

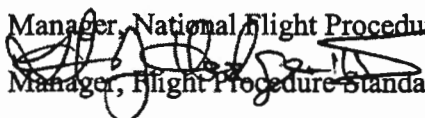


Federal Aviation Administration

Memorandum

Date: March 30, 2007

To: Manager, National Flight Procedures Office, AVN-100

From:  Manager, Flight Procedure Standards Branch, AFS-420

Prepared by: Steve Jackson, Flight Procedure Standards Branch, AFS-420

Subject: Continuous Descent Angle on Instrument Procedures

Fuel savings, emissions reductions, and noise pollution reductions are all possible when the procedure design philosophy for standard terminal arrival route (STARs) and instrument approach procedures allows aircrews to use the Continuous Descent Angle (CDA) technique for flying the procedure. CDA vertical profiles are flown as a continuous descending path without level segments, based on the actual performance of the aircraft, under the current conditions. The CDA may be initiated from enroute altitude or from the initial approach fix (IAF). The descent is computed from where the descent begins to the final approach fix (FAF) or precision final approach fix (PFAF). Most aircraft will have an actual vertical path between 2.3 and 3.3 degrees until on the actual glide path.

Since no new procedure design criteria are required, CDA can be flown on procedures where the vertical profile is not restricted unnecessarily. The use of "at or above altitudes" for obstacle avoidance and "at or below altitudes", only where it is necessary for Air Traffic Control (ATC) separation purposes, facilitate this technique. Hard altitudes and mandatory level segments severely restrict the use of the CDA. Procedure construction should still allow for non-CDA operation, as well. Having deceleration segments constructed so that they do not require level flight, but accommodate it for those aircraft which require it, facilitates operations for all operators. Procedures constructed with these parameters in mind allow the crews to descend on the optimum profile for their aircraft, based on the current conditions.

While CDA does not require new procedure criteria, incorporating the CDA considerations into the construction of procedures will satisfy industry requests for more efficient procedures and may also ease the environmental approval process. Even where the optimum descent profile cannot be achieved, savings can result from allowing less restrictive vertical profiles wherever possible.

If you have any questions, please contact Harry Hodges, Acting Manager, AFS-420, at (405) 954-4164.