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INTERNATIONAL CIVIL AVIATION ORGANIZATION

FOURTEENTH MEETING ON THE IMPROVEMENT OF AIR TRAFFIC SERVICES OVER THE SOUTH ATLANTIC

Montevideo, Uruguay, 7 to 9 May 2008

Agenda Item 1: Air traffic management (ATM)
1.3. Follow up of the AORRA airspace implementation.

Extension of AORRA Airspace to the North

(Presented by IATA)

SUMMARY

This paper discusses the need to extend the boundary of AORRA airspace to the North in support of new operations that would use this extended Random Routing area.

1. INTRODUCTION

1.1 On the 21st of December 2006, the South Atlantic States commenced a Random Route area for aircraft operating between Africa and South America called Atlantic Ocean Random Routing RNAV Area (AORRA). Random Routing in Oceanic airspace is not new having been first implemented in the North Atlantic in the early 1970s. The Central Pacific Air Navigation Service Providers (ANSPs) began published PACOTS flexible routes daily in the early 1980s. More recently operations in the Indian Ocean from South Africa and the Middle East to Australia have benefited from a progressive expansion of the area supporting Random Routes since the mid-1990s.

1.2 Participating airlines will potentially be able to realise large benefits from Random Route tracks designed to maximize or minimise wind effect. Maximum airline participation coupled with minimal requirements or restrictions encourages the use of the Random Routes. In the Indian Ocean example, the extrapolated benefits from actual data on savings are estimated to be in excess of 2.7 million kilograms of fuel per annum in the Melbourne FIR alone.

1.3 The implementation of the AORRA area within the South Atlantic has begun with a group of ANSPs determining the extent of the area and considered as the initial phase. Aircraft flying Random Routes within AORRA will use the conventional Airway structure outside of the AORRA area and commence Random Routing only at the boundary. As the conventional ATS Airway structure does not always position the aircraft efficiently for a random route (Flex Track), benefits to airlines will increase with the extension of the current boundary of AORRA airspace to the North. This would make Random Routing & its associated benefits accessible to airlines operating from the Arabian Gulf (Middle East) or Central/Eastern Africa (the middle tier of Africa) in both directions.

1.4 IATA has recently reiterated the need for airlines to concentrate on utilising the processes and procedures instigated by dedicated ANSPs to achieve fuel efficiencies for their airline customers. An additional benefit of reduced fuel burn is the subsequent reduction in green house gas emissions.

2. DISCUSSION

2.1 The original phase of the South Atlantic AORRA area runs approximately East/West along line between 5°S and 18°S In order to gain maximum flexibility the current northern AORRA boundary needs to move to meet the Southern edge of the EUR/SAM RVSM corridor, or to a suitable RVSM Transition boundary for crossing traffic. As the AORRA is currently defined, the wind dynamics will have a Dubai/Sao Paolo flight operating in the Random Routing area most days accruing the associated benefits while the return sector Sao Paolo/Dubai will be operating on the ATS fixed route structure without the benefits of a random route (Flex tracking).

2.2 With flight times on the Dubai/Buenos Aires city-pair typically around 16 hours Eastbound and 17 hours Westbound, these Ultra-Long Range (ULR) operations need as much optimization as possible in order to be operationally and commercially economic

2.3 Individual ANSPs have limited potential to improve long haul fuel efficiencies. However multiple ANSPs working to a common goal, such as the SAT AORRA, have the capability to provide dramatic gains. The initial implementation of the AORRA in the South Atlantic is a necessary first step in providing optimum Random Route options for operators in this Region. It only remains for it to be extended to include all South Atlantic airspace to the South of the EUR/SAM RVSM corridor.

2.4 During the SAT 13 Task Force Meeting, Cape Town 21-23 February, extensive discussion took place with regards to the implementation of phases 2-4 of AORRA. IATA lobbied that as a result of the successful implementation of phase 1 there was no need to implement the other areas in phases. IATA proposed to the group that phases 2-4 should be combined and implemented by no later than 2008. However, Senegal objected to this proposal based on the need for their ATS to gain insight and obtain lessons learned of AORRA. As a result the meeting agreed to implement phase 2 by no later than 31 December 2008 and phases 3 and 4 by no later than 31 December 2009. To facilitate a quicker implementation IATA and South Africa agreed to provide technical assistance to Senegal with a goal that the CAA would feel comfortable with AORRA. It is of paramount importance these deadlines be met to ensure efficient operations.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) Note the benefits to airlines by Random Routing areas, such as the AORRA in the South Atlantic,
b) Ensure the extension of AORRA to the North with an appropriate target publication date, (end of the 2008),
c) Support and encourage ongoing collaborative development of harmonized operational requirements and crew procedures with other Oceanic and Remote airspace around the world, and
d) Facilitate as soon as practicable efficient Direct route segments within appropriate Domestic airspace to effectively feed the AORRA Random Routing area.

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