



Federal State Unitary Enterprise
«State ATM Corporation»

Branch of «North East Air Navigation»



ADS-C CDP Implementation





Automatic Dependence Surveillance – Contract Climb and Descent Procedure (ADS-C CDP)

The feasibility of using the ADS-C in the oceanic airspace allows applying the advanced separation procedures, which enable aircraft to maintain the best possible flight level. The ADS-C CDP is based on the existing aircraft ADS-C equipment and ATS unit technological capacity and allows using the optimal vertical flight profiles for the bigger number of flights therefore enhancing the airspace capacity and efficiency.

At present automatic dependence surveillance - contract climb and descent procedure is not applicable in the Russian Federation.

“North East Air Navigation” branch is planning to implement this procedure in Magadan ACC airspace.



Conditions Required for ADS-C CDP

A controller can issue an altitude change clearance that allows an aircraft to pass through the altitude of another aircraft in situations where standard separation minima would preclude an altitude change.

The ground automation system determines the possibility of CDP application provided:

- The longitudinal distance between the aircraft (the angular difference is less than 45 degrees or more than 315 degrees) is determined by the ground automation system from near simultaneous ADS-C reports which contain position accuracy of 0.25 NM or better;
- the altitude difference between aircraft is not greater than 600 meters.
- the clearance is issued with a restriction that ensures vertical separation is re-established within 15 minutes from the first ADS-C demand report request;
- direct controller-pilot voice communications or CPDLC is maintained;
- application of the ADS-C climb and descend procedure requires ongoing monitoring based on supporting information.



Applicable Situations for ADS-C CDP

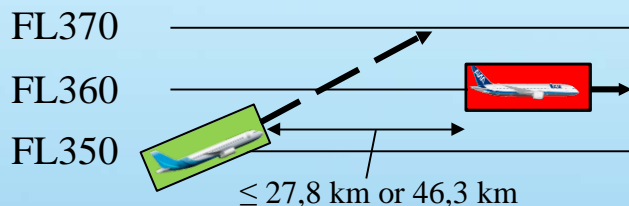


Blocking aircraft

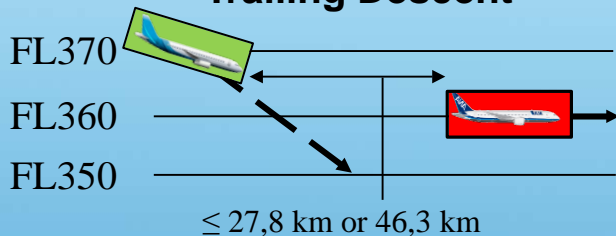


Requesting aircraft

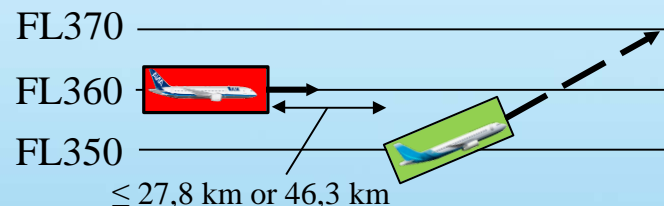
Trailing Climb



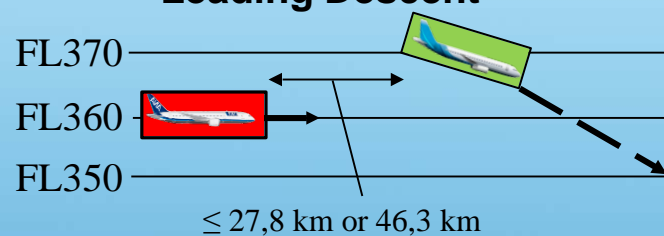
Trailing Descent



Leading Climb



Leading Descent



- 27,8 km (15 NM) – when the preceding aircraft is at the same speed or faster than the following aircraft;
- 46,3 km (25 NM) – when the following aircraft is not more than either 18, 5 km/h or 0,02 Mach faster than the preceding aircraft.

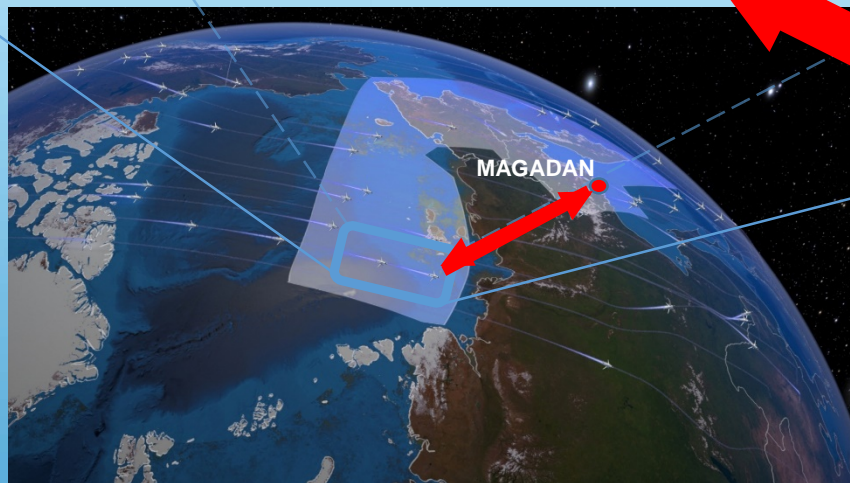


ADS-C CDP



Safety assessment of the possible
maneuver

Level change request





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The Federal Transport Agency (Rosaviatsia) supported the proposal by FSUE “State ATM Corporation” on ADS-C CDP implementation. The justification for entering CDP into the air law of the Russian Federation in accordance with paragraph 5.4.2.8 ICAO Doc 4444 Procedures for Air Navigation Services - ATM) has been prepared.

“North East Air Navigation” branch has produced a draft project on automatic dependence surveillance - contract climb and descent procedure (ADS-C CDP) implementation in Magadan ACC Oceanic sector.

The work on CDP implementation will be continued!



THANK YOU!