ADS-C CDP Climb/Descend Procedure

Implementation Project Update

Presented to: ISPACG/29

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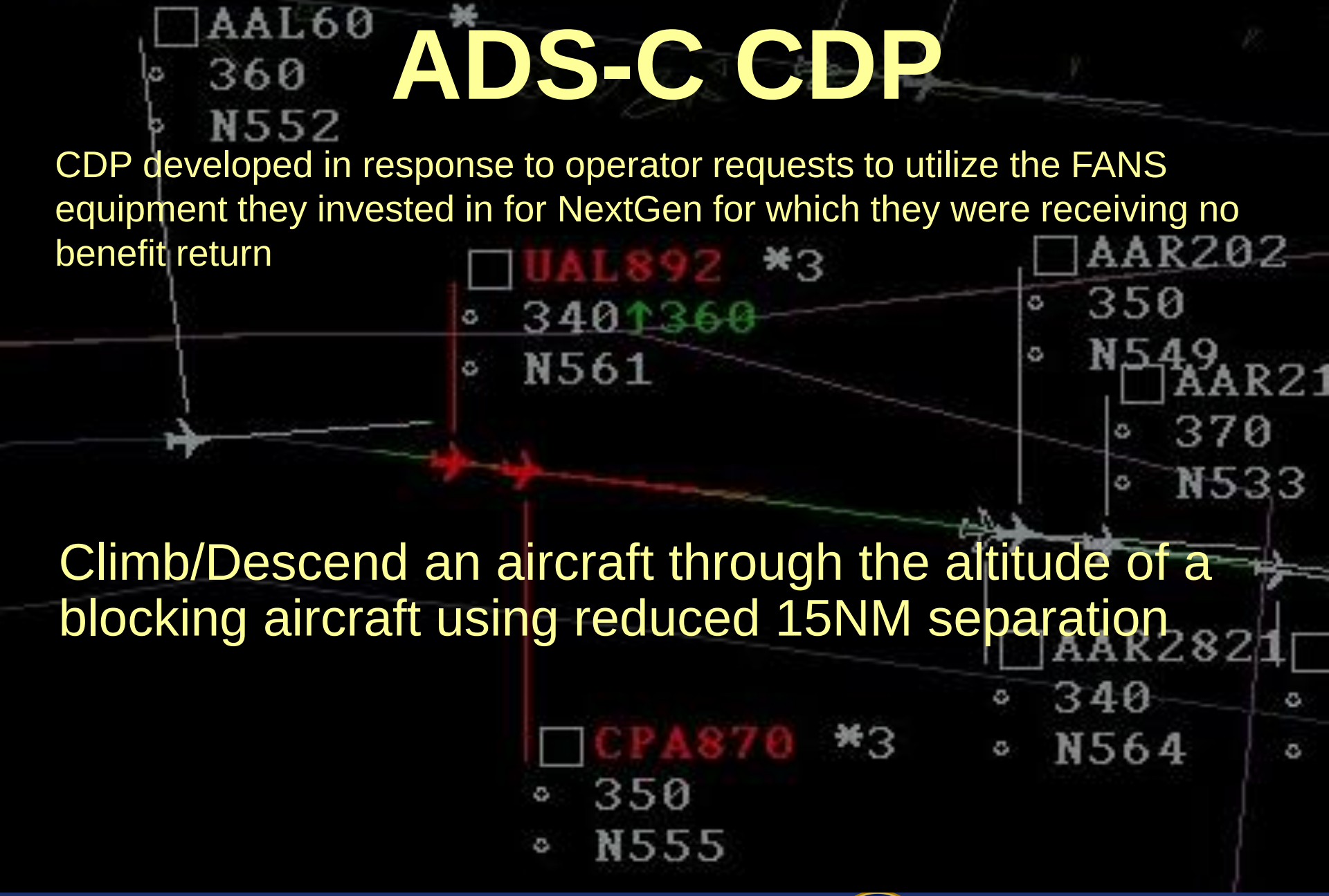
ADS-C CDP

CDP developed in response to operator requests to utilize the FANS equipment they invested in for NextGen for which they were receiving no benefit return

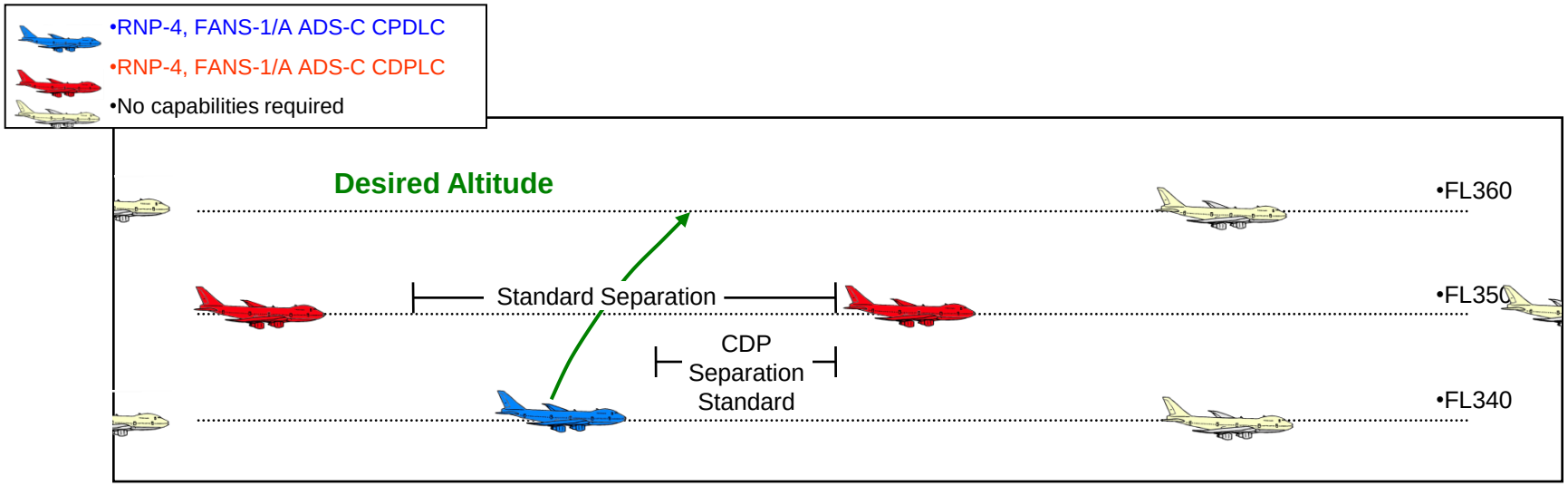
Climb/Descend an aircraft through the altitude of a blocking aircraft using reduced 15NM separation



ADS-C Operational Requirements

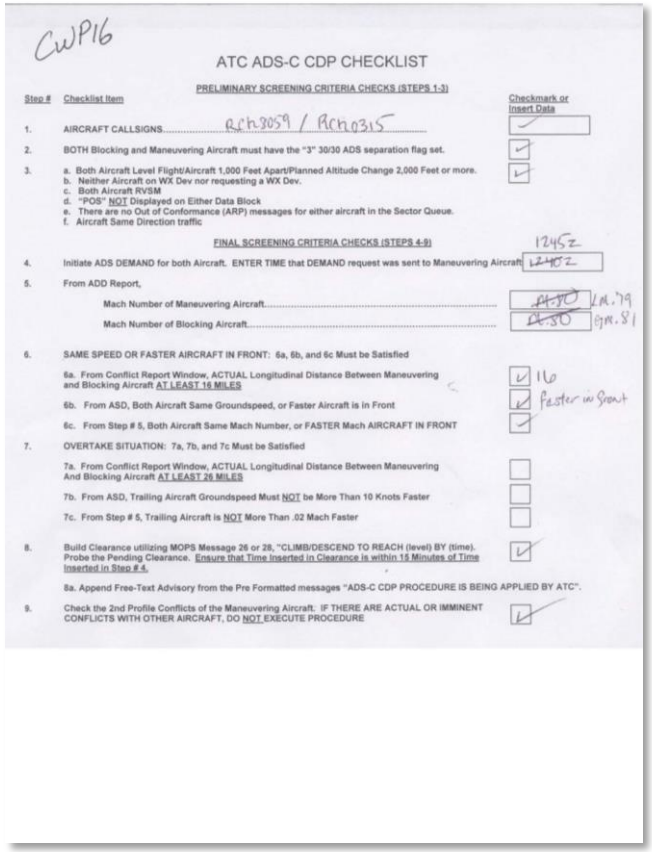
- **CPDLC maintained**
- **Distance between aircraft determined from near simultaneous ADS-C demand reports which contain position accuracy of 0.25 NM or better (Figure of Merit 6 or higher)**
- **Distance between aircraft is not less than**
  - 15NM when same speed/faster aircraft in front
  - 25NM when faster aircraft in back (not more than M0.02)
- **Altitude difference between aircraft not more than 2000ft**
- **Clearance assures vertical separation within 15 minutes from first ADS-C report request**

Automated ADS-C CDP



- **Automation requirements**
  - ATOP conflict probe decision support tool determines when CDP can be applied for climbing/descending aircraft by determining eligibility
  - ATOP will account for maneuvering aircraft, blocking aircraft, and all other traffic
  - ATOP will be able to handle multiple maneuvers in one or multiple sectors
  - Controller either issues the clearance for the climb/descend or UNABLE

Automated Procedure



CWP16

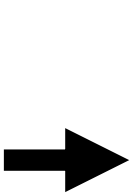
ATC ADS-C CDP CHECKLIST

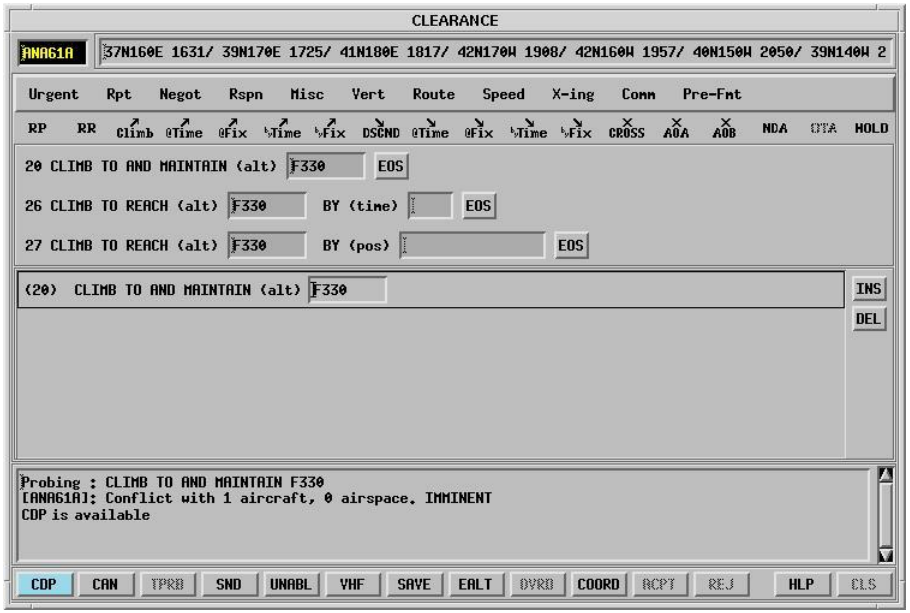
PRELIMINARY SCREENING CRITERIA CHECKS (STEPS 1-3)

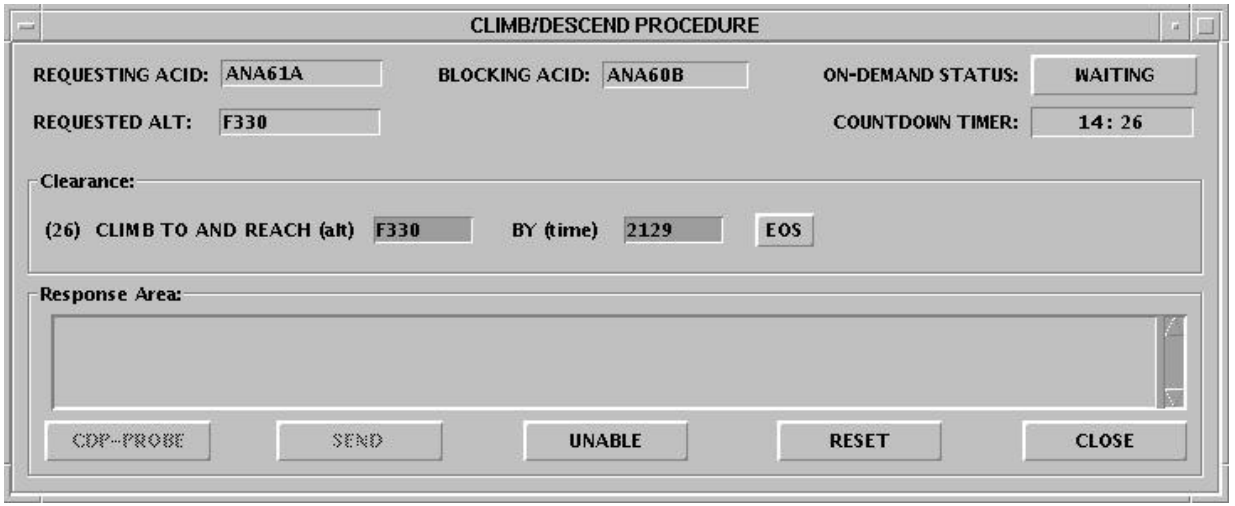
Step #	Checklist Item	Checkmark or Insert Data
1.	AIRCRAFT CALLSIGNS..... ACH3059 / ACH0315	✓
2.	BOTH Blocking and Maneuvering Aircraft must have the "3" 30/30 ADS separation flag set.	✓
3.	a. Both Aircraft Level Flight/Aircraft 1,000 Feet Apart/Planned Altitude Change 2,000 Feet or more. b. Neither Aircraft on WX Dev nor requesting a WX Dev. c. Both Aircraft RVSM d. "POS" NOT Displayed on Either Data Block e. There are no Out of Conformance (ARP) messages for either aircraft in the Sector Queue. f. Aircraft Same Direction traffic	✓

FINAL SCREENING CRITERIA CHECKS (STEPS 4-9)

4.	Initiate ADS DEMAND for both Aircraft. ENTER TIME that DEMAND request was sent to Maneuvering Aircraft	1245z 1245z
5.	From ADD Report, Mach Number of Maneuvering Aircraft..... Mach Number of Blocking Aircraft.....	~~.84~~ .79 ~~.80~~ .81
6.	SAME SPEED OR FASTER AIRCRAFT IN FRONT: 6a, 6b, and 6c Must be Satisfied	
	6a. From Conflict Report Window, ACTUAL Longitudinal Distance Between Maneuvering and Blocking Aircraft AT LEAST 16 MILES	✓ 16
	6b. From ASD, Both Aircraft Same Groundspeed, or Faster Aircraft is in Front	✓ Faster in Front
	6c. From Step # 5, Both Aircraft Same Mach Number, or FASTER Mach AIRCRAFT IN FRONT	✓
7.	OVERTAKE SITUATION: 7a, 7b, and 7c Must be Satisfied	
	7a. From Conflict Report Window, ACTUAL Longitudinal Distance Between Maneuvering And Blocking Aircraft AT LEAST 26 MILES	
	7b. From ASD, Trailing Aircraft Groundspeed Must NOT be More Than 10 Knots Faster	
	7c. From Step # 5, Trailing Aircraft is NOT More Than .02 Mach Faster	
8.	Build Clearance utilizing MOPS Message 26 or 28, "CLIMB/DESCEND TO REACH (level) BY (time). Probe the Pending Clearance. Ensure that Time Inserted in Clearance is within 15 Minutes of Time Inserted in Step # 4. 8a. Append Free-Text Advisory from the Pre Formatted messages "ADS-C CDP PROCEDURE IS BEING APPLIED BY ATC".	✓
9.	Check the 2nd Profile Conflicts of the Maneuvering Aircraft. IF THERE ARE ACTUAL OR IMMINENT CONFLICTS WITH OTHER AIRCRAFT, DO NOT EXECUTE PROCEDURE	✓







Current Working Schedule

- **ADS-C CDP automation, when ready as an operational capability, will be installed and employed in Anchorage, Oakland and New York oceanic airspace.**

- **Software projected to be loaded in early 2016.**

- **The projected initial operating capability (IOC) of the automated ADS-C CDP procedure is June 2016.**

ICAO
ADS-C CDP Attachment A

- 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 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.

Questions?