

Ed Williams is an Engineer with 38 years of experience of innovation in Air Traffic Management including Radar, ATC automation systems, ADS-B and aircraft satellite navigation as well as aviation ground infrastructure management.

As a graduate Engineer with the Department of Transport he worked on the conversion of old L-Band radars from vacuum tubes to semi-conductor technology.

Ed's introduction to software and ATC automation systems came as a junior member of a project to introduce computer based radar display systems at Adelaide, Melbourne and Perth. He subsequently put in place and headed the support group for software based radar systems.

Ed became involved in international standardisation of civil aviation systems as the Australian Member (for eight years) of the ICAO SSR Improvements and Collision Avoidance System Panel (SICAS) which developed the standards for TCAS (Aircraft Collision Avoidance System) and ADS-B (Automatic Position Reporting).

Ed explored second generation satellite navigation avionics and as Chair of the ASTRA (the Australian whole of industry ATM planning forum) Performance Based Navigation Working Group lead the transition of Australian aircraft navigation from terrestrial navigation aids to satellite navigation. This realised operational benefits, increased safety and avoided the cost of renewing some 210 navigation aids.

Working closely with Qantas and Naverus, Ed introduced Required Navigation Performance Authorisation Required (RNP AR) Terminal Instrument Procedures; both proprietary and ICAO compliant at 13 airports. These procedures increase payload, optimise descent profile, shortened track miles, keep aircraft away from noise sensitive areas, reduce fuel burn and emissions.

In the months following the loss of MH-370, working with Virgin, Qantas and Inmarsat, Ed adapted FANS-1 aircraft automatic position reporting to meet the ICAO recommended surveillance of aircraft operating oceanic. The technique was subsequently adopted by New Zealand, South Africa, Fiji, and USA (Pacific ocean).

Ed Williams contribution to the International Civil Aviation Organisation (ICAO) includes:

- Former Australian Member (2013-16) of the ICAO Navigation Systems Panel (NSP);
- Former Rapporteur of the NSP Navigation Operations Sub-Group;
- Former Australian Advisor of the Separation and Airspace Safety Panel (SASP)
- Former Australian Member of the SSR Improvements and Collision Avoidance Systems Panel (SICAS)
- Chair of the Sixth ICAO SICAS Panel meeting which approved TCAS version 7.1 and ADS-B Standards for publication in ICAO Annex 10

Retired from full time employment, Ed remains an active contributor in ASTRA; he participates in both the Council and the Safety Efficiency Technology Working Group. He is actively pursuing the introduction of Satellite Based Augmentation System to provide continuous lateral and vertical guidance for Instrument Procedures to CAT-I minima everywhere in Australia and New Zealand.