



Agenda Item 4

Air Navigation Matters

4.2 Follow-up on the Implementation of the NAM/CAR Regional Performance Based Air Navigation Plan (NAM/CAR RPBANIP):

- **Progress reports of the former Sub-regional Working Groups on AIM, ATM and CNS fields.**

IMPLEMENTATION OF REDUCED LATERAL SEPARATION AND NEW RNAV ROUTE RESTRUCTURE IN THE GULF OF MEXICO

(Presented by the United States)

SUMMARY	
<p>The project to implement 50 nautical mile (NM) lateral separation and Area Navigation (RNAV) routes in the Gulf of Mexico (GoMex) has been progressed by the United States Federal Aviation Administration (FAA), the Dirección General de Aeronáutica Civil de México (DGAC), and Servicios a la Navegación en el Espacio Aéreo Mexicano (SENEAM), in coordination with the ICAO North American, Central American and Caribbean (NACC) Office and operator organizations. The 50 NM lateral separation standard was implemented on 20 October 2011. A new GoMex RNAV route structure was successfully implemented on 10 January 2013.</p>	
References:	
<ul style="list-style-type: none"> • Report of the Twelfth Meeting of the Directors of Civil Aviation of the Central Caribbean (C/CAR/DCA/12) 	
Strategic Objectives:	<p><i>This information paper is related to Strategic Objectives:</i></p> <p><i>C. Environmental Protection and Sustainable Development of Air Transport</i></p>

1. Introduction

1.1 In 2009 the United States Federal Aviation Administration (FAA) and Servicios a la Navegación en el Espacio Aéreo Mexicano (SENEAM) started working together to progress implementation of 50 NM lateral separation between operators and aircraft authorized for Required Navigation Performance (RNP) 10 or RNP 4 operations and to introduce an RNAV route structure for the airspace overlying the Gulf of Mexico (GoMex).

1.2 The FAA and SENEAM conducted a number of meetings to plan the project and, in addition, participated in ICAO regional planning meetings and workshops to inform States and industry organizations on progress of the project.

2. Discussion

2.1 On 20 October 2011, 50 NM lateral separation was implemented between aircraft authorized RNP 10 or RNP 4 on the existing GoMex route structure.

2.2 On 10 January 2013, a new GoMex RNAV route design was successfully implemented. The redesigned routes are spaced 50 NM apart to support the lateral separation standard. The new route structure increases the availability of routes and flight levels in the GoMex and enables more aircraft to operate on time and fuel efficient routes and flight levels. This, in turn, will reduce fuel burn and engine emissions. In addition, en route capacity and air traffic management flexibility will be enhanced.

2.3 The FAA worked with the ICAO NACC Office, State regulators and air traffic service providers in the GoMex and Caribbean areas to implement a policy for single long-range navigation system (S-LRNS) equipped aircraft to qualify for RNP 10 for GoMex operations. Allowing S-LRNS equipped aircraft to qualify for RNP 10 will enable more operator aircraft to be authorized RNP 10; thereby, creating a more uniform operating environment for the application of 50 NM lateral separation. The factors considered were: (1) the shortness of the legs outside the range of ground navigation aids; (2) the availability of radar and VHF coverage in a large portion of GoMex airspace; and, (3) the absence of events attributed to S-LRNS in GoMex operations.

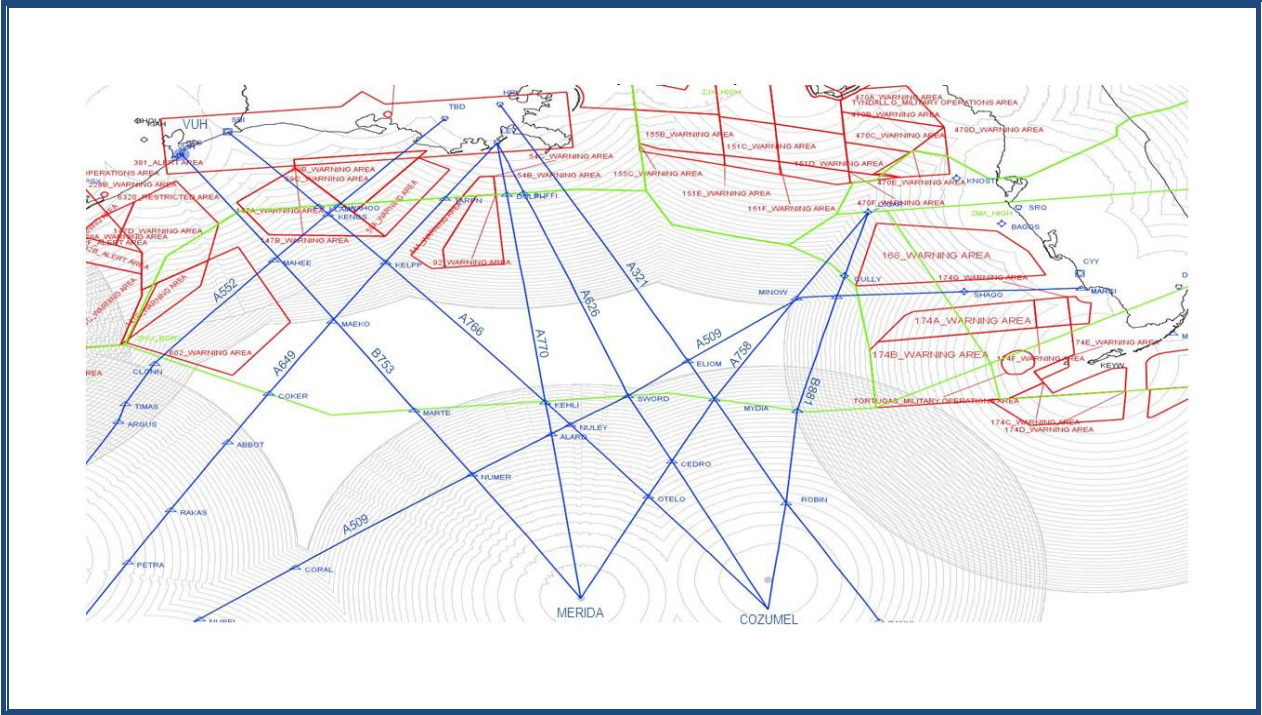
2.4 Non RNP 10 aircraft may file any route at any altitude in the route structure and are cleared on their preferred route/altitude as traffic permits. The 50 NM lateral separation is not applied to Non RNP 10 aircraft.

2-5 The transition from the old routes to the new routes was smooth and uneventful. FAA William J. Hughes Technical Center, Separation Standards Analysis Branch analysis on Gulf traffic for a 31-day period in March 2011 on the new route structure estimated a \$1.5M operator fuel cost savings.

3. Conclusion

3.1 The Working Group is invited to note the information presented in this paper.

PREVIOUS GOMEX ROUTE STRUCTURE



NEW GOMEX ROUTE STRUCTURE

