 20 years now. Subject to State acceptance, it has generated a fragmented implementation by States on a global basis and customized individual local host system configurations. The changes envisaged under the new ICAO FPL format should theoretically bring a marked improvement in service and benefits, subject to a universal application by all ATM stakeholders. As airlines plan towards meeting the applicability date of 15 November 2012, they are concerned that the problems encountered under the current formatting of the FPL provisions will persist. As more complexity in data and automation is added to the current form, universal acceptance and standardized implementation is paramount to ensure success. A uniform obligation and application by all ATM stakeholders is the key to flight safety & efficiency.

1. INTRODUCTION

- 1.1 On 25 June 2008 ICAO issued State Letter AN13/2.1-08/50 amending the 15th edition of the PANS-ATM, Doc 4444. The timing of this State Letter allowed over 4 years of lead-time to all stakeholders in preparation. Although the format will remain relatively consistent with that being used today, numerous changes will be required in the abbreviations, sequencing and various Field descriptors used in the ICAO Flight Plan form.
- 1.2 As a consequence of these modifications, substantial system and work practice changes will be required by Airlines and ANSP's alike. Therefore, IATA considers these changes as a 'significant difference' to ICAO PANS-ATM – Doc.4444.

- 1.3 Airline systems will need to conform to the new data fields, sequence and alphanumeric coding. Likewise, adaptation within the ATS Providers' flight data processing systems will need to ensure that the new flight plans filed are accepted without any cause for reject or denial of service. Although the effective date for the changes in the Filed Flight Plan (FPL) is November 15, 2012, airlines and States can transition to the new format at any time.

2. Discussion

- 2.1 The main rationale for the new FPL format is to allow users to benefit from modern aircraft capabilities, such as PBN. Such changes are fully embraced by the airlines and without exception likely to be ready for the 2012 deadline.
- 2.2 There are however many complexities that emerge in the changeover process and in the timeframes leading up to the November 2012 cutover. These complexities are generally manifested at the implementation level at the time when airlines file flight plans. Processing of these flight plans are done by ANSP's on a regional and global basis, determined by route of flight.
- 2.3 For Airlines as users, two principal areas of concern emerge, mainly at the implementation phase.
 - 2.3.1 Supporting dual systems 'old' or 'new' before or after 2012.

A significant portion of the problem is addressed by limiting the exposure to two different systems – the 'old' and the 'new'. From an internal software logistics perspective, for an airline this avoids the complexities involved in updating and modifying flight planning systems by means of a direct cut-over; somewhat as seen with the implementation of RVSM.

From an external procedural perspective and given the variable transition period leading up to the November 15, 2012 deadline, users will also face the dilemma of whether to maintain the functionality of the 'old' ¹system up until the cut-off date. This decision will be dictated by the transition program adopted by the major ANSP that they usually interface with. For example, a domestic airline in Europe might find it beneficial to changeover prior to the Nov.2012 cutover in aligning to the dates of the CFMU transition. Flying back from outside the CFMU area might however pose a problem, where the NEW features might not be available in the non-CFMU ANSP's.

Therefore, supporting and maintaining two FPL systems for an extended period, as well as planning for a flight that crosses successive FIR's that fall in different stages of implementation is clearly impractical from both a service and logistical point of view.

¹ For clarity and without reference to the current dateline, we have deliberately chosen to depict the 'PRESENT' format as 'OLD'.

2.3.2 Global applicability of common standards

The airline flight planning/dispatch services today operates to a high degree of automation. Likewise, the data flow in the flight plan filing process within the ANSP is also reliant on a high degree of data transfer capability between ATS units. Without significant increases in workload it would be inconceivable to anticipate any manual modifications. Any 'weak link' in the data chain results in lost or corrupted flight information. In view of the enhanced services that these new data elements should provide, they can only be justified by airlines as a one-time effort.

Airline Implementation:

- 2.3.3 Changes to airline flight planning systems will entail major modifications to the automation, databases and formatting. A large part of the reconstructed Field descriptors and sequence of entries will result in major software changes and/or system replacement, all with consequent costs. At this point, it still remains unknown if and to what magnitude of costs these changes would entail. Further, it is quite conceivable that the additional cost outlay could be an option that an airline might choose not to exercise. In which case, the airline would need to carefully evaluate the costs of the upgrade vis-à-vis the potential benefits if and where they can be gained. This could well be the case where a majority of airlines' operations cover a regional or State basis covering a single ANSP. The readiness of the ANSP will therefore be the key determinant to justify if an airline should (or not) changeover to the 'NEW' system.
- 2.3.4 The functional nature of airline Flight Planning operations whereby FPL's are filed from a remote and centralized location precludes awareness of local requirements, peculiarities, host system limitations etc. This is particularly the case with medium to large airlines operating an international network. Filing of the FPL is done remotely, by electronic means. Maintaining and using a standardized system that would apply on a global basis is therefore crucial to justify the decision to change over to the 'NEW' system.

3. **Implications on Users**

3.1 The implications on Users will be four-fold:

3.1.1 Adaptability to current airline flight planning software and work practices.

- a) **Delays:** In terms of the daily operation, the conformity of a FPL with the ANS system is usually known while calling for start-up. A reject of a FPL becoming known at this late stage can only result in a flight delay and a situation that no airline can justify, much less afford.
- b) **Costs:** Most airline flight planning systems are vendor-provided solutions. Hence, it will not be a viable option for airlines to sustain both systems simultaneously either during or after the transition.

- c) **Automation:** Sequencing and formatting the FPL format to allow a partial dissemination of ‘some OLD’ and ‘some NEW’ during the transition will be impractical for a dispatcher in terms of workload and manual interventions.
- d) The challenge of accurately **tracking Transition dates** - as States randomly migrate from ‘OLD’ to ‘NEW’, as well as
- e) **Tracking States** that have not or chosen not to adopt the PANS ATM changes.

3.2 Possible implications on local and en-route host Air Traffic Information Systems.

- a) The possibility for an airline operating across multiple FIR’s – primarily through through a mix of ‘OLD’ FIR’s **after** the Transition period. Such a situation requires that these ANSP’s convert the ‘NEW’ to the ‘OLD’ for their own use. While transferring the flight to the upline ANSP, they are then required to convert the ‘OLD’ to the ‘NEW’.
- b) Specific residual ANSP peculiarities or host limitations that remain post-2012 (e.g. restricted number of characters in Item 10, required sequences in field 18, etc.) The logistics of host software upgrades and costs have yet to be established.
- c) Testing and compatibility for inter-center data exchange. with adjoining Centers. A higher level of automation usually means a higher level of effort to ensure system compatibility.
- d) Being the dictate of an ANSP service, it is foreseeable in some rare cases (e.g. purely domestic operations) that some airlines will involuntarily remain with the ‘old’ well after the 2012 deadline.

4 IATA position

4.1 IATA strongly believes that the FPL format is one ‘such that its uniform application by all Contracting States is necessary in the interests of safety or regularity of international air navigation’. ICAO Doc.8143 deems this as sufficient criteria to warrant inclusion as an Standard to Annex 2 of the Convention.

4.2 IATA is working closely with airlines to ensure that all airlines systems will change-over to the new format on the applicability date, November 15, 2012. All airlines will thereafter file only the NEW format.

4.3 IATA and the airlines will assist States and ANSP’s with tests and trials on a limited basis.

4.3 IATA continues to remain concerned at the lack of visibility of those States that decide not to change-over to the NEW format in 2012. While the FPL provisions under PANS ATM are non-binding on a State, the global impact on the safety and efficiency of flight; air-ground and ground-ground remains a primary area of concern.

4.5 IATA maintains that a software interface adaptability layer provided by a flow control unit (such as CFMU with AENA & UK Nats) will serve the technical solution of system compatibility. It may not however deliver the benefits of advanced aircraft capabilities.

4. Side Note

- 4.1 Although outside the scope of this working paper, it remains worthwhile to mention the legal status of the ICAO flight plan format. Many have questioned why the ICAO flight plan format contained in the PANS-ATM is not an ICAO Standard? ICAO Doc 8143 (Directives to Divisional-type Air Navigation Meetings and Rules of Procedure for their Conduct) outlines the following criteria for the development of SARPS:
- a) To qualify as a Standard, the specification must be such that its uniform application by all Contracting States is necessary in the interests of safety or regularity of international air navigation.
 - b) To qualify as a Recommended Practice, a specification must be such that its uniform application by all Contracting States is considered desirable, but not essential, in the interests of safety, regularity or efficiency of international air navigation.
- 4.2.1 It should be further noted that the Standards of Annex 2 and Annex 11 govern the application of the *Procedures for Air Navigation Services – Air Traffic Management* (PANS-ATM, Doc 4444). Although the contents of a flight plan are an Annex 2 Standard, the format is not. The success of these changes relies on the universal adoption of a common format and data exchange mechanism generated by the airline flight plan automation systems of airlines into the flight data processing systems of ANSP's.
- 4.2.2 For reasons justifying a 'one-time' change as outlined in 3.1, it is clear that the provisions of PANS ATM will be globally adopted by all airlines.
- 4.2.3 From the State and ANSP's side however, it is unclear and most doubtful if this will be the case, thus generating the concern among airlines for what the various levels of mitigation required to operate without FPL rejects.
- 4.2.4 In today's world of required automation support, IATA's position is therefore one that strongly promotes a uniform adoption and application of the ICAO flight plan into a specific electronic format as a clear necessity and in the interests of safety and regularity of international aviation.

5. ACTION BY THE MEETING

5.1 On the basis of feedback from Airline users, IATA urges the meeting to:

- a. Note the airline position of adopting the 'NEW' flight plan as of November 15, 2009
- b. Universally adopt without exception, that effective 15 November 2012 all States will accept and disseminate 'NEW' FPL's only. If the transition occurs earlier, ensure that the 'OLD' flight plan is supported till the Applicability date.
- c. Universally implement the new FPL system globally on 15 November 2012 in order to assure a seamless and timely transition with no loss of service. If this cannot be agreed then it is preferable to set a minimum transition period.
- d. In the unlikely event that an ANSP does not implement, that State shall notify the fact in part 1 of their AIP as a 'significant difference' to the PANS ATM as described under Annex 15, 4.1.2-c, prior to November 15, 2012.
- e. Propose that the ICAO Air Navigation Commission consider and recommend the inclusion of a Note to Annex 2, as proposed in **Appendix A**.

International Civil Aviation Organization
Eastern and Southern African Office

**Eleventh Meeting of the APIRG Air Traffic Services,
Aeronautical Information Services and Search and Rescue
Sub-Group
(ATS/AIS/SAR/SG/11)
[Nairobi, Kenya 26 – 30 April 2010]**

Appendix A

Amend ICAO Annex 2, Chapter 3, paragraph 3.3.1.1, as follows:

3.3 Flight plans

3.3.1 Submission of a flight plan

“3.3.1.1 Information relative to an intended flight or portion of a flight, to be provided to air traffic services/air traffic flow management units, shall be in the form of a flight plan. The format for the flight plan and associated ATS messages shall be as prescribed by the provisions of the PANS-ATM and the Regional Supplementary Procedures, as applicable.”

3.3.1.2 A flight plan shall be submitted prior to operating:

...
