ICAO APAC ADS-B Regulator's Workshop –Agenda Item 5

AUSTRALIAN ADS-B EQUIPAGE APPROVAL PROCESS

Australian Government
Civil Aviation Safety Authority
www.casa.gov.au

ADS-B Workshop SP/6

Australian ADS-B equipment approval process - existing system

- There is still no *internationally aligned* standards or scheme for aircraft ADS-B avionics certification

- In the absence of a certification scheme, CASA, in consultation with Airservices Australia, implemented an equipment configuration qualification scheme based on an individual approval process for each aircraft for which ADS-B service was requested
  - applied at the outset of ADS-B service provision in 2006

- Australian scheme is not purported or intended to be an aircraft ADS-B avionics *certification* scheme – we did not need that, and most APAC States do not need that

Australian ADS-B equipment approval process - existing system (cont'd)

- Aircraft operators who notify CASA or Airservices that they wish to avail of ADS-B services can apply by completing a form with the details of each of their aircraft and the ADS-B equipment on board
  - https://www.airservicesaustralia.com/projectsservices/projects/adsb/application.asp
- CASA then assesses the aircraft equipment configuration (i.e. the GNSS receiver + the ADS-B transponder) against the standards published in the Australian Civil Aviation Order
- Aircraft having approved equipment configurations are accepted to receive ADS-B separation service by ATC
- Approximately 1100+ aircraft (Australian and foreign registered) have been approved to date

Australian ADS-B equipment approval process - existing system (cont'd)

- Registration details of approved aircraft are entered in Airservices ATC system, and their ADS-B transmissions are then displayed on ATC screens
  - ADS-B transmissions by unapproved aircraft are rejected by the ATC automation system and not displayed on ATC screens - track based on flight plan only then is displayed

- Advantage:
  - Provides assurance that ADS-B transmissions displayed for ATC have the assurance of integrity and accuracy necessary for a separation service

- Disadvantage:
  - Not the normal approach for regulating airworthiness
  - Time consuming process put in place because there was no international avionics certification process available at the outset in 2006.

Australian ADS-B equipment approval process - existing system (cont'd)

On request, CASA will be pleased to provide any APAC State Regulator a listing of the State's aircraft that have been accepted into the Australian ADS-B service.

- Such aircraft meet the standards that are published in the Australian Civil Aviation Order (see IP/2)

- May assist State's in determining compliance of their own aircraft (if a rule with similarity to the Australian rule is adopted by the State)

➢ Currently approved types of avionics configurations approved by Australia up to April 2010 are listed in AC 21-45

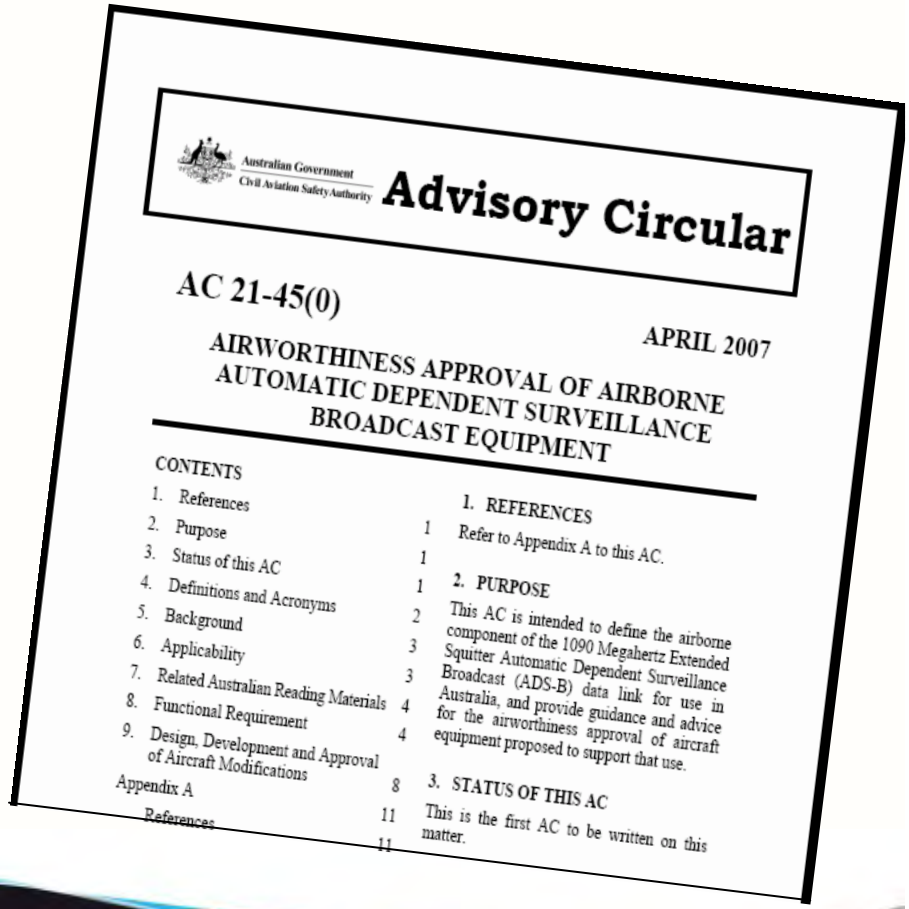
Advisory Circular AC 21 – 45

- Advisory Circular to provide aircraft operators with guidance on avionics standards/fitment:

http://www.casa.gov.au/rules/1998casr/021/index.htm

- and a listing of approved equipment configurations:

http://casa.gov.au/rules/1998casr/021/021c45eqptlist.pdf



Australian Government
Civil Aviation Safety Authority

Advisory Circular

AC 21-45(0)

APRIL 2007

AIRWORTHINESS APPROVAL OF AIRBORNE AUTOMATIC DEPENDENT SURVEILLANCE BROADCAST EQUIPMENT

CONTENTS

1. REFERENCES

Refer to Appendix A to this AC.

2. PURPOSE

This AC is intended to define the airborne component of the 1090 Megahertz Extended Squitter Automatic Dependent Surveillance Broadcast (ADS-B) data link for use in Australia, and provide guidance and advice for the airworthiness approval of aircraft equipment proposed to support that use.

3. STATUS OF THIS AC

This is the first AC to be written on this matter.

Future process

- CASA will gradually move to a system where all aircraft are presumed to comply with the existing equipment standards of the ADS-B rule
- **Beforehand: An industry publicity program - to alert aircraft operators of their responsibility to fully comply with the standards**
- At the outset, all aircraft transmitting ADS-B will then be displayed to ATC
  - Except for a “black-list” of those aircraft which are known to not comply – they will be suppressed from display of their ADS-B transmission on ATC screens, and not provided with an ADS-B separation service
- CASA will inform aircraft operators of the non-compliance and require them to comply with the standards for flight in Australia
- CASA ADS-B rule will be amended to add acceptance of newly issued certification schemes of other States, e.g. the FAA certification scheme.