



International Civil Aviation Organization

North American, Central American and Caribbean Office (NACC)

**Seventh Central American Air Navigation Experts Working Group Meeting
(CA/ANE/WG/7)**

Ninth Central Caribbean Working Group Meeting (C/CAR/WG/9)

ICAO NACC Regional Office, Mexico City, Mexico, 5 to 9 March 2012

Agenda Item 3:

Air Navigation Matters

3.2 Follow-up on the implementation of the NAM/CAR Regional Performance Based Air Navigation Plan (RPBANIP) in Central America and the Central Caribbean

RESULTS OF THE OFF-LINE TESTS AND FOLLOW-UP TO THE IMPLEMENTATION OF THE NEW ICAO FLIGHT PLAN (FPL) FORMAT

(Presented by the Secretariat)

SUMMARY

This working paper offers a follow-up to the implementation of the activities to the New Flight Plan Format reported since the NACCWG/3 Meeting, highlighting the off-line tests carried-out and the urgent attention to develop the Transition Phase activities to be performed.

References:

- ICAO State Letter on the new flight plan format: AN 13/2.1-08/50 dated 25 June 2008, AN 13/2.1-09/9 dated 6 February 2009 and AN 13/2-10/31 dated 29 March 2010;
- RPO 5 of the NAM/CAR Regional Performance Based Air Navigation Implementation Plan (NAM/CAR RPBANIP)
- NACC/DCA/4 Meeting Final Report (San Pedro Sula, Honduras, 24-24 June 2011)
- NACC/WG/3 Meeting Final Report, (Guatemala City, Guatemala, 9 to 13 May 2011); and
- Summary of Discussions of the ICAO Workshop for the Implementation of the New Flight Plan Format for the NAM/CAR Regions, (Mexico City, Mexico, 26 to 28 September 2011).

Strategic Objectives

This working paper is related to Strategic Objectives A and C.

1. Introduction

1.1 In the ICAO NACC Regional Office web page are the relevant references to follow for the implementation of the New Flight Plan Format (<http://www.mexico.icao.int/ATM.html#FPL>):

  ICAO NEW FLIGHT PLAN FORMAT NUEVO FORMULARIO DE PLAN DE VUELO DE LA OACI		Documents	Documentos
Subject / Asunto			
Ejemplo AIC Modificaciones FPL			
Matriz de Evaluación de impacto FPL update 17 oct 2011			
Reference Documents / Documentos de referencia			
RPBANIP Regional Objective No. 5 - Implementation of New Flight Plan Format (Version 2.0, May 2011) Objetivo Regional No. 5 del RPBANIP - Implementación del nuevo formulario de plan de vuelo			
Flight Plan Implementation Tracking System (FITS)			
Consolidated Action Plan for the implementation of the new flight plan format Plan de acción consolidado para la implementación del nuevo formulario de plan de vuelo			
NAM/CAR Flight Plan Points-of-Contact (PoCs) / Puntos de contacto NAM/CAR para el Plan de Vuelo (PoCs)			
Federal Aviation Administration (FAA) - Flight Plan Website			
Federal Aviation Administration (FAA) - Flight Plan Website - Planned Changes to Filed Flight Plans in 2012			
EUR 2012 TEST PLAN / Plan de pruebas EUR 2012 para el Nuevo formulario de plan de vuelo de la OACI This document is available only in English.			

- a) ICAO State letter AN 13/2.1-08/50 of 25 June 2008, informed on Amendment 1 to the 15th Edition of PANS-ATM, Doc. 4444 – ICAO New Flight Plan Format.
- b) To facilitate the implementation of the new ICAO FPL format, through letter AN 13/2.1-09/9 dated 6 February 2009, ICAO developed guidelines to facilitate airspace users and air navigation services providers (ANSPs) the simultaneous use of CURRENT and NEW information of the flight data processing systems during the transition period.
- c) ICAO letter AN 13/2-10/31 dated 29 March 2010: Use of FITS (<http://www2.icao.int/en/FITS/Pages/home.aspx>).

1.2 GREPECAS Conclusion 16/39 urged States to develop their action plans and informed the results of this implementation to the ICAO NACC and SAM Regional Offices not later than **30 November 2011**.

1.3 The implementation in the NAM/CAR regions are followed through the consolidated Action Plan which at the same time is based on the regional performance objective (RPO) No. 5 *Implementation of the New ICAO Flight Plan Format* within the NAM/CAR RPBANIP. It was agreed that this RPO will serve as a regional reference for the drafting of national action plans, with the aim of duly complying with this implementation.

2. Follow-up to the implementation activities

2.1 During the NACC/WG/3 meeting, a follow-up to the work and activities for each sub region was carried-out, following the 3 phases of the consolidated Action Plan: Preparation, Transition and post-implementation.

2.2 A follow-up has been done to the technical operational and management impact, in the NACC/WG/3 and has been updated to October 2011; the summary table of this evaluation, as well as the current status of the progress is shown in the NACC Regional Office web site.

2.3 The ICAO NACC website presents the update of the consolidated Action Plan. **Appendix A** to this working paper presents the relevant activities to be implemented.

2.4 Several States have published as Aeronautical Information Circular (AIC) their plans to implement this amendment. An AIC publication is available in the ICAO NACC Regional Office website.

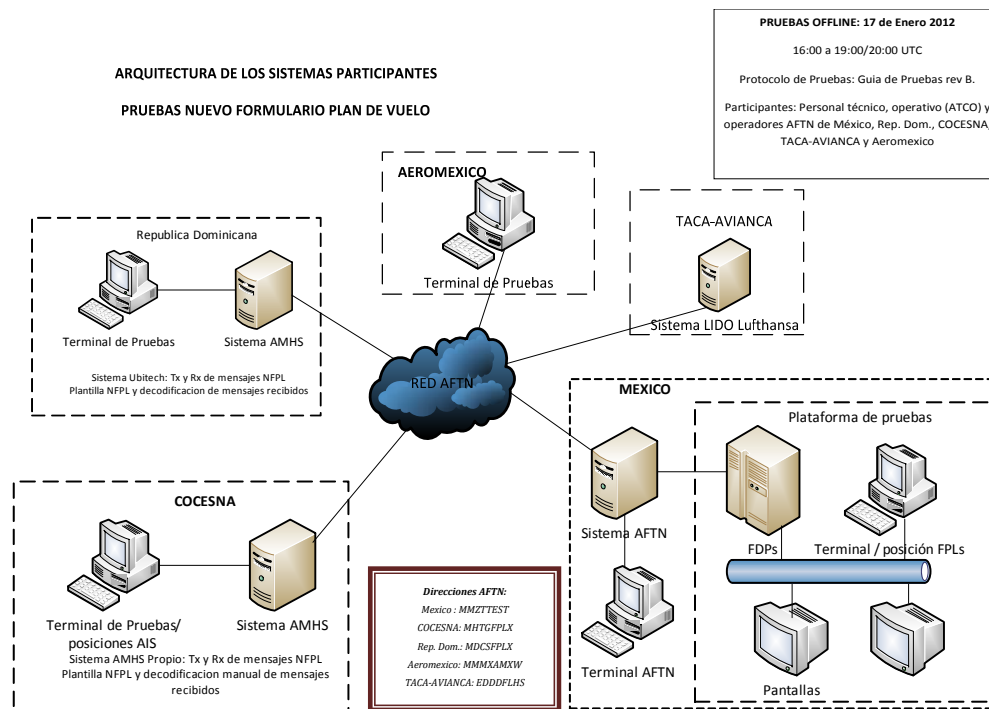
Follow-up Workshop on the Implementation of the New ICAO Flight Plan Format for NAM/CAR Regions

2.5 From 26 to 28 September 2011, the Follow-up Workshop on the Implementation of the New ICAO Flight Plan Format for the NAM/CAR Regions was held in the ICAO NACC Regional Office in Mexico City. The information to this event is available in the ICAO NACC Regional Office webpage (<http://www.mexico.icao.int/Meetings/FlightPlanWorkshop.html>). The **Appendix B** to this working paper presents the summary of discussions and agreements for the follow-up of the activities.

Preliminary off-line tests of the new FPL Format

2.6 The NACC/WG/3 acknowledged that several States and service providers such as Mexico, Curaçao, Dominican Republic and COCESNA have made progress in their activities for the implementation and agreed to conduct preliminary off-line testing for the last quarter of 2011, between their systems that already have the necessary changes and therefore proposed Draft Conclusion NACC/WG/3/2 – *Preliminary Off-Line Testing of the New FPL Format*.

2.7 The off-line tests were conducted in two dates: 28 November 2011 and 17 January 2012. For these tests, a test Guide was developed with a preliminary group of messages. Dominican Republic, Mexico, COCESNA and Aeromexico participated in the tests. The equipment configuration for the tests was the following:



Actualización: 12 Dic 2011

2.8 The results of these preliminary tests will be submitted in the next follow-up workshop in March 2012, together with the test guide/testing messages and other deliverables from the C3 project. A review of these tests is presented in **Appendix C** to this paper.

Follow-up Meeting/Workshop on the Implementation of the New ICAO Flight Plan Format for NAM/CAR Regions

2.9 To continue with this follow-up and to achieve a harmonized implementation, a Meeting/Workshop has been convened for the New ICAO Flight Plan Format for the NAM/CAR Regions, to be held from 26 to 28 March 2012, in the ICAO NACC Regional Office in Mexico City, letter of reference to States Ref.: NT4-4.36- **EMX0023** dated 19 January 2012. Likewise, a Working Meeting of the Project C3 will be held from 29 to 30 March 2012 in the ICAO NACC Regional Office, in order to complete the tasks assigned to this group.

2.10 One of the main objectives of this event is the preparation of tests for this implementation among States that have available their systems for interconnection tests starting from April 2012.

3. Suggested action

- 3.1 The Meeting is invited to encourage the States/Territories/International Organizations to:
- a) review the national plan for the implementation of the FPL format in accordance with the Consolidated Action Plan commented in paragraph 2.3, by reporting their progress current status;
 - b) confirm and update the impact table in the systems indicated in paragraph 2.2,
 - c) review and update the completion of activities of the transition phase commented in paragraph 2.3 and Appendix A, and
 - d) participate in the next Workshop/meeting on this follow-up as informed in paragraphs 2.9 and 2.10.
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APPENDIX A

RELEVANT ACTIVITIES OF THE CONSOLIDATED ACTION PLAN FOR THE NEW FIGHT PLAN FORMAT IMPLEMENTATION

- a) The Preparation Phase activities have been completed
- b) From the Transition Phase activities, several activities should urgently be initiated by the States:

Task Name	Start	Finish
Elaboration of contingency procedures and determine technical considerations/operational for the transition	03/01/11	30/06/11
Conduct trials between systems with NEW flight Plan processing capacity: April, May and June	18/07/11	30/06/12
Assessment of Transition Actions and make adjustments	18/07/11	30/06/12
Delivery and assessment of software changes and other adjustments	18/07/11	30/06/12
Publication of Transition Actions, Trials and other publication for the users and stakeholders: <ul style="list-style-type: none"> • ensure publication of regulations, procedures, transition actions, trials and other informative publications (poster, videos, folders, etc.) for all stakeholders; • publish in AIP flight plans procedures for the coordination of the timeline and updating of related changes (altitude, ETD, route, speed, etc.); and • update ATS Letters of Agreements (LOAs) with adjacent ATS units, as needed. 	30/06/11	29/06/12

- c) The NACC/WG also identified the following actions:
- i. implement a switch-over plan. Carry out safety assessments to the changes and interoperability of the impacted systems by the new FPL format implementation;
 - ii. based on the operational requirements, review the ATS AIDC messages defined in the PANS-ATM and ICD documents, for their timely implementation;
 - iii. establish a collaborative decision making (CDM) process with air operators, ANSPs, pilots, dispatchers, general aviation and ATCOs to resolve unforeseen operational issues;
 - iv. consider the implementation of a centralised Flight Plan Coordination Unit by each FIR;
 - v. develop and conduct training programmes for ATCOs, pilots, AIS personnel, dispatchers and other personnel in charge for supervision, verification and compliance, as required;
 - vi. analyse the impacts of current problems due to errors, missing and duplication of flight plans and implement mitigation actions; and
 - vii. develop and conduct a safety assessment (monitoring) programme before and post implementation period.

d) The NACC/DCA/4 stressed on the support to the activities of the transition phase:

Due to the impact that this implementation may have on safety, the Meeting agreed to support the following activities for the transition phase:

Publication of:

- Regulations, procedures, transition actions, trials and other informative publications (posters, videos, folders, etc.)
- Publish operational procedures in AIP flight plans for the programme coordination and updating of related changes (altitude, ETD, route, speed, etc.)
- Update ATS Letters of Agreements (LOAs) with adjacent ATS units

Actions for:

- Implementing contingency procedures to mitigate identified hazards
 - Implementing a switch-over plan
 - Establishing a collaborative decision making (CDM) process with air operators, ANSPs, pilots, dispatchers, general aviation and ATCOs
 - Analyzing the implementation of a centralised Flight Plan Coordination Central Unit by each FIR
 - Implementing training programmes for ATCOs, pilots, AIS personnel and dispatchers, as required
 - Implementing measures to resolve problems caused by errors, missing and duplication of flight plans
 - Implementing a safety assessment (monitoring) programme before and post implementation period
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APPENDIX B



INTERNATIONAL CIVIL AVIATION ORGANIZATION

ICAO NACC REGIONAL OFFICE

FOLLOW UP WORKSHOP FOR THE IMPLEMENTATION OF THE NEW ICAO FLIGHT PLAN FORMAT FOR NAM/CAR REGIONS

(Mexico City, 26 to 28 September 2011)

SUMMARY OF DISCUSSIONS

1. Introduction

1.1 The workshop was conducted within the framework of Special Implementation Projects (SIPs) for the year 2011. The objectives of the workshop were to assist the NAM/CAR Regions States/Territories and International Organizations with the following:

- a) to report the status of how Air Traffic Control (ATC) system providers have complied with the implementation of the New Flight Plan Format;
- b) evaluate the progress of the States within the NAM/CAR Region in regards to the implementation activities and preparation of the ICAO New Flight Plan (NFPL) Format;
- c) coordination and preparation of the activities and scenarios necessary for off-line testing;
- d) meeting of the C3 GREPECAS project regarding the implementation of the NFPL; and
- e) identification and plan to perform missing activities according to the consolidated Regional Action Plan.

1.2 The workshop followed-up on the NAM/CAR Regional Performance Based Air Navigation Implementation Plan (NAM/CAR RPBANIP) Regional Performance Objectives No. 5 *Implementation of the New ICAO Flight Plan Format*, applying ICAO SARPs and guidance material as well as the CAR/SAM Regional Strategy for the New ICAO Flight Plan Format Implementation and other ICAO reference material. The final workshop programme and documentation are available at:

<http://www.mexico.icao.int/Meetings/FlightPlanWorkshop.html>

1.3 The workshop was attended by a total of 51 participants from 12 States, 5 international organization representatives, 5 industry representatives and 3 airline representatives. The list of participants is available at <http://www.mexico.icao.int/Meetings/FlightPlanWorkshop.html>.

1.4 Mr. Victor Hernandez, Regional Officer ATM/SAR of the ICAO NACC Regional Office on behalf of Mrs. Loretta Martin, Regional Director of the ICAO NACC Regional Office, opened the workshop. Mr. Victor Hernandez and Mr. Julio C. Siu, RO/CNS, carried out the coordination and facilitation of the event with the assistance of Mr. Tom Brady, ICAO Global Coordinator for the New Flight Plan Implementation.

2. Discussions

2.1 The first workshop day started with ICAO providing an overview of ICAO Amendment 1 to the 15th edition to PANS-ATM, Doc 4444, ICAO New Flight Plan Format, describing the amendment, ICAO guidelines, the conversion table from NEW to PRESENT format and ICAO Flight Plan Tracking System (FITS).

2.2 ICAO provided guidelines for the completion and coordination of Flight Plans, the global harmonization effort for this implementation, the regional agreements and activities carried out in the NAM/CAR Regions, the NAM/CAR RPBANIP Regional Objective for this implementation, the CAR/SAM Regional Strategy, the GREPECAS C3 Project activities, the coordination of the off-line test preparation and initial coordination and a follow-up to the implementation actions.

2.3 The second workshop day opened with ICAO explaining the main transition phase activities including testing, training, documentation AIP and aeronautical publications, training plans, contingency activities and other aspects remaining for the implementation. Central America/COCESNA, United States, Cuba, Mexico, Jamaica and Trinidad and Tobago presented their current implementation status and mayor concerns in their implementation. Aruba, Costa Rica, Curacao, Guatemala, Dominican Republic, Sint Maarten and Turks and Caicos Islands also commented their progress on this implementation.

2.4 The third day was dedicated to the working sessions for the C3 Project and the Off-line Tests preparation/coordination. ICAO oriented on the monitoring or safety assessment programme to be carried out by States. Complementary information, such as the detailed description of the amendment changes and the conversion table, was available as “Other documents” under the workshop’s ICAO NACC web page (<http://www.mexico.icao.int/Meetings/FlightPlanWorkshop.html>).

3. Conclusions/ Recommendations

3.1 As a result of the discussion, the workshop developed the following conclusions/recommendations to be addressed by NAM/CAR States/Territories/International Organizations and ICAO, as appropriate:

States:

1. The Consolidated Action Plan of the NAM/CAR RPBANIP should be used by States for the implementation of the NFPL Format, from which States should generate their national implementation Plans.

2. States/Territories/International Organizations are urged to develop and coordinate with the ICAO NACC Regional Office their national implementation plans to ensure the harmonized implementation in the Regions and based on GREPECAS Conclusion 16/39, these plans are to be submitted to ICAO no later than 30 November 2011. Non compliance of the New FPL Format will be addressed as DEFICIENCY into the GANDD. Additional national activities should be considered such as:

— B3 —

- encourage participation in the regional implementation events (seminars, workshops, meetings, courses, etc.)
- based on the ATM operational requirements, review the AIDC messages defined in the PANS-ATM and ICD documents, and complete the operational specifications for OLDI/AIDC implementation
- develop agreements with adjacent ANSPs
- analyze the issue of missing and duplicated flight plans and implement mitigation measures
- consider the implementation of a centralized FPL unit by FIR
- analyze processing capacities of existing systems in both present and new FPL format
- determine systems to modernize or upgrade for NFPL format processing
- provide a Point of contact (PoC) for regional and national coordination
- establish a CDM process with air operators, ANSPs, pilots, dispatchers, general aviation and ATCOs to resolve unforeseen operational issues
- develop action plan and datelines for the implementation of NFPL format based on Appendix B to this report
- ensure publication on regulations, procedures, transition actions, trials and other informative publication (poster, videos, triptychs, etc.) for all stakeholders
- conduct a Transition Plan
- develop contingency procedures
- conduct safety assessment (monitoring) programme before and post implementation
- develop and conduct training programme for ATCOs, pilots, AIS personnel, dispatchers, etc., as required
- coordinate periodic progress with ICAO NACC Regional Office

3. About the Vendor FDP systems, it was observed that solutions are available at this time, so a) States need to agree contracts with Vendors ASAP and b) States need to encourage vendors where necessary to deliver systems in line with the regional implementation plan.

4. Concern was raised that many States seem to be late in aligning with the regional implementation plan in that they will not be in a position to accept the NFPL until well after 1 July 2012. Some States informed that their implementation date, due to vendor's timing, is September 2012.

5. Some States are having difficulty defining and producing requirements and procurement documentation. It was recommended that those States who have already produced these documents should provide assistance to other States. The status of progress of each State should be known through the Points of Contact and the System Impact Table for the NAM/CAR Regions.

6. Participants were informed on Vendor Convertors systems as a temporary solution to comply with the implementation of the NFPL Format and concluded that it may be an acceptable short term solution, but the convertor system will not allow future processing of the enhanced Flight plan data and may not align with the PBN roadmap. This temporary solution will achieve the requirements of Amendment 1 however does not meet the "spirit/intent" of the amendment.

7. Based on the industry's presentation, States recommended that more extensive translation tables should be agreed upon. ICAO HQ will consider it and States are also to suggest a proposal based on the testing of their systems and the operation expertise in the NAM/CAR regions.
8. Regarding filed NFPL, States should refer back the changes to the originator of the FPL who is responsible for the data within their flight Plan as well as errors in filing should be notified to the originator.
9. In order to support the harmonized implementation in the NAM/CAR Regions, the United States FAA will:
 - a) send to ICAO NACC Regional Office, an update of their system status, indicating the system (Host or ERAM) expected to be operational at each ATC center. Keeping ICAO updated on expectations as the operational transition continues. The FITS database will be updated accordingly.
 - b) will share its safety analysis results with the NAM/CAR Regions through ICAO NACC Regional Office
 - c) will provide information for those interested in dialing in to FAA monthly Flight Plan filer teleconference. FAA will ask that people interested simply provide a name and email address—FAA will then send out the meeting notice, cancelations, presentation materials, etc. via email.
 - d) to coordinate the States/Territories related with United States FIRs; ICAO will be informed, when available, with the corresponding testing dates with related NAM/CAR Regions States once FAA's systems are upgraded.
 - e) send ICAO a description of technical issues, along with discussions achieved with other regions in order to help with the dialog of the technical aspects of the implementation. NAM/CAR Regions States shall discuss and publish regional decisions on these matters. To be coordinated with C3 Project delivery of ambiguities and clarifications to Amendment 1.
10. United States FAA informed of some potential updates to the Regional Supplementary Procedures due to the NFPL implementation; ICAO suggested following the corresponding regional procedure through ICAO to carry out these updates.
11. A sample of AIC for the New Flight Plan implementation was presented by COCESNA. The States agreed that this sample could be used as a reference for States.
12. States updated the Points of Contact List which will be posted in the ICAO NACC Regional web page.

— B5 —

13. States are urged to use and take advantage of ICAO FITS website.

NFPL Format implementation issues

14. Regarding the length of Item 10b, participants were informed that Indra had allocated 20 characters and Thales 25 characters to this field (follows ICAO guidelines).

15. For item 10a, its maximum length needs to be defined and agreed. Thales informed has allocated 50 characters to this item. ICAO HQ will approach IATA for their suggestions and will advice. One State has settled on 69 characters for item 10 field length

16. Concern was raised regarding the FPL form and the division of the field might apply to RPL, also it was suggested to ICAO HQ to consider removing the “/” from the form and to consider adding a subnote using a “*”.

17. The use of ALT aerodrome is mandated to be used.

18. On the processing of the New Format, cross validation of items 10 and 18 needs to be agreed.

19. Regarding the indicator order in item 18: some States will only accept indicators in the order specified by Amendment 1, some States will accept any order, some states will re-align the order to comply with Amendment 1 when coordinating FPL messages, some States will reject any unknown indicators in item 18 and some States will place any unknown indicators in RMK/.

20. Regarding the date of Flight (DOF); ICAO clarified that 0 will be used for current day if no DOF in FPL, but will provide more guidance on how to be used this item in outgoing coordination messages if DOF is passed.

21. Other details in the implementation: RVR and RFP Grandfather rights will apply for Europe and as stated in the Amendment, users must assume that use of letter S implies no ADF.

C3 Project Activities

22. The membership and work programme of the C3 Project was updated and a new action plan to achieve the target deliverables was presented.

23. The C3 Project will provide ICAO a list of ambiguities/clarification needed as well as proposed solutions regarding the Amendment no later than 7 October 2011.

24. The C3 Project and Mexico informed on the test activities and dates, detailed in Presentation D3-3.

Off-line Tests Coordination and Preparation activities

25. Based on Conclusion NACC/WG 3/2 - *Preliminary Off-line tests for the New FPL Format*, México, Dominican Republic, COCESNA and Aeromexico met to prepare and coordinate the activities for these tests.

26. States/Territories/International Organizations should follow-up the conclusions/recommendations resulted from this Follow-up Implementation workshop, under the work programmes of the corresponding NAM/CAR Working Groups, and conclusions/recommendations will also be reported to the GREPECAS ATM Automation and Situational Awareness Programme for future regional planning and implementation.

Region Implementation Status

27. States updated the System Impact Evaluation Table and the consolidated action plan. ICAO will post these updates in the ICAO NACC Office Regional web page. Mayor concerns were:

- i. Lack of training within the States
- ii. Missing publication informing the users and stake holders about the State's plan on the NFPL implementation
- iii. Safety assessment of changes and updates
- iv. Need to request vendors to comply with critical dates on the implementation.

ICAO

28. ICAO emphasized that States should enforce the actions, agreement and support to mitigate and resolve the loss and duplication of Flight plan data, which is a serious issue within the CAR and NAM Regions.

29. ICAO presented some options and considerations on financing the activities/project for this implementation, since some States have problems finding the finance for the project.

30. Regarding the ICAO Strategic Support Team, States can request targeted support from this team directly to the ICAO Regional Office, through their DGCA or ANSP Chief Executive. The terms of the support are available on the Regional Office website and financial cost to States is limited in a cost recovery basis to be no more than 1 week of effort.

31. ICAO, as required, assist States in the development of action plans and training programmes for the new Flight Plan implementation.

APPENDIX C

REVIEW OF THE PRELIMINARY OFFLINE TESTS

- a. From the tests conducted on November 28, 2011, it was identified several mis-coordinations and the need to establishment agreements on means to use and the appropriate sequence of messages.
- b. The tests on January 17 were conducted satisfactorily with some adjustments to the AFTN addresses (Mazatlan to Mexico). COCESNA and SENEAM sent their results.
- c. It was confirmed that COCESNA and SENEAM used the FPL templates implemented in their AFTN terminals. SENEAM used their EUROCAT X test bed, testing the message validity by the FDP; however the FDP processing features regarding the activation, presentation, prediction and other functions related to the FPL new data were not tested.
- d. It was observed that one of the incompatibilities with the new FPL was the implementation of the established order/sequence related to designators in number 18. The order is a NFPL requirement and therefore systems must send this information in the required sequence/order.

Actions to be followed:

- e. It was agreed that for the next tests, a set of more oriented messages to existing routes, times and regional scenario will be required, specifically formulated to cover different variables and required capabilities by the NFPL. Also, the tests are to be made with more appropriate addresses to the operational scenario: Mexico with its configuration as Mérida ACC and involve the other adjacent ATS (Cuba and Dominican Republic) as well as users like airlines.
- f. The GREPECAS C3 Project Coordinator, Mayda Avila, emphasized that the C3 Project is designated with the deliverable of a proposal or test guide for the NFPL, which will contain a set of test messages and therefore, it was agreed to assign the tasks to the C3 Project.
- g. The next NFPL tests are scheduled for mid-April when the guide and messages are provided by the C3 Project.
- h. ICAO will present the offline test results in the working group (WGs) meetings and in the NFPL workshop/meetings.
- i. The C3 members will send their proposals for messages to the Project C3 coordinator, no later than 23 February, for their consolidation in the tests guidance deliverable to be submitted in the next NFPL Workshop/meeting in March 2012.
- j. That ICAO invites the airline users to the execution of these tests according to scheduling agreed for the tests in April.