Twenty Ninth Meeting of the
Informal South Pacific ATS Co-ordinating Group
(ISPACG/29)

Santiago, Chile
4-6 March 2015

Agenda Item: [5.1.3]

Automatic Dependent Surveillance – Contract (ADS-C) Climb/Descend Procedure (CDP) Project Update

Presented by Federal Aviation Administration

SUMMARY

This paper presents the U.S. Federal Aviation Administration (FAA) activities associated with the ADS-C CDP.

1. INTRODUCTION

1.1 The ADS-C CDP is designed to improve service to properly equipped aircraft by allowing an oceanic air traffic controller to have an option for granting an altitude change request when other standard separations, such as ADS-C distance-based 30 nautical miles (NM) longitudinal separation minima, do not allow for a climb or descent through the altitude of a blocking aircraft. It is an air traffic control (ATC) tool to be applied between manoeuvring and blocking aircraft pairs.

1.2 The United States (U.S.) FAA developed the ADS-C CDP to utilize existing user equipage and ATC capabilities to allow more oceanic flights to achieve their preferred vertical profiles.

1.3 This procedure is based on in-trail Distance Measuring Equipment (DME) rules in ICAO Doc 4444, paragraph 5.4.2.3.2. Aircraft pair distance verification is performed by the Advanced Technologies and Oceanic Procedures (ATOP) automation system, using near simultaneous ADS-C demand contract reports. As with the existing DME procedure, responsibility for separation assurance remains with ATC.

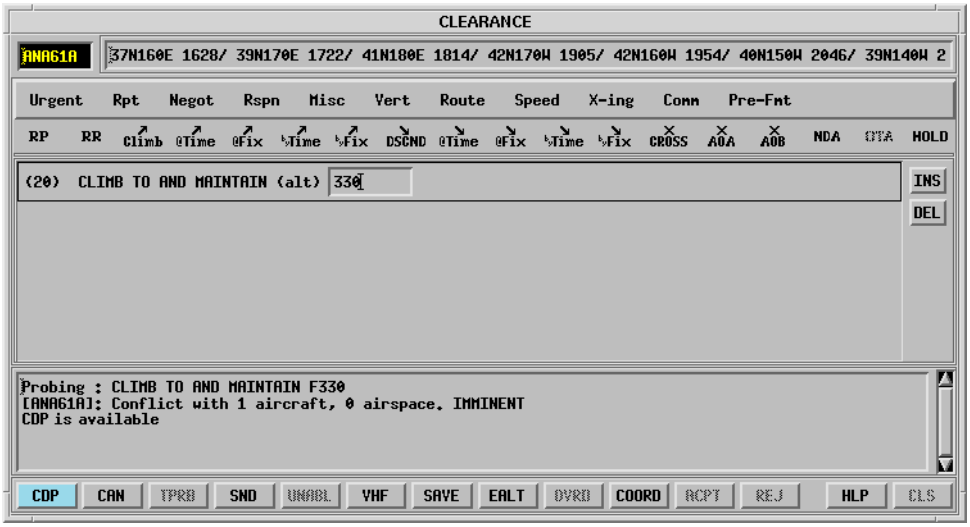
2. DISCUSSION

2.1 Implementation of the ADS-C CDP automation will benefit ADS-C equipped aircraft; non-equipped aircraft will continue to receive the current level of service. From the controllers' perspective, the implementation of the ADS-C CDP system will cause no change in workload, as all the separation calculations are performed internally. The controller will either issue the clearance for the climb/descend or UNABLE; thus, from the controller's standpoint there will be minimal change in operations. From a systems efficiency perspective, the proposed ADS-C CDP system will allow for increased efficiency and improved flow for properly equipped aircraft.

2.2 The automation enhancements to ATOP include capabilities for a controller to select two aircraft and check that the two aircraft are eligible for ADS-C CDP, send near simultaneous on-demand position reports to two aircraft, determine if the minimum separation distance between the two aircraft is greater than the ADS-C CDP separation distance (e.g., greater than 15 nm), display the ADS-C CDP conflict probe results to a controller, and build an uplink clearance message to the ADS-C CDP requesting aircraft and an uplink traffic advisory message to the blocking aircraft.

2.3 New York, Oakland and Anchorage oceanic airspace will receive the software update in January 2016. The projected initial operating capability (IOC) of the automated ADS-C CDP procedure is June 2016.

2.4 The 25th Separation and Airspace Safety Panel (SASP) Working Group Meeting conducted a final review of the Procedures for Air Navigation Services – Air Traffic Management (PANS-ATM) proposal for amendment. The Circular and the impact statement (see Attachment A) and concluded that all work has been completed and that the separation standard is ready for presentation to the Air Navigation Conference (ANC) for approval. It is anticipated that, pending approval, the standard will be applicable in November 2016.



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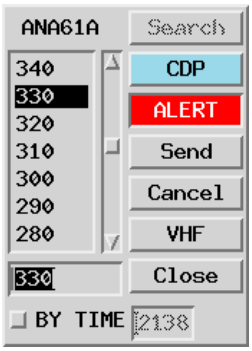
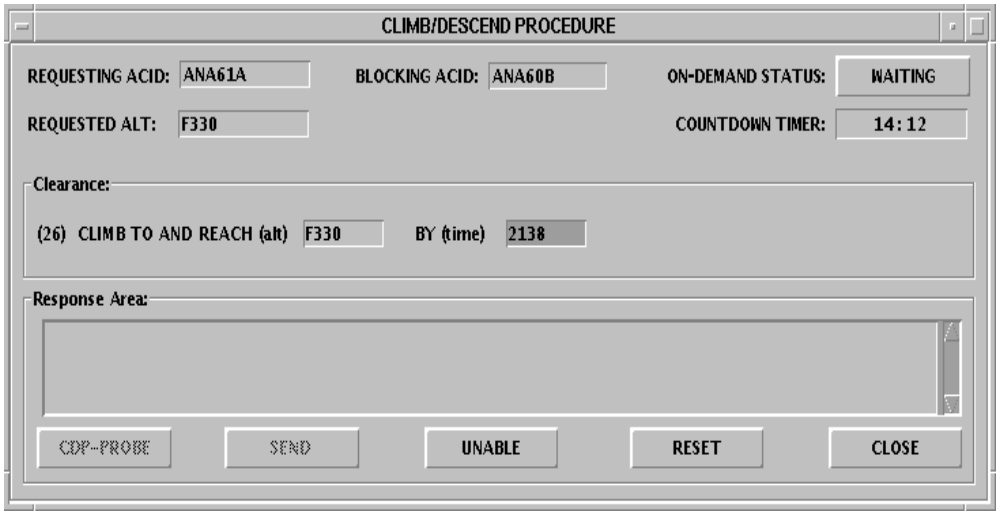


CDP enabled from probe request.



3. ACTION BY THE MEETING

3.1 The meeting is invited to note the information provided.