



International Civil Aviation Organization

Sixth Meeting of the Air Traffic Services Route Network Task Force

(ARN TF/6)

(Cairo, Egypt, 22– 24 April 2013)

Agenda Item 3: Review ATS Route Network

IMPLEMENTATION OF SIGNIFICANT AIR-ROUTE CHANGES WITHIN THE BAHRAIN FIR

(Presented by Bahrain)

SUMMARY

This paper presents a summary of the activities related to the implementation of significant air-route changes within the Bahrain FIR functional airspace block in the MID region.

Action by the meeting is at paragraph 3.

REFERENCES

- MID RVSM SMR 2010
- MID RVSM SMR 2012

1. INTRODUCTION

1.1 For some years it has been recognized within the Bahrain FIR that traffic congestion, combined with frequency overload, has presented a need for air-route modification to improve safety and reduce complexity within the region. As regional airline fleets continue to grow, this need for change has become more pressing.

1.2 Since 2010 the MIDRMA has indicated that Bahrain has one of the highest traffic levels in the MID region. The Bahrain FIR entry point BALUS, which serves as the westbound traffic entry point into the Bahrain FIR from the U.A.E., scored the highest number of flights within the MID region.

1.3 Bahrain raised their serious concerns to the MIDRMA regarding the need for establishing a second, or more, entry points and air-routes to carry westbound traffic entering the Bahrain FIR from the Emirates FIR so as to reduce traffic congestion at BALUS and to increase safety margins.

1.4 Following extended negotiations with neighboring ATSUs, in particular the U.A.E. and Qatar, changes to the air-route structure within the Bahrain FIR are proposed for the 30th of May 2013. This will result in a reduction of controller and pilot workload through simplified and more segregated routings, and is likely to increase the acceptance rate for traffic entering from the U.A.E. into the Bahrain FIR.

2. DISCUSSION

2.1 Prior to May the 30th 2013, only ONE airway was available for traffic leaving the Emirates FIR into the Bahrain FIR, which is UL768, commencing at position BALUS. Combined with the traffic acceptance conditions imposed through inter-unit LOAs, this single use point/airway presented the Bahrain FIR controllers with significant challenges as traffic flowed out of the U.A.E. towards the Kuwait and Jeddah FIRs; these neighbouring ATSU's requiring larger lateral separations between aircraft than what Bahrain accepts from the U.A.E.

2.2 Significant levels of R/T and controller intervened tracking were required in this area to enable aircraft to reach their requested cruising altitudes and routings, effective May the 30th 2013, three new air-routes will exist for traffic entering the Bahrain FIR from the U.A.E. FIR.

2.3 At position ORMID UP699/UN929 commences and will be used for traffic with destination OBXX and OEDX. Traffic transiting the Bahrain FIR into the Jeddah FIR at position GIBUS will follow UN929.

2.4 At position ALPOB UN563/UL768/UN571 commences and will be used for traffic transiting the Bahrain FIR into the Jeddah FIR at positions GIBUS, ANTER and COPPI.

2.5 At position TUMAK UM557/UM600/UL602 commences and will be used for traffic transiting the Bahrain FIR into the Tehran FIR at position MIDSJ and the Kuwait FIR at positions KUMBO and DAVUS.

2.6 These new air-routes will result in the following operational enhancements:

- a. Greater acceptance rate of traffic from the U.A.E. into the Bahrain FIR,
- b. Greater traffic segregation at the Bahrain/U.A.E. FIR boundary according to the route they will fly,
- c. Simplified route clearances issued to aircraft according to the route will fly, i.e. "...cleared UL602 IVONI." instead of "...cleared UL768 RAMSI, UL602 IVONI.",
- d. Less requirement for controller intervention to enable aircraft to reach cruising levels as aircraft cross FIR boundaries.

2.7 Effective May the 30th 2013, four air-routes will exist for traffic exiting the Bahrain FIR into the U.A.E. FIR, at positions NALPO and OBNET, air-routes UP559 and UM677/UL308 will be used for traffic entering the northern U.A.E. either over-flying or with destination OMDX.

2.8 At positions OVONA and TOSNA, air-routes UN318 and UN685/UL604 will be used for traffic entering the southern U.A.E. either overflying or with destination OMAX.

2.9 These new air-routes will result in the following operational enhancements:

- a. A reduction in the amount of traffic convergence within the Bahrain Central sector. One of the most complex and busiest sectors in the MID region. Traffic from the Kuwait FIR can transit through to the U.A.E. without requiring as much intervention against traffic transiting from the Jeddah FIR,
- b. More effective sequencing of traffic arriving into the U.A.E. against traffic departing from within the Bahrain FIR to the east.
- c. Simplified route clearances issued to aircraft according to the route they will fly, i.e. "...cleared UP559 TOMSO." instead of "...UP559 LOTIT, UL308 NADAM."

2.10 From the 30th of May 2013 traffic from the Kuwait and Jeddah FIRs will continue to enter the Bahrain FIR as it does at present however as stated above, the flow of that traffic towards the Bahrain Central and East sectors will be managed much more effectively by reducing the number of crossing tracks.

2.11 The air-route change proposal effective the 30th of May 2013 introduces significant operational benefits to the Bahrain FIR controllers and to aircraft transiting this airspace. In conjunction with this change, some modifications will be made to internal Bahrain FIR sector boundaries to further assist the traffic flow and reduce frequency congestion. Of further importance, this proposed change allows for some accommodation of the projected increase in regional traffic growth. Further improvements in this area are likely to be made through a reduction in cross border lateral separation requirements, an issue that Bahrain remains committed to through continued friendship and close cooperation with our neighbouring aviation partners.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a. note the information contained in this working paper; and
- b. update the MID ANP BASIC ATS-1 Table.

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