



ICAO

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DISCUSSION PAPER

ANI/WG/3 — DP/03  
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**Third NAM/CAR Air Navigation Implementation Working Group Meeting (ANI/WG/3)**  
Mexico City, Mexico, 4 to 6 April 2016

- Agenda Item 4: Follow-up, Performance Evaluation and Monitoring of the NAM/CAR Regional Performance Based Air Navigation Implementation Plan (NAM/CAR RPBANIP) Targets**
- 4.1 Progress Reports of the Task Forces and the ANI/WG**

**ANI/WG ATFM IMPLEMENTATION TASK FORCE PROGRESS REPORT**

(Presented by ANI/WG ATFM Implementation Task Force Rapporteur)

<b>EXECUTIVE SUMMARY</b>	
This working paper presents the progress achieved by the ATFM Implementation Task Force (TF) since its previous progress report to ANI/WG/2 Meeting in Costa Rica in June 2015. This paper includes the results for previously identified deliverables and recommendations for improving the Task Force function and coordination.	
<i>Strategic Objectives:</i>	<ul style="list-style-type: none"><li>• Safety</li><li>• Air Navigation Capacity and Efficiency</li></ul>
<i>References:</i>	<ul style="list-style-type: none"><li>• NAM/CAR Regional Performance-Based Air Navigation Implementation Plan (RPBANIP)</li><li>• First NAM/CAR Air Navigation Implementation Working Group Meeting (ANI/WG/1), Mexico City, Mexico, 29 July to 1 August 2013</li><li>• Second NAM/CAR Air Navigation Implementation Working Group Meeting (ANI/WG/2), Puntarenas, Costa Rica, 1 June to 4 June 2015</li><li>• ATFM TF teleconferences, webinars and e-mail correspondence</li></ul>

**1. Introduction**

1.1 The Air Traffic Flow Management (ATFM) Implementation Task Force was established during the first ICAO NACC Air Navigation Implementation Working Group meeting in 2013 to reflect the importance of TFM to the region. The objective of the ATFM TF is to work collaboratively and develop a regional and interoperable ATFM framework in the NAM/CAR Region that is consistent with ICAO Doc. 9971 and other related global documents.

1.2 This Discussion Paper summarizes the discussion on ATFM TF activities during the work sessions at the ANI/WG/2 Meeting. Participants are: Midori Tanino (USA – acting Rapporteur), Leah Moebius (USA), Carlos Agueda (FAA Representative at Panama), Carlos Bolanos (Costa Rica), Alvaro Perez Galindo (Mexico), Jorge Carrion (Mexico), Marco Vidal (IATA), Javier Vanegas (CANSO). Some States had only one representative and multiple workshops taking place simultaneously because the difficulty to participate desired work sessions.

## 2. Progress, Discussions, and Results

2.1 **Announcement** was made that Mike Richardson (FAA) will be the next ATFM TF rapporteur.

2.2 Since May 2015, the ATFM TF held 4 **web conferences**. These meetings included discussions on the FAA's regular Caribbean Telcons to encourage participation by the TF ANSPs in these telcons. These web-conference meetings also included briefings by the various TF members, including a briefing on Contingency Planning by Trinidad and Tobago, and a briefing on ATFM Progress by COCESNA. Next web conference is scheduled for April 25, 2016 at 1:00 (US EDT).

2.3 During the ATFM TF web-conference on March 2016, the number of changes in personnel representing the various States and organizations on the ATFM TF was brought to the attention. The **ATFM TF Member list** was drafted and verified as much as possible. (See **Attachment A.**) The Rapporteur took an action to follow up with the member list.

2.4 The **ATFM TF Survey** was sent to States and members of the TF to collect information on their status on ATFM environment. The TF Rapporteur and members analysed the surveys and provided an assessment of States' current ATFM environment. The results of that survey are presented in ANI/WG/3 IP13, *Caribbean Air Traffic Flow Management (ATFM) Survey Results*. With this IP, the TF agreed that the ATFM TF Work Program Item 1-CAR regional assessment of ANSPs ATFM environment is closed.

2.5 Several **ATFM Workshops** were conducted, including Panama in May, Cuba in July, and Trinidad and Tobago in November 2015. In addition, the Dominican Republic participated in ATFM Workshops hosted by the FAA's Air Traffic Control System Command Center (ATCSCC) in October and December. In March 2016, Cuba visited the ATCSCC and received the presentations on FAA's ATFM systems and its capabilities.

2.6 These **ATFM Workshops** provided opportunities for States' ANSPs and other stakeholders to participate in briefings and discuss best practices for ATFM and Collaborative Decision Making. Emphasis was consistently placed on fostering greater collaboration on ATFM throughout the Caribbean and the need to establish a CDM process in the region. Next ATFM Workshop candidate is Costa Rica and the detail will be coordinated by the FAA and Costa Rica.

2.7 Discussions then moved to what defined **training** and it was agreed that it would be helpful for the project and the region to define training requirements and/or to develop checklist of training for States. CANSO took the action to coordinate with its headquarters to discuss possibility of conducting a week long ATFM training course in the region in the upcoming year.

2.8 CANSO provided information on the **new FAA/CANSO/IATA/ICAO Regional Implementation Group (RIG)** (refer to ANI/WG/03 IP14, *Caribbean Regional Implementation Group for Air Traffic Flow Management (ATFM) / Collaborative Decision Making (CDM) by CANSO and FAA*). The purpose of this RIG is to expedite the ATFM/CDM implementation in the CAR FIRs managed by CANSO LAC3 partners. The kick-off meeting of this RIG is scheduled for July 2016 in the Dominican Republic. CANSO noted that any State whose maturity level is met can be eligible for two way data exchange.

2.9 CANSO emphasized the importance of a Concept of Operations (ConOps). IATA noted that there are 4 states (Colombia, Brazil, Mexico and Peru) in the region that have developed or are developing ConOps but was not sure if these would be integrated with the other for a harmonized ATFM/CDM regional approach. IATA and CANSO took an action to gather the regional ATFM ConOps related documents and distribute amongst the ATFM TF members so that achievable CAR ATFM ConOps be described. It was well understood that **CAR ATFM ConOps** must be based on and aligned with ICAO DOC 9971, *Manual on Collaborative Air Traffic Flow Management*.

2.10 The group agreed that there was a need to establish a baseline of ATFM implementation and/or initiatives in the region and that a **harmonized integrated approach** was best for the region. One of the areas of concern to IATA was that there were several initiatives underway in the region that may lead individual states to implement ATFM/CDM initiatives in the region but that they may not be harmonized to ensure interoperability. One of the first steps for the region was to reestablish the weekly Caribbean conference calls.

2.11 Currently, ATCSCC hosts **CAR Operational Telecon** three times a week; Fridays, Saturdays, and Sundays at 8:15AM (US DST). Regular participants are ATCSCC, Dominican Republic, Jamaica, Mexico, Cuba, Miami Center, New York Center, and IATA. The decrease in participation and the benefit of expanding such telecon were discussed. The decrease in participation could be due to (1) teleco cost; (2) no immediate benefit; (3) lack of qualified participants; and (4) cumbersome to call and participate. The benefits could be (1) each ANSP will know the process when such telecon is needed to share information and finding better solution; (2) having this weekly information can help in daily operations; (3) daily accumulation of better CDM practices that will benefit the CAR ATFM at large; and (4) this can result in more effective LOAs to outline procedures and process in case of emergency.

2.12 To reengage the region in participating in regular **CAR Operational Telecons**, the FAA is proposing the usage of ATCSCC's teleco capability. The ATCSCC can program its teleco system to auto-dial select group of participants. It is important to note that the number to call must be always the same and the qualified TFM personnel must answer the call. We might want to start this experiment once a week (say, every Friday) base.

2.13 IATA and COCESNA recommended that the ATFM Task Force develop some informational briefings that can be provided to ATC supervisors on the benefits of participating in the **CAR Operational Telecon**. A post telcon report will also be shared with call participants to recap the items discussed. The quantitative benefits is difficult to obtain, however, the diligent reporting the post operation will provide the qualitative benefits.

2.14 In addition to the CAR Operational Telecon, establishing an **Emergency telecon process** was discussed which would include creating an "emergency telecon list" of PoCs for States to be kept aware of any emergency situations.

2.15 The importance of continued working **relationship between PBN TF** was emphasized since PBN will increase the capacity. For example, the ATFM TF and PBN TF can jointly conceptualize deconflicted route structures that can help reduce flow constraint areas and increase throughput which could create the “playbooks” those are suited for certain situations. Through the CAR Operational Telecons using “playbooks”, we can provide the better services.

2.16 Reviewed the **ATFM goal described in the Port-of-Spain declaration**, “100% of Flight Information Regions (FIRs) within which all Area Control Centres (ACCs) to have ATFM measures available by December 2018.” We will keep this in mind as the goal we need to achieve.

2.17 **ATFM TF Terms of Reference (ToR)** was reviewed and updated. (See **Attachment B.**)

2.18 The results of the ATFM Survey of States as well as insights gained from the past years’ multiple web conferences and ATFM Workshops suggest a review and **possible re-prioritization of the TF Work Programme** would facilitate the TF Mission of promoting and implementing a regional, interoperable ATFM framework. For example, the need for establishing bi-lateral/multi-lateral Letter of Agreements (LOAs) between States/FMUs (see Work Programme Activity 2) would seem to be of less immediate priority than promoting pre-tactical operation daily briefings (see Work Programme Activity 7) and establishing basic data exchange between the ANSPs (see Work Programme Activity 4).

2.19 We have walked through the **ATFM TF Work Program**. The updated ATFM TF Work Program is provided as **Attachment C**. We have adjusted several “Date” fields. For example, Mid-Long term was modified from 2015-2017 to 2016 - 2020. Some items are noted as On-going instead of specific years.

- a) Work Program No. 1: Regional assessment of ANSPs is now closed (refer to section 2.4)
- b) Work Program No. 2: Procedural Agreements: Priority on two items: Data Exchange Agreements with neighbouring States and Data Exchange between ANSPs.
- c) Work Program No.4: Tools, technology & automation: Web page to post the post CAR Operational Telecon. Priority on technology/tool to support the data exchange and common situational awareness.
- d) Work Program No 7: Pre-Tactical Operation Daily Briefing: Refer to sections 2.11 – 2.15.

### **3. Suggested Action**

3.1 The Meeting is invited to:

- a) Evaluate the progress of the ATFM TF detailed in this paper;
- b) support the recommendations; and
- c) review and Update Work Program timelines and priorities.

## ATTACHEMENT A

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Vanegas, Javier	CANSO	<a href="mailto:Javier.Vanegas@CANSO.org">Javier.Vanegas@CANSO.org</a> - Confirmed
Espino, Edy	COCESNA	Verify and get email address
Luna, Pablo	COCESNA	Verify and get email address
Soto, Fernando	COCESNA	Verify and get email address
Bolanos, Carlos	Costa Rica	<a href="mailto:cbolanos@dgac.go.cr">cbolanos@dgac.go.cr</a> - Confirmed
Sequeira, Mario	Costa Rica	<a href="mailto:navegacionaerea.atfm@dgac.go.cr">navegacionaerea.atfm@dgac.go.cr</a> - Confirmed
Coello, Camilo Zuniga	Costa Rica	<a href="mailto:cvega@dgac.go.cr">cvega@dgac.go.cr</a> - Confirmed
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Peña, Roosevelt	Dominican Republic	<a href="mailto:rapm77@hotmail.com">rapm77@hotmail.com</a> - Confirmed
Legagneur, Mario Eric	Haiti	Verify and get email address
Vidal, Marco	IATA	<a href="mailto:vidalm@iata.org">vidalm@iata.org</a> - Confirmed
Siu, Julio	ICAO	<a href="mailto:jsiu@icao.int">jsiu@icao.int</a> - Verify
Finlayson, Christopher	Jamaica	<a href="mailto:Christopher.Finlayson@jcaa.gov.jm">Christopher.Finlayson@jcaa.gov.jm</a> - Confirmed
Malcolm, Courtney	Jamaica	<a href="mailto:Courtney.Malcom@jcaa.gov.jm">Courtney.Malcom@jcaa.gov.jm</a> - Confirmed
Avila, Arturo Enríquez	Mexico (DGAC)	
Vargas, Oscar	Mexico (DGAC)	<a href="mailto:ovargasa@sct.gob.mx">ovargasa@sct.gob.mx</a> - Confirmed
Pérez Galindo, Alvaro Edgar	Mexico (DGAC)	<a href="mailto:aperegal@sct.gob.mx">aperegal@sct.gob.mx</a> - Confirmed
Carrion, Jorge	Mexico (SENEAM)	<a href="mailto:desmon1996@yahoo.com">desmon1996@yahoo.com</a> - Confirmed
Fraser, Curtis	Trinidad and Tobago	<a href="mailto:cfraser@caa.gov.tt">cfraser@caa.gov.tt</a> Confirmed
Mohammed, Riaaz	Trinidad and Tobago	<a href="mailto:rmohammed@caa.gov.tt">rmohammed@caa.gov.tt</a> - Confirmed
Peters, Curtis	Trinidad and Tobago	
Richardson, Mike	United States	<a href="mailto:Mike.Richardson@faa.gov">Mike.Richardson@faa.gov</a> - Confirmed
Tanino, Midori	United States	<a href="mailto:Midori.Tanino@faa.gov">Midori.Tanino@faa.gov</a> - Confirmed
Hinkson, Marsha	Belize	Proposed
Torres, Gilberto	Belize	Proposed
Hernandez, Rolando Cruz	El Salvadore	Proposed
Iglesias, Valdemar Antonio	El Salvadore	Proposed
Jax, Jerry	Guatemala	Proposed
Nunez, Erik Fernando	Honduras	Proposed
Pavon, Heriberto	Honduras	Proposed
Molina, Holman Humberto	Nicaragua	Proposed
Savallos, Jorge Luis	Nicaragua	Proposed

**ATTACHEMENT B****~~TASK FORCE ON THE IMPLEMENTATION OF AIR TRAFFIC FLOW MANAGEMENT (ATFM)~~  
AIR TRAFFIC FLOW MANAGEMENT (ATMF) TASK FORCE  
Terms of Reference (ToR)****1. Background**

~~1.1 — In order to streamline the implementation activities for specific air navigation matters, the ANI/WG, in its first meeting agreed to form an ATFM Implementation Task Force. This TF shall complete the implementation of ATFM in accordance with the implementation plan, as well as update and report its progress to the ANI/WG based on its action plan for these works.~~

During the first ANI/WG meeting, an ATFM Implementation Task Force was formed in order to streamline related air navigation implementation activities. This Task Force shall complete ATFM implementation in accordance with the Regional Performance Objective (RPO) with emphasis on the Collaborative Decision Making (CDM) and Improve Demand and Capacity Balancing (DCB) of the RPBANIP processes, as well as update and report progress to the ANI/WG based on the action plan for these tasks.

**2. Responsibilities**

2.1 — The Task Force is responsible for:

- Work Program Management
- Coordinating implementation and support of the ATFM system
- Identifying and improving ATFM operations

**3. Working Methods**

3.1 — The Task Force will:

- Present its work programme containing activities in terms of objectives, responsibilities, deliverables and timelines
- Avoid duplicating work within the ANI/WG and maintain close coordination among the existing entries to optimize use of available resources and experience
- Designate, as necessary, Ad hoc Groups to work on specific topics and activities and organize clearly defined tasks and activities
- Coordinate tasks to maximize efficiency and reduce costs via electronic means including emails, telephone and teleconference calls, and convene meetings as necessary
- Report on and coordinate the progress of assigned tasks to the ANI/WG

4. **Work Programme** (to be included)

5. **Membership** (List of Members)

## ATTACHEMENT C

## NAM/CAR ATFM Task Force Work Programme

**ATFM Mission Statement**

The ATFM Work Programme (WP) provides specific initiatives for the development of a regional concept of ATFM implementation in NAM/CAR Region. This is consistent with ICAO Doc. 9971 and other related global documents. It takes into consideration the execution of a simple, basic, and incremental approach of promoting, sharing and implementing a regional, interoperable ATFM framework for global harmonization.

**INTRODUCTION**

People, automation, technology and collaboration with system stakeholders (inclusive of academia) will be the core principles of this project. The Work Programme seeks to:

1. Establish consistent regional ATFM planning and operating practices
2. Encourage a collaborative and harmonized approach to ATFM amongst States and Regions
3. Foster a systemic approach to ATFM, inclusive of all ATM community members

The document takes into consideration the diverse range of experience, technology and available resources. Each group tasking will be categorized using the following key:

**Short Term:** Achievable within 1 year time frame (Tactical)

**Medium Term:** Accomplishable within 1-2 year time frame (Pre-tactical)

**Long Term:** Obtainable within 3-5 year time frame (Strategic)

\*\*\* This document shall be a guideline for establishing ATFM NAM/CAR goals and reviewed periodically throughout the year. A formal review each calendar year shall be conducted during the ANI/WG and NACC/WG meeting so as to update/revise/modify its content for currency and applicability.

No	Activity	Objective	Responsible	Deliverable	Date
1	<b>Regional assessment of ANSPs</b> <ul style="list-style-type: none"> <li>• Identify participants</li> <li>• Capabilities</li> <li>• Experience (entry/intermediate/advance)</li> <li>• FMU/FMP/Ops Sup/Mgr.</li> <li>• What do ANSPs need?</li> <li>• Conduct study of existing/future FMP/FMU and a Regional Centralized FM Center</li> <li>• Note: A review as to the specific methodology to solicit this info (email/survey etc.) will be determined</li> </ul>	Provide a baseline assessment of resources, needs & capabilities	ATFM Task Force Team	<del>Report/ document to be determined</del> ANI/WG/3 IP, Caribbean Air Traffic Flow Management (ATFM) Survey Results	<del>Short Term (Dec-2014 – July 2015)</del> Closed
2	<b>Procedural Agreements</b> <ul style="list-style-type: none"> <li>• Establish bi-lateral/multi-lateral LOAs between States/FMUs</li> <li>• Identify high volume/prefer city pairs/routes</li> <li>• Develop multi-FIR regional network of ATFM coordination</li> <li>• Develop Regional harmonized methodology for the collection, analysis and reporting of demand/capacity, and delay data.</li> <li>• Research guidance on qualifications and competencies for ATFM personnel and develop action plan</li> <li>• Data Exchange Agreements with neighbouring States</li> <li>• Data Exchange between ANSPs</li> </ul>	Provide formalize agreements that will facilitate the safe and efficient movement of high density, constrained focused areas	ATFM Task Force Team	Formalized inter/intra ATM agreements that will identify and enhance regional efficiency for the safety and movement of air traffic	Med-Long term (2017-2020) 6 - 2020)
3	<b>Training</b> <ul style="list-style-type: none"> <li>• Assess training needs of ANSPs</li> <li>• Establish list of TNG subjects</li> <li>• Solicit instructors</li> <li>• Establish Schedule</li> <li>• Publish/coordinate events</li> <li>• Establish cross TNG, personnel exchange program</li> <li>• Perform ATFM workshops/seminars/visits</li> </ul>	Provide a core foundation to build upon for Regional participants	ATFM Task Force Team	Report listing training accomplishments as noted	<del>Medium-Long Term (2015-2017)</del> On-going

No	Activity	Objective	Responsible	Deliverable	Date
4	<p><b>Tools, technology &amp; automation</b></p> <ul style="list-style-type: none"> <li>• Research development of Ops web page</li> <li>• Flight plan processing</li> <li>• Identifying ATFM suite of tools such as Prediction &amp; Monitoring Tools</li> <li>• Explore Meteorological Products</li> <li>• Est. Sub-Team for research/development of future concept of regional ATFM system</li> <li>• Est. a test bed for testing and implementing future technologies for modelling</li> <li>• Capabilities to support data exchange</li> <li>• Capabilities to support common situational awareness</li> </ul>	Ongoing research development. Mid-Long term objective which will evaluate, strategic goals for Regional ANSPs regarding integration & harmonization of ATFM tools & technologies. This should incorporate the capability for growth & airspace modelling	ATFM Task Force Team	An integrated, comprehensive pre-tactical web based conference which includes various stakeholders	Med-Long term (2015–2017) (2016–2020)
5	<p><b>Schedule Regional ATFM Workshops</b></p> <ul style="list-style-type: none"> <li>• Enhance cooperation</li> <li>• Share best practices and ideas</li> <li>• Forecast future growth/needs</li> <li>• Encourage academia and industry participation</li> </ul>	Provide a foundational baseline of refresher & supplemental training for personnel involved in ATFM. To be accomplished in concert with stakeholder community	ATFM Task Force Team	Schedule ATFM workshops, seminars, webinars and symposiums for the purposes of furthering ATFM education	Med-Long term (2015–2017) On-going
6	<p><b>Improve Demand and Capacity Balancing (DCB)</b></p> <ul style="list-style-type: none"> <li>• Establish coordination with key stakeholders</li> <li>• Identify major traffic flows/city pairs</li> <li>• Research airport/sector capacity calculation</li> <li>• Compare with ICAO ATFM Global Doc</li> <li>• Id high density airports/sectors</li> <li>• Develop mitigation strategies</li> </ul>	Provide initial steps needed to work with aviation stakeholders, identify major city pairs and focus on constrained density areas	ATFM Task Force Team	Report/document identifying these objectives for aviation stakeholders	Med - Long term 2015–2016(2016–2020)
7	<p><b>Pre-Tactical Operation Daily Briefing</b></p> <ul style="list-style-type: none"> <li>• Solicit input from ANSPs &amp; stakeholders</li> <li>• Develop Ops Briefing checklist</li> <li>• Select Ops Telcon platform (GoTo or ATCSCC)</li> <li>• Train/practice web conferences</li> <li>• Research Traffic Management Initiatives</li> <li>• Standardization</li> <li>• Notification</li> <li>• Implementation</li> <li>• Documentation</li> <li>• Review analysis</li> <li>• Publication of the Daily ATFM Plan</li> </ul>	Provide a venue for ANSPs, stakeholders and the aviation community to participate, engage & collaborate in ops info sharing	ATFM Task Force Team	An integrated, comprehensive pre-tactical web based conference which includes various stakeholders	Mid-Long Term (2015–2016) (2016–2020)
8	<p><b>Flexible Use Airspace</b></p> <ul style="list-style-type: none"> <li>• Perform assessment of where FUA can be utilized/benefit</li> <li>• Identify civil/military coordination entities</li> <li>• Arrange for permanent liaison and cooperation between civil ATS and air defense units.</li> <li>• Conduct regional review of SUA</li> <li>• Assess use of airspace management process</li> <li>• Review use of dynamic airspace processes</li> <li>• Institute dynamic ATC sectorization and notification for demand and capacity</li> <li>• Develop performance measurement programme</li> <li>• Review/establish LOAs between FMUs/Military</li> <li>• Data Sharing between Civil and Military Units</li> </ul>	Identify and facilitate the cooperation between Civil/Military Organizations for the movement of Air Traffic	ATFM Task Force Team	Develop training, formalize LOA's, and pre-tactical coordination between organizations	Mid-Long Term 2015–2017 (2016–2020)



No	Activity	Objective	Responsible	Deliverable	Date
9	<b>Contingency Planning</b> <ul style="list-style-type: none"> <li>• Interoperability</li> <li>• Seamless continuity plan</li> </ul>	Establish a foundational baseline of education to construct a regional continuity plan of operation in the event of catastrophic occurrence	ATFM Task Force Team	This can be accomplished via ongoing training webinars, presentations and refresher training	Short-Med Term ( <del>2015–2017</del> ) (2016–2020)
10	<b>ANI/WG Decision 1/3</b> <ul style="list-style-type: none"> <li>• Provide progress report/update for Chairperson reference NACC/WG/4</li> </ul>	Liaison with Regional Coordination Group	TF Rapporteur	Work Programme and Revised ToR to ICAO R/O	June 2016
<b>References:</b> <ul style="list-style-type: none"> <li>• Manual on Collaborative Air Traffic Flow Management (Doc 9971)</li> <li>• Caribbean/South American Air Traffic Flow Management Concept of Operation (CAR/SAM CONOPS ATFM)</li> <li>• Global Air Traffic Management Operational Concept (Doc 9854)</li> <li>• Manual on Air Traffic Management System Requirements (Doc 9882)</li> <li>• Manual on Global Performance of the Air Navigation System (Doc 9883)</li> <li>• Manual on Flight and Flow – Information for a Collaborative Environment (Doc 9965)</li> <li>• Civil/Military Cooperation in Air Traffic Management (Cir 330-AN/189)</li> <li>• Procedures for Air Navigation Services — Air Traffic Management (PANS-ATM, Doc 4444)</li> </ul>					