INTERNATIONAL CIVIL AVIATION ORGANIZATION

AFI PLANNING AND IMPLEMENTATION REGIONAL GROUP
SEVENTEENTH MEETING (APIRG/17)
(Burkina Faso, 2 to 6 August 2010)

Agenda Item 3.4: Review of the Report of the Eleventh Meeting of APIRG Air Traffic Services, Aeronautical Information Services and Search and Rescue Services (ATS/AIS/SAR/SG/11)

IMPLEMENTATION OF STRATEGIC LATERAL OFFSET PROCEDURES IN THE AFI REGION

(Presented by IATA)

SUMMARY
The 11th Meeting of APIRG ATS/AIS/SAR Sub-group requested AFI States to implement strategic lateral offset procedures (SLOP) as a means of enhancing safety by reducing the risk of collision in case of loss of vertical separation. This working paper recommends an immediate application of SLOP procedures for en-route operations within the AFI Region, including in random routing areas, based on experience gained in other ICAO Regions and lessons learnt from AFI RVSM safety assessments.
Action by APIRG/17 is at paragraph 3.1.
References: • ICAO Annex 2 and Doc 4444 - PANS-ATM. • ATS/AIS/SAR/SG/11 Report.

1. Introduction

1.1 ICAO has developed guidance material for strategic lateral offset procedures (SLOP), which are contained in ICAO Doc 4444 – PANS/ATM, Section 16.5. Annex 2, 3.6.2.1.1, requires authorization for the application of strategic lateral offsets from the appropriate ATS authority responsible for the airspace concerned. Such procedures, which are particularly relevant in an RVSM environment, have already been implemented in other Regions, including in some AFI FIRs (EUR/SAM Corridor). Strategic lateral offsets are being used by operators in the AFI Region, in an uncoordinated manner.

1.2 After noting the successful implementation of RVSM in the AFI Region on 25 September 2008, APIRG ATS/AIS/SAR Sub-group agreed to step forward with the application of SLOP procedures in the
AFI region in order to increase air navigation safety (Conclusion 10/03 refers). The Sub-group particularly requested AFI States to implement strategic lateral offset procedures in selected areas.

2. Discussion

Characterization of AFI airspace

2.1 In many flight information regions (FIRs), further extension of VHF or radar coverage cannot be implemented due to natural obstacles or difficulties in accessing preferred facility locations (forests, deserts, and oceanic areas). For this reason, AFI FIRs are generally characterized as remote continental areas for planning purposes. In the performance-based navigation (PBN) domain, the same navigation specifications which are applicable to oceanic and continental remote areas, i.e. RNP10 and RNP4, have been retained as the appropriate navigation specifications for en-route operations in the AFI Region.

Risk Mitigating Effect of Strategic Lateral Offset Procedures (SLOP)

2.2 RVSM safety assessment shows that the precision of lateral navigation is an important factor with regard to vertical collision risk. A general assumption is that 50% of the flying time is being made with GNSS navigation and the remaining 50% with VOR/DME navigation, while an extended use of GNSS navigation should have a risk increasing effect. For example: an increase of the GNSS flight time proportion to 75% would cause the estimate of the technical vertical risk to increase by a factor of approximately 1.5.

2.3 Therefore, the risk mitigating effect of strategic lateral offset procedures (SLOP) cannot be overemphasized.

Scope of SLOP procedures s

2.4 The underlying reason for SLOP is that state of the art navigation equipment are extremely accurate and increase the risk of collision when aircraft are utilizing a common route, or common points comprising a route. This reality applies to any route and it doesn't matter whether the aircraft is flying a fixed airway or random route, SLOP may provide the lateral separation to prevent a collision if two aircraft meet over a common waypoint.

2.5 It is for this same reason that the SLOP procedure is used in the entire North Atlantic Oceanic airspace to include random routings as well as the parallel track system. For consistency between oceanic regions, and to reduce the risk of collision, the SLOP procedure should be applied in the Atlantic Ocean Random Routing Area (AORRA).

2.6 There is no practical difference between two aircraft colliding on a "fixed" airway and two aircraft colliding who are coincidently flying the same random route; and there is no difference between two aircraft colliding on a fixed airway or two aircraft colliding over the same random waypoint contained in each of their random routes. In each instance, the collision might be avoided if one, or both, aircraft is flying an offset.

2.7 Further, no additional risk is incurred by allowing aircraft to fly an offset - the offset procedure only reduces risk of collision while adding no extra risk of its own.

3. Conclusion

3.1. The meeting is invited to request that AFI States authorize the application of special procedures for strategic lateral offsets for en-route operations in oceanic and remote continental airspace within AFI Region, including in random routing areas such as AORRA.

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