

**Thirty-Third Meeting of the
Informal South Pacific ATS Coordinating Group
FANS Interoperability Team
(ISPACG FIT/33)**

**Brisbane, Australia
5-7 May 2026**

Agenda Item 4: Working Papers and Information Papers

AIRBUS BRIEF – ATS B2 UPDATE

Presented by: *Airbus / Guillaume MOLINIER*

SUMMARY

This paper provides updates on ATS B2 deployment and benefits.

1. INTRODUCTION

- 1.1 Air Traffic Services Baseline 2 (referred to as B2 in the rest of this document) is a technology supported by the Aeronautical Telecommunications Network (ATN), currently considered as the long-term target by ICAO for worldwide harmonization of Air Traffic Control datalink.
- 1.2 ATN is the ICAO-endorsed network dedicated to Aeronautical use for Datalink Safety services and used to be only accessible over VHF Datalink Mode 2 (VDL2) media which has been now enhanced to be accessible over SATCOM media as well (IRIS Service via Inmarsat Swift Broadband-Safety).
- 1.3 B2 comprises a new (enhanced) version of the CPDLC message set as well as ADS-C exchanges, over the ATN network, in order to improve current ATM services and introduce new ones (e.g. 4DTRAD, D-TAXI...).
- 1.4 A European Commission mandate will be enforced by January 2028: all new aircraft delivered with a Certificate of Airworthiness after that date, and planning to operate above FL285 in the European airspace, will have to support the B2 ADS-C capacity.

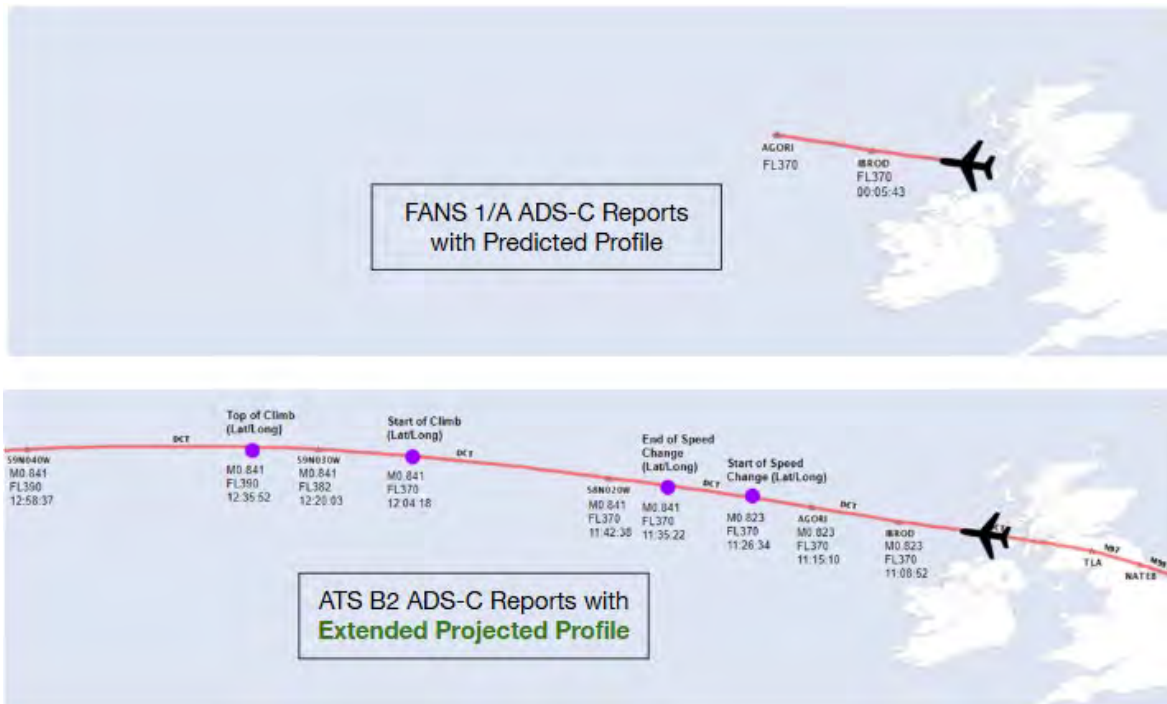
2. DISCUSSION

- 2.1 Currently, only Eurocontrol Maastricht Upper Area Control Center (MUAC) has implemented the B2 technology in their operational environment. Trained controllers have access to the B2 CPDLC message set, and have access to the display of some B2 ADS-C data on their screens, including Aircraft FMS trajectory.
- 2.2 Due to European Commission mandate, other Air Navigation Service Providers will deploy similar implementation, receive and display FMS trajectory (a.k.a. Extended Projected Profile) on Controller Working Positions.
- 2.3 On the airborne side, Airbus has certified, in 2019, a first avionics datalink product for the A320 & A330, supporting the B2 technology, as well as FANS 1/A+ and ATN B1 technologies, in a seamless fashion.

- 2.4 Several European SESAR projects have investigated and demonstrated different benefits of ATS B2 encompassing:
- ◆ Improved ground models fed by airborne data
 - ◆ 2D discrepancies identification (Conformance monitoring)
 - ◆ Adherence to filed flight plan
 - ◆ Enhanced descent profile
 - ◆ Optimised flow management
 - ◆ Airspace capacity
- 2.5 In-service exposure and analysis from MUAC and Lufthansa groups have detailed and highlight the following tangible benefits:
- a) **ATCo workload reduction**
 - i. Flight Management trajectory (lateral & vertical) can be checked anytime, discrepancy warnings reduce the need for monitoring.
 - ii. Display of offset procedures during weather deviation reducing the need of keeping aircraft on radar headings.
 - b) **Fuel/CO2 savings**
 - i. **Shortcuts and DIRECTs** enabled by better controller awareness on lateral trajectory.
 1. A320: ~100kg /316 kg CO2 (20 Nm shortcut at FL380)
 2. A330: ~220 kg / 695 kg CO2 (20 Nm shortcut at FL380)
 - ii. **Route optimisation** using random Lat/long and Push-to-Load in the FMS
 1. A320: ~25kg /79 kg CO2 (5 Nm lateral savings at FL380)
 2. A330: ~55kg / 173 kg CO2 (5 Nm lateral savings at FL380)
 - iii. **Later Start Of Descent** enabled by better controller awareness on FMS Top Of Descent
 1. A320: ~16 kg /50 kg CO2 (Delaying ATCo descent clearance by 20Nm)
 2. A330: ~37 kg /117 kg CO2 (Delaying ATCo descent clearance by 20Nm)
 - iv. **Continuous climbs**
 1. A320: ~9 kg /29 kg CO2 (by removing a 30Nm intermediate level-off at FL340 during climb to FL380)
 2. A330: ~24 kg /76 kg CO2 (by removing a 30Nm intermediate level-off at FL340 during climb to FL380)
- 2.6 Although the extended CPDLC message set offered by the B2 technology will provide some improvements to existing datalink services (e.g. new message “AT [position] CLEARED TO [position] VIA [route clearance]” to strategically alter a route between 2 unchanged waypoints) and will allow implementing future new services (e.g. 4D Trajectory-Based Operations), the major immediate benefit that can be expected by Oceanic Air Traffic Controllers will clearly be the B2 ADS-C capacity.
- 2.7 B2 ADS-C includes, in particular the Extended Projected Profile (or EPP) frame. As the name indicates, this frame allows downlinking a very complete set of Flight Management System data providing ATCos with avionics-based predictions over up to 128 points ahead of the A/C, as well as additional information such as the current A/C gross weight and currently engaged guidance modes.

2.8 This data can allow the ground system to “re-build” the FMS predicted four-dimensional trajectory of the A/C: lateral & vertical significant points (including offset transitions, start of climb/top of climb, top of descent...), altitude/speed/time predictions at each ATC waypoint but also FMS internal point (speed changes...). It is a very significant step-up from the current FANS 1/A ADS-C capacity “Predicted Route” frame which only provides partial predicted data for the NEXT and NEXT+1 waypoints.

2.9 Below is a comparison of the data set available in the FANS 1/A ADS-C Projected Route group vs the B2 ADS-C Extended Projected Profile.



2.10 The EPP can thus provide advanced short and long-term conformance monitoring, including not only the lateral route set into the FMS, but also any pre-planned speed or altitude change prepared by the flight crew. It can also significantly assist the management of traffic flows in a given airspace, thus helping to support User Preferred Routes concepts.

2.11 For more technical information on B2, refer to the applicable standard documents: ED-228A/DO-350B & ED-229A/DO-351B.

2.12 Work on revisions C for these documents is currently on-going under EUROCAE WG-78 / RTCA SC-246.

3. ACTION BY THE MEETING

3.1 The meeting is invited to note the information provided.

-- END --