

Eurocontrol CDA

Implementation Guidance Information

An Overview

Environmental Working Group

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Participants

- *Airbus*
- *Air France*
- *Airports Council International (Europe)*
- *British Airways*
- *Bucharest Henri Coanda Airport*
- *Department of Transport Romania*
- *DFS (Germany)*
- *DGAC (France)*
- *IATA*
- *LFV (Sweden)*
- *LVNL (Netherlands)*
- *Manchester Airport*
- *NATS (UK)*
- *Romanian CAA*
- *ROMATSA (Romania)*
- *SAS - Scandinavian Airlines*
- *Stockholm (Arlanda) Airport*
- *TAROM*
- *UK Civil Aviation Authority*

Scope and Objective

- The guidance is intended to facilitate harmonised implementation of CDA at aerodromes in the ECAC area.
- The objective of a CDA is to reduce aircraft noise, fuel burn and emissions by means of a continuous descent, so as to intercept the approach glide path at an appropriate height for the distance to touchdown.

Scope and Objective

- Definition: A CDA is an aircraft operating technique in which an arriving aircraft descends from an optimal position with minimum thrust and avoids level flight to the extent permitted by the safe operation of the aircraft and compliance with published procedures and ATC instructions.
- Keeping aircraft as high as possible for as long as possible can be more effective at reducing noise impact on the ground than Low-Power/Low Drag (LP/LD) techniques alone. *(LP/LD is a noise abatement technique for arriving aircraft in which the pilot delays the extension of wing flaps and undercarriage until the final stages of the approach...)*

Scope and Objective

- CDA will be most appropriately deployed where an aerodrome has existing or potential noise issues - typically where noise sensitive areas are being over-flown at medium altitude by arriving aircraft. However, the application of CDAs may be extended to all airports as a means of reducing the environmental impact of aviation. Increases in traffic density may require ATC support tools to continue the use of CDAs.

Collaboration and Culture

- Successful and safe implementation of CDA requires effective collaboration and communications among the aerodrome operator, the Air Navigation Service Provider (ANSP) and aircraft operators at an aerodrome together with support from appropriate State authorities such as the safety regulator. Effective implementation of CDA may require some change to present practice and must therefore be supported by senior management commitment. Success will also require an open exchange of information such that all parties can assess progress.

Operational Aim

- The overall operational aim for a CDA is to assist pilots to optimise aircraft approach profiles in order to reduce noise impact on the ground and, where possible, reduce fuel-use and atmospheric emissions. Because noise reduces exponentially with distance between source and receptor, the main aim of CDA is to keep aircraft as high as possible for as long as possible without adversely affecting the application of a safe descent profile. Additional noise reduction may be achieved by incorporating, to the extent possible, LP/LD techniques such as later deployment of flaps and undercarriage.

A Broader Operational Concept

As local conditions require, CDA may comprise any of the following:

- Standard Arrival Routes (STARs) (including transitions) which may be designed with vertical profiles. The routes may be tailored to avoid noise-sensitive areas as well as including the vertical profile (see ICAO PANS-OPS Doc 8168, Volume II) and the provision of Distance To Go (DTG) information;
- the provision of 'distance from touchdown' (hereinafter referred to in this document as 'distance to go' (DTG)) information by Air Traffic Control during vectoring; or
- a combination of these: STARs being used in low traffic density, and DTG estimates being issued by ATC as and when radar intervention is required e.g., during busy periods.

Key CDA Elements

- Providing accurate and timely DTG information to pilots in order to achieve CDA.
- Avoiding giving descent clearance prior to the point at which a CDA would naturally occur and giving an estimated distance from touchdown to the pilot to allow the aircraft to intercept the approach glide path with a minimum of level flight.
- Provision of appropriate speed requirements to facilitate a continuous descent profile without the need for segments of level flight.
- Avoiding unnecessarily early deployment of flap and undercarriage where this does not conflict with the safety requirements and company operating procedures.

Key Concepts and Differences

- Scope and Application
 - “Optimal position”, not TOD
 - Minimum thrust, not idle thrust
 - Stepwise application at intermediate altitudes, keep aircraft high
 - Noise Abatement key objective
 - ATC provision of DTG for vector scenarios
- Airport operator/Community Involvement
- Harmonization of all aspects/ICAO based
- Safety Assessment prior to Trials

LINK to Brochure

- EUROCONTROL Web Site
 - http://www.eurocontrol.int/environment/public/standard_page/cda_download.html