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AIC
03/08
18 MAY 08

OPERATIONAL TRIALS OF GPS BASED LOCAL SEPARATION MINIMA ON
SELECTED SEGMENTS ON AIRWAY R 329

1. Introduction

1.1 This AIC is to inform all operators about the operational trials of GPS based Local Separation Minima on selected segments on Airway R329. This minima is prepared in light of the difficulties faced by ATC due to the unreliability and limited availability of navigation aids at all regional airports, on which the separation methodology presently employed are reliant upon, in managing traffic flows on the following route segments on ATS route R329:

- (i) **R329 South**
- (a) Between reporting point ATISA and "KD" NDB;
 - (b) Between reporting point ATISA and "KA" NDB;
 - (c) Between reporting point ATISA and "GAN" VOR/DME;
 - (d) Between "KD" NDB and "KA" NDB;

(e) Between “KD” NDB and “GAN” VOR/DME;

(f) Between “KA” NDB and “GAN” VOR/DME; and

(ii) **R 329 North**

(a) Between reporting point KAGUM and “HA” NDB.

Note: *A graphical depiction of these areas is on the last page, in which the applicable route segments are thick and red. Hydrography and topography is frozen for file size reduction.*

2. Suggestive Proposal

2.1 To consider all route segments between ATISA and “GAN” VOR/DME as one segment.

2.2 Designate and declare reporting points ATISA and KAGUM as waypoints

2.3 Designate and declare surveyed geographical locations of “GAN” VOR/DME, “HA” NDB, “KA” NDB and “KD” NDB as waypoints which are already in WGS 84 format.

2.4 Implement longitudinal separation minima based on GPS distance under paragraph 4 on a trial basis.

3. Operational Requirements

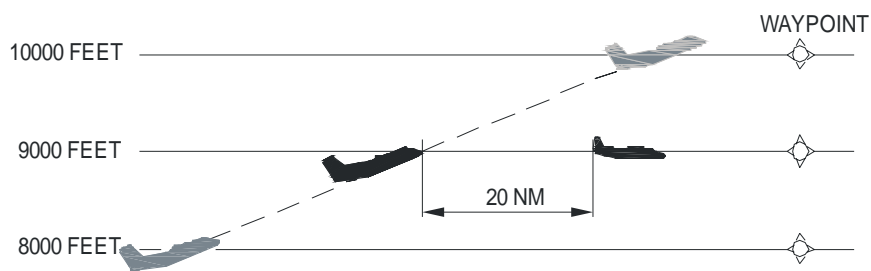
- 3.1 Participating aircraft must be equipped with GPS equipment approved for IFR operations and certified in accordance with FAA Technical Standard Order TSO C-129 A1.
- 3.2 ATC must be advised if:
 - (i) RAIM is lost for periods greater than 10 minutes, even if GPS is still providing position information; or
 - (ii) RAIM is not available when ATC request GPS distance, or if an ATC clearance or requirement based on GPS distance is imposed; or
 - (iii) GPS receiver is in DR mode, or experience loss of navigation function for more than one minute; or
 - (iv) Indicated track displacement from track centreline is found to exceed 2 NM.
- 3.3 Immediate action must be taken to apply an alternative standard when any participating aircraft reports or ATC becomes aware of any of the conditions listed under paragraph 3.2

4. Separation Minima

4.1.1 Climbing Aircraft

20 NM, provided:

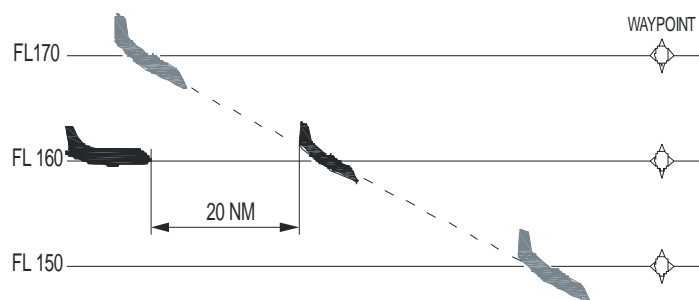
- (a) each aircraft reports distance from the same waypoint;
- (b) one aircraft maintains a level while vertical separation does not exist; and
- (c) Separation is established by obtaining simultaneous GPS readings from the aircraft relative to the same waypoint.



4.1.2 Descending Aircraft

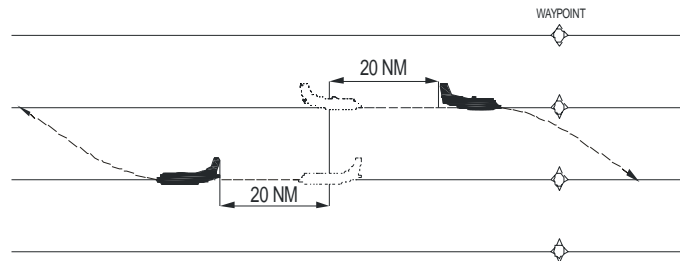
20 NM, provided:

- (a) each aircraft reports distance from the same waypoint;
- (b) one aircraft maintains a level while vertical separation does not exist; and
- (c) Separation is established by obtaining simultaneous GPS readings from the aircraft relative to the same waypoint.



4.1.3 Reciprocal Aircraft

Aircraft reporting GPS distance from the same waypoint may be cleared to climb or descend to through the levels occupied by other aircraft provided that it has been positively established



5. Trial Period

Six calendar months from the date of implementation.

6. Adoption

On completion of trials, and any subsequent changes thereto, based on real time performance.

7. References

ICAO Doc 4444 PANS ATM/501

Australian CASA, MOS Part 172

Maldives CAD, ASC OPS 16, Issue 01

8. This AIC will remain in force until 30th Nov 2008

Mahmood Razee
EXECUTIVE DIRECTOR

