



International Civil Aviation Organization

**Eight Meeting of the Communications/Navigation/Surveillance and
Meteorology Sub-Group (CNS/MET SG/8) of APANPIRG**

Bangkok, Thailand, 12-16 July 2004

Agenda Item 5: Radio Navigation Aids

REVISION OF NAVIGATION SERVICE IN AUSTRALIA

(Presented by Australia)

SUMMARY

This paper provides the general, direction to be adopted in the provision of radio navigation services within Australia through to the year 2020

1. INTRODUCTION

1.1 Australia has developed an ATM Strategic Plan through collaboration of aviation stakeholders that form the ASTRA group¹. Volume 3 of the Plan describes the strategic direction for navigation capability for all classes of aircraft and all classes of operation through to the year 2020.

1.2 It is appropriate to update the Australian entries currently published ICAO Asia/Pacific Facilities and Services Implementation Document (FASID) to reflect the revised strategy. This paper provides information on the general direction to be followed by Australia in the continued provision and rationalisation of conventional navigation aids. Specific changes to the FASID have been provided to the Regional Office.

2. GENERAL DIRECTION

2.1 Oceanic and Enroute

Australia intends to transition to Sole Means GNSS with Airborne Augmentation for oceanic and enroute navigation by 2010.

2.2 Terminal and Non Precision Approach

Australia intends to transition to GNSS with airborne augmentation for sole source Terminal and Non Precision Approach navigation for certain classes of aircraft and operation such as domestic General Aviation and lower capacity Regional and Charter aircraft by 2010.

Australia intends to transition to GNSS with airborne augmentation for primary means Terminal and Non Precision Approach navigation, with a network of conventional navigation aids to provide an alternative means of Terminal and Non Precision Approach Navigation for Air Transport and larger Regional and Charter aircraft by 2010.

¹ <http://www.astra.aero/>

2.3 Precision Approach

The use of the Instrument Landing System will continue to provide Precision Approach Category I. A close watch is maintained in the development on the Ground Based Augmentation System which is expected to be deployed at major aerodromes. However, ILS is expected to be retained on some runway ends as a backup until 2020.

The possible use of APV as a Precision Approach capability is currently being explored with due consideration of safety of flight, technical, operational and economic factors. No decision to adopt APV has been taken.

3. IMPACT TO AIRCRAFT FITMENT

3.1 Oceanic and Enroute

Aircraft will need to be equipped with a navigation suite or GNSS equipment to support enroute navigation without conventional enroute navigation aids. Typically, aircraft will need to have area navigation capability.

3.2 Terminal and Non Precision Approach

Aircraft will need to be equipped with either a navigation suite or GNSS equipment to support Terminal and Non Precision Approach capability based on GNSS.

Air Transport and larger Regional Charter aircraft will also require DME/VOR/NDB to allow use of the backup conventional navigation aids in the period until GNSS sole means is achieved for Terminal Area and Non Precision Approach navigation.

3.3 Precision Approach

No change.

4. IMPACT TO CONVENTIONAL NAVIGATION AIDS

4.1 VOR

VORs which only support enroute navigation will be progressively removed following consultation with Industry with expected completion by 2010.

A selection of VORs to form part of the conventional navigation aid network to provide backup Terminal and Non Precision Approach capability will be maintained through to 2015.

Those terminal VORs which are not included in the backup network will be progressively withdrawn commencing 2010.

4.2 NDB

NDBs which only support enroute navigation and locators will be removed progressively with completion expected by 2010.

A selection of NDBs to form part of the conventional Navigation Aid network to provide backup Terminal and Non Precision Approach capability will be maintained through to 2015.

Those terminal NDBs which are not included in the backup network will be progressively withdrawn commencing 2010.

4.3 DME

DME service will continue to be provided with no phase out date currently identified.

DME associated with an ILS will see increasing use in place of marker beacons.

4.4 ILS

ILS will be retained as the Precision Approach system until 2020; initially as the only Precision Approach aid but following the expected deployment of GBAS as a backup if GPS is not available.

5. CONCLUSION

5.1 The meeting is invited to note the general direction being adopted by Australia in the provision of navigation services.

5.2 It is also suggested that States work in collaboration with stakeholders to develop or refine navigation plans and such plans are coordinated through the Regional Navigation Plan and supporting FASID.

Contact:
David Cook
Airservices Australia
Email: david.cook@airservicesaustralia.com