International Civil Aviation Organization
NORTH AMERICAN, CENTRAL AMERICAN AND CARIBBEAN OFFICE
Twentieth Meeting of Directors of Civil Aviation of the Eastern Caribbean (20th E/CAR DCA)
Miami, Florida, United States 4 to 7 December 2006

Agenda Item 3: Air Navigation Matters
3.6 Other Air Navigation issues

AIR TRAFFIC FLOW MANAGEMENT CONCEPT

(Presented by the United States of America)

SUMMARY

This Working Paper presents for the Meeting's consideration the development of Air Traffic Flow Management (ATFM) between the NAM/CAR regions. With the approach of Cricket World Cup, the application of ATFM between the NAM/CAR regions will help to ensure that safety of air operations is not compromised, an optimum flow of air traffic is maintained, delays are reduced, and ATC is provided assistance in complying with its objectives.

The meeting is invited to endorse the development of Air Traffic Flow Management in the NAM/CAR regions and consider the steps necessary to implement ATFM in the NAM/CAR regions.

References:

- Report of the Twelfth Meeting of the CAR/SAM Regional Planning and Implementation Group (GREPECAS/12).
- ICAO Global Plan Initiative #6, Air Traffic Flow Management.

1. Introduction

1.1 ICAO CNS/ATM Systems received support from the Tenth Air Navigation Conference held in 1991 at ICAO Headquarters in Montreal, Canada. That same year, the CAR/SAM Regional Planning and Implementation Group (GREPECAS) started to work towards a regional application of this new air navigation services concept. At the Eleventh Air Navigation Conference (AN-Conf/11, Montreal September 2003), States supported and approved the new ICAO ATM Global Operational Concept, which encourages the implementation of a services management system which enables an operationally continuous regional airspace through the application of ATM functions. Global Plan Initiative #6, Air Traffic Flow Management, specifically addresses the concepts contained in this Working Paper.

1.2 An ATFM system should: 1) ensure an optimum flow of air traffic in sectors and terminal areas during periods in which the demand exceeds -- or is foreseen to exceed -- the available capacity; 2) reduce aircraft ground and in-flight delays and avoid system overload; 3) assist ATC to comply with its objectives and achieve an effective utilization of airspace and airport capacity; 4) ensure that the safety of air operations is not compromised during periods of traffic congestion; and , 5) ensure that air traffic is effectively managed without applying unnecessary flow restrictions.

1.3 This paper includes a model of Air Traffic Flow Management that will assist States in the NAM/CAR region in meeting these ATFM objectives.

2. Discussion

2.1 To develop Air Traffic Flow Management in the NAM/CAR regions and develop the steps necessary to implement ATFM in the NAM/CAR regions, one first needs a plan or approach.

2.2 This paper presents an approach for developing Air Traffic Flow Management (ATFM) for the NAM/CAR regions. It outlines five important steps for States to consider when preparing to participate in regional ATFM activities. When implemented, it will assist the States in efficiently managing increased future demand. The near term future need for AFTM for the NAM/CAR region will be the Cricket World Cup.

2.3 This paper is foundation for and as such supported by three other papers that speak to: regular communications between NAM/CAR Flow Management Units, and determination of values for sector and aerodrome capacity. A prime goal here is to ensure a safe and efficient flow of traffic through the NAM/CAR region.

2.4 This approach has been presented at the NAM/CAR ATFM Seminar (Tegucigalpa, Honduras, 27-31 March 2006), the Regional NAM/CAR Air Traffic Management Meeting (Santo Domingo, Dominican Republic, 19-21 April 2006), the Second Meeting of the CAR/SAM Air Traffic Flow Management Task Force (Bogota, Colombia, 6-8 July 2006), and the First Meeting of the NAT/CAR ATS Routes Working Group (Miami, Florida, 19-21 September 2006). This approach has been supported at all these meetings and was endorsed for further work at the Second Meeting of the CAR/SAM Air Traffic Flow Management Task Force in Bogota. During the Fifth Meeting of the ATM/CNS Subgroup of GREPECAS, 13 to 17 November 2006 a draft conclusion of the CAR and SAM ATFM Concept of Operations was accepted. Draft Conclusion ATM/5/8 includes the provision to establish a work program to enable the implementation of the ATFM Concept of Operations.

2.5 The next section talks to five steps a State would need to consider, in order to participate in a NAM/CAR regional ATFM activities. The section lays out the information in the form of a simple check list for ease of use, and presents graphical models to help better explain the concept.

3. Elements for Consideration for participation in NAM/CAR ATFM

3.1 The first step is to identify the key stakeholders of the ATFM system. The list below, while not all-inclusive, represents the main operational groups that have a significant role and interest in traffic flow management.

a) Air Traffic service providers

b) Meteorological units

c) Customers (examples include air carriers, air taxi, general aviation, and military aviation)

d) Airport authorities

e) Others (examples include immigration officials, customs officials, and military authorities)

3.2 The second step is to define the elements of common situational awareness.

a) Traffic flow information. One method to accomplish this is through the use of a common software program such as Enhanced Traffic Management System (ETMS).

b) Weather information. One way to accomplish this is through the use of agreed-upon meteorological web sites.

c) Others. Examples include information concerning volcanic activity, hurricane impact, and special traffic management events such as the Cricket World Cup.

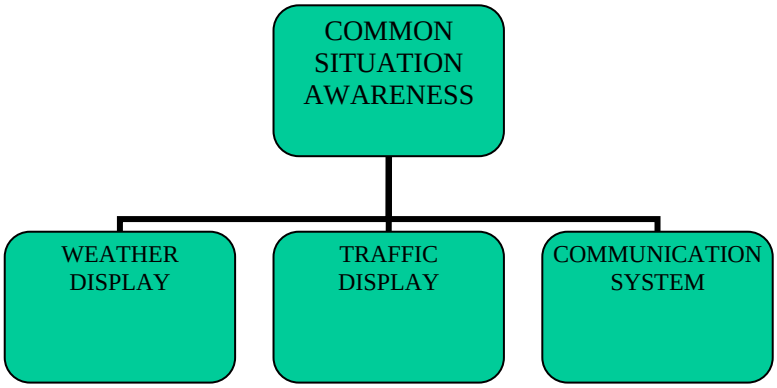
3.3 The third step is to identify the appropriate means for communication.

a) Telephone conferences

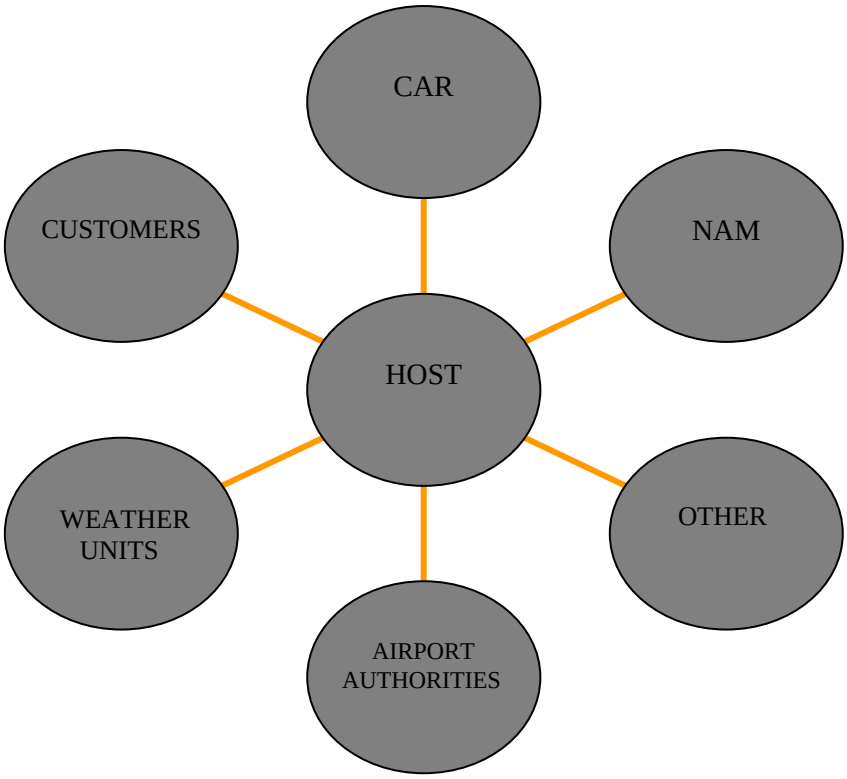
b) Web-based conferences

c) Traffic management advisory messages

3.4 The fourth step is to combine each of these aspects to form the basis of the ATFM model.



3.5 Following this model, the fifth step is for the NAM/CAR States to participate in a daily ATFM conference call. The purpose of the conference call will be to discuss ATFM concerns and to develop an outlook for the next 24-hour timeframe. This outlook will be transmitted to the customers and air traffic service providers via an advisory message.



4. Conclusion

4.1 This paper has presented an approach for developing ATFM for the NAM/CAR regions. It outlined five steps for States to consider when preparing to participate in regional ATFM, which when implemented, will assist the States in efficiently managing the extra demand that is expected during Cricket World Cup. This paper seeks endorsement of development of Air Traffic Flow Management in the NAM/CAR region.

5. Recommendation

5.1 The Meeting is invited to:

a) Take note of the information in this paper;

b) Endorse the development of Air Traffic Flow Management in the NAM/CAR regions; and

c) Establish an E/CAR point-of-contact to work with the GREPECAS ATM Committee Air Traffic Management Task Force (ATFM/TF/2) Rapporteur to develop the steps necessary to implement harmonized ATFM service in the NAM/CAR regions. (Joe Hof via email at joe.hof@faa.gov - Phone: 703 925 3113)

- END -