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IMPLEMENTATION OF RNP 10 OPERATIONS (50 NM LONGITUDINAL SEPARATION) ON ATS ROUTES L510, N571 AND P628

1. INTRODUCTION

1.1 Following the implementation of data link services Automatic Dependant Surveillance - Contract (ADSC) and Controller Pilot Data Link Communication (CPDLC) within Kuala Lumpur FIR as an alternative medium in maintaining surveillance and communication outside radar and VHF coverage; Malaysia will be implementing Reduced Horizontal Separation (RHS) on certain of its oceanic routes in the Bay of Bengal in line with the ICAO regional programme.

1.2 The purpose of this AIP Supplement is to provide details on the implementation of RNP 10 (50 NM longitudinal separation) operations on ATS routes L510, N571 and P628 in the Kuala Lumpur FIR.

2. IMPLEMENTATION OF REDUCED HORIZONTAL SEPARATION OPERATIONS ON RNAV ATS ROUTES L510, N571 AND P628

2.1 ATC will apply 50 NM longitudinal separation minima between suitably equipped aircraft which are approved for RNP 10 operations and FANS 1/A compatible aircraft (which are compliant to RCTA DO-258A or ED EUROCAE 100A) on ATS routes L510, N571 and P628 in those segments of the routes which fall within the Kuala Lumpur FIRs.

a) L510 – (between EMRAN and GIVAL)

b) N571 – (between IGOGU and VAMPI)

c) P628 – (between IGREX and GIVAL)

2.2 Pilots are to advise ATC of any deterioration or failure of navigation system below the navigation requirements for RNP 10 or failure of its data link airborne equipment. ATC shall where appropriate provide alternate separation and/or alternative routing.

2.3 Pilots of aircraft meeting RNP 10 navigation requirements are to indicate ‘R’ in Item 10 of the ICAO Flight Plan.

3. LONGITUDINAL SEPARATION MINIMA

3.1 10 minutes or 80 NM RNAV distance based separation based on Mach Number Technique (MNT) between RNP 10 equipped aircraft shall be applied between aircraft.

3.2 50 NM longitudinal separation will be applied only between RNP 10 approved aircraft equipped with FANS 1 A which successfully able to LOGON to Kuala Lumpur CPDLC (WMFC) when outside VHF coverage; or where a direct controller pilot communication (DCPC) exists.

3.3 Differential Mach Number Technique (MNT) separation minima **shall not** be applied for RNAV distance based 80/50 NM.

3.4 The mixed mode of 80 NM and 50 NM RNAV distance based longitudinal separation and 10 minutes time based separation minima shall be in practice until such time the DCPC requirements are fully met in the area under consideration.

3.5 15 minutes time based separation shall be applicable between aircraft on crossing tracks.

4. OPERATIONS BY AIRCRAFT NOT MEETING RNP 10 REQUIREMENTS

4.1 An aircraft that is unable to meet the minimum navigational requirements for RNP 10 must file flight plan at or below the minimum flight level of the route. However operations of these aircraft above the minimum level will be subject to ATC approval, and in accordance with the provisions of paragraph 4.2, and if not approved, will be required to file a flight plan to operate via alternate route.

4.2 ATC units receiving a request for a non-RNP 10 approved aircraft to operate on ATS routes specified in paragraph 2.1(a), 2.1(b), 2.1(c) at or above FL280, will coordinate with adjacent ATC units affected by the flight. In deciding whether or not to approve the flight, each ATC unit will take into consideration:

a. Traffic density;

b. Communications, including non-availability of normal communication facilities;

c. Weather conditions en-route;

d. Restrictions notified from time to time for the route;

e. Other factors pertinent at that time.

5. MONITORING OF AIRCRAFT NAVIGATION PERFORMANCE

5.1 Monitoring of aircraft navigation performance is a joint responsibility between Operators, States of Registry or States of Operators (as applicable), regulatory authorities and the ATS providers. The detection and reporting of non-conformance with the navigation requirements against the following parameters will rely primarily on monitoring by ATC units.

5.2 Large Lateral Deviation (LLD):

LLD is classified as any deviation of 15 NM or more to the left or right of the current flight-plan track.

5.3 Large Longitudinal Error (LLE):

Any unexpected change in longitudinal separation between an aircraft pair, or for an individual aircraft the difference between an estimate for a given fix and the actual time of arrival over that fix, as applicable, in accordance with the criteria set out below:

Type of Error	Category of Error	Criterion for Reporting
Lateral Deviation	Individual-aircraft error	15 NM or greater magnitude
Longitudinal Deviation	Aircraft-pair (Time-based separation applied)	Infringement of longitudinal separation standard based on routine position reports
Longitudinal Deviation	Aircraft-pair (Time-based separation applied)	Expected time between two aircraft varies by 3 minutes or more based on routine position reports
Longitudinal Deviation	Individual-aircraft (Time-based separation applied)	Pilot estimate varies by 3 minutes or more from that advised in a routine position report
Longitudinal Deviation	Aircraft-pair (Distance-based separation applied)	Infringement of longitudinal separation standard, based on ADS, radar measurement or special request for RNAV position report
Longitudinal Deviation	Aircraft-pair (Distance-based separation applied)	Expected distance between an aircraft pair varies by 10 NM or more, even if separation standard is not infringed, based on ADS, radar measurement or special request for RNAV position report

6. OPERATORS PROCEDURES

6.1 The operator shall ensure that in-flight procedures, crew manuals and training programmes are established in accordance with RNP 10 navigation requirements.

7. EFFECTIVE DATE

7.1 This AIP Supplement will become effective at 0001 UTC on the 15 December 2011. Any changes on the information content on this AIP Supplement will be notified through NOTAM or superseded by another AIP Supplement.

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