



International Civil Aviation Organization
Eastern and Southern African Office

**Air Traffic Management Coordination Meeting for Southern AFI
Flight Information Regions (ATM/CM-SAF)
(Johannesburg, South Africa, 3-5 February 2015)**

**Agenda Item 4: PBN, ASBUs and the AFI Optimized Route Trajectory and Airspace
(AORTA) Initiative**

AFI Optimized Route Trajectory and Airspace (AORTA)

(Presented by South Africa)

SUMMARY
The purpose of this working paper will be -:
<ul style="list-style-type: none">- To inform members as to the progress made locally regarding the South African route review as well as regional route implementation initiatives stemming from the Performance Based Navigation Route Network Development Working Group (PRND WG/4) (Nairobi, Kenya, 1 to 3 April 2014)
REFERENCES
This Working Paper is related to Strategic Objectives: A, C, F

1. INTRODUCTION

- 1.1 A PRND WG/3 meeting convened in Dakar, Senegal 5-8 August 2013 agreed that users should continue to develop efficient ATS route trajectories through the AFI ATS Route Catalogue based on efficiency, preferred profiles and environmental protection to support airspace optimization and PBN implementation in the AFI Region.
- 1.2 The development of new ATS routes takes place with the concept of AORTA endorsed by the APIRG/19 meeting in October 2013. It will be recalled that AORTA is a coordinated approach to the development of trajectories, supporting coordinated efficient operations from end to end. In this regard the development of terminal routes is to take into consideration existing and proposed development of ATS routes in the en-route structure.

-2-

- 1.3 Actions stemming from PRND WG4, was to continue developing en-route trajectories providing efficiency and safety to the AFI airspace, taking into consideration the criteria agreed at PRND WG/3 meeting and endorsed by the APIRG/19 meeting.
- 1.4 The South African PBN Roadmap midterm review of en-route airspace will be completed by 2016. New RNAV routings will be AIRAC Effective early March 2015.

2. DISCUSSION

- 2.1 The South African PBN Roadmap midterm goals will leverage increasing flight capabilities based on RNAV and RNP, with a commensurate increase in benefits such as fuel-efficient flight profiles, better access to airspace and airports, greater capacity, and reduced delay. These incentives, which should provide an advantage over non-RNP operations, will expedite propagation of equipage and the use of RNP procedures.
- 2.2 A RNAV Route review of South African airspace has recently been completed and flight operations will be utilizing and benefitting from these changes as early as March 2015.
- 2.3 Stemming from PRND WG/3 ((REPORT APPENDIX 3A) (- Attachment 1 ATS Routes Initiated by PRND WG/3)), various routes were suggested for development by the meeting. These suggested routings were carried forward and work shopped at PRND WG/4 in Nairobi, Kenya, 1-3 April 2014.
 - 2.3.1 The work shopped routes included the following:
 - 2.3.2 **Route 018** – FALE – FVHA/FLKK (Johannesburg/Lusaka)
 - 2.3.3 **Route 033** – FACT – FVHA (Cape Town/Harare)
 - 2.3.4 **Route 034** – FACT – FQMA (Cape Town/Maputo)
 - 2.3.5 **Route 035** – FACT – FLKK (Cape Town/ Lusaka)
- 2.4 Communication to aviation authorities through which the various airspaces would flow, have not been fruitful. FQMA has been helpful in suggesting an entry point into their FIR for the RNAV extending from FACT to FQMA. This RNAV has not been developed as the RNAV route review mentioned earlier taking place in South Africa has only recently been completed.
- 2.5 As a result of the slow progress made regarding the development of Routes 018, 033 and 035 mentioned above, the initiative was taken to develop routings between the city pairs and they are put forward as a possible RNAV routing solution.

-3-

2.6 The suggested routings are listed below:

2.6.1 **Route 018:** TGV, APMAT, APGAP, GERAX, VMS, PKV, PHV, EPLON, VMV, VSB/VLS

This routing is being trialed by SA EXPRESS airline after a CDM process between the airline and ATNS

2.6.2 **Route 033** VSB, GWV, DUMGO, NESAG, RAGUL, UQ10, CTV

2.6.3 **Route 035** VLS, XOSIN, BONAL, EVEBO, EPMAX, CB001, AVUSA, UPV, UQ23, CTV

2.7 ICAO to provide guidance for the naming convention used for these RNAV routings.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) Take note of the contents of the discussion paper.
- b) It is suggested that ICAO take the lead in ensuring co-ordination between all parties concerned to develop and implement these routings as per PRND WG3/4 regional route review.

-----END-----