

Airport CDM

Lessons learnt & Challenges ahead

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META-CDM Workshop

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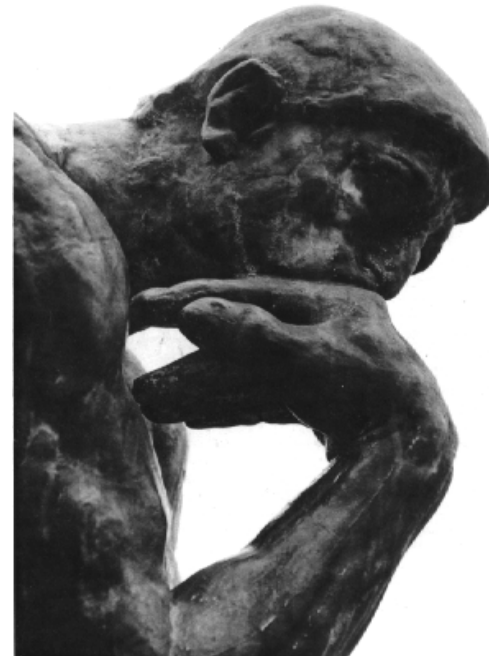
Contents

- Airport CDM history
- Current status
- Lessons learned
- Future outlook



All started with Scepticism...in early 2000

- CDM Philosophy...
- “Ethical need” for collaboration...
- All projects “must do” it anyway...
- NO NEED for A CDM Project!



Airport CDM could be a mammal?

- Mother of CDM ??
- May be mother of an elephant !
- 22 months gestation period...
- A-CDM born in Dec 2001



First Believers...

- **Brussels airport**
opened its doors for trials (the usual victim due to vicinity...)
- **Barcelona airport**
developed an Airport CDM prototype, in collaboration with the EUROCONTROL Experimental Centre in France
- Both contributed extensively to the formation of today's Airport CDM concept elements!

Previous Airport CDM Fora

- 1st A-CDM TF 12 Dec 2001
Twice per year (13 in total) 130-150 participants
Replaced by:
- The A-CDM Coordination Group (Nov 2007- DEC 2010)
- The Procedures Group (limited to 30 participants)
- The Expert panels e.g. Adverse weather, DPI panel
Replaced by:
- The A-CDM HTF (Harmonisation Task Force)



Outcome of Stakeholders' Work in past 10 years

- The A-CDM Implementation Manual (the Bible)
- OCD, FRD
- EUROCAE Technical Specifications (3 Documents)
- Community Specifications (CSs)
(published in EU Official Journal in June 2010)
- Cost Benefit Analysis (generic & local CBAs) 9/1 ratio !!
(Munich has doubled & tripled this ratio!)



Airport CDM a European Concept?

- An original concept for European airports
- Adopted by FAA in the US
- Australia, India, Japan
- Paradigm for the ICAO Global CDM Manual
- ACI- CANSO MoC 2012 for promotion & roll out of CDM programs at airports worldwide



Airport CDM...

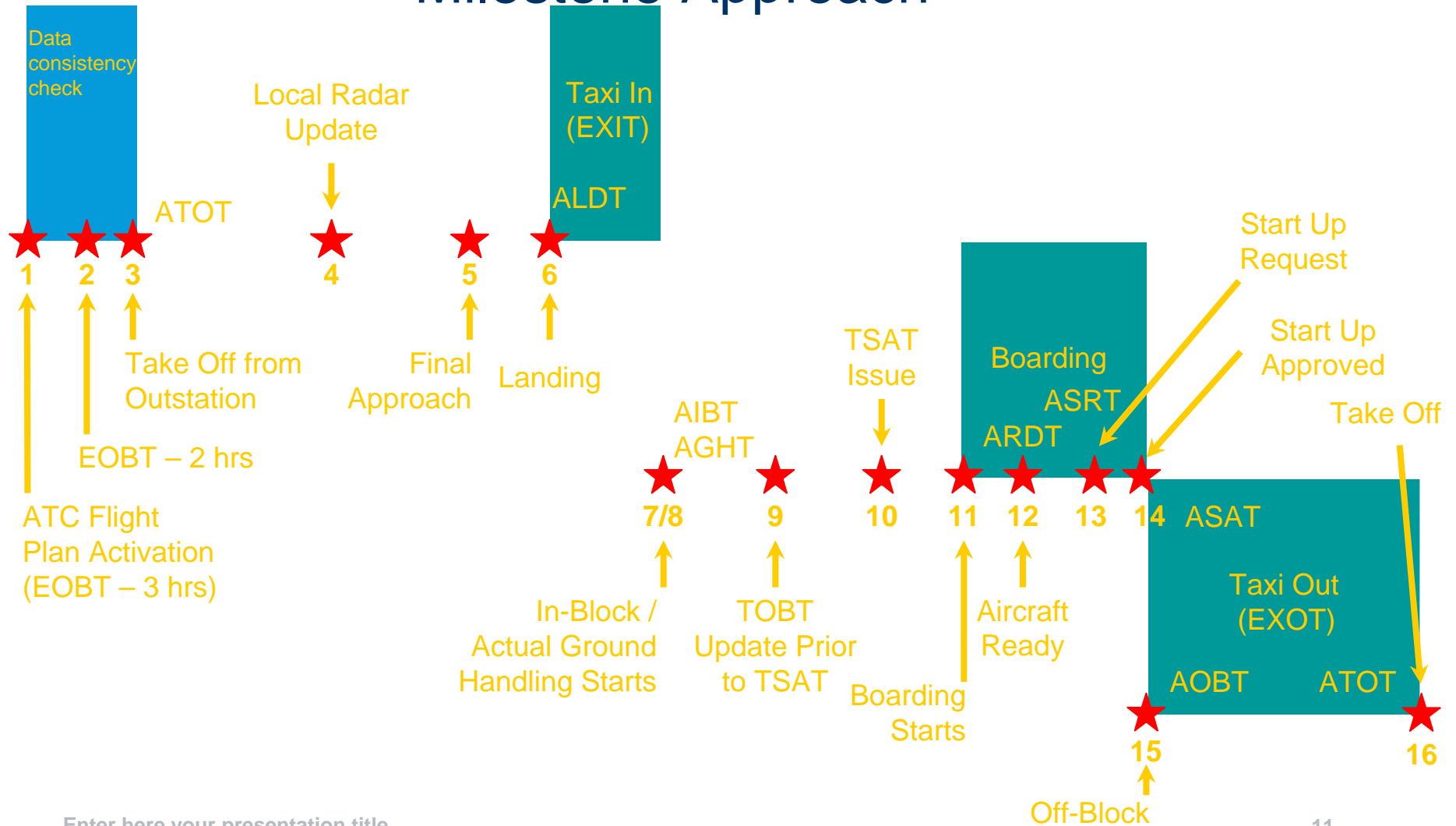
- A **proven concept** aiming at improving airside operations at airports
- Allows each Airport CDM Partner to optimise their decisions based on **shared, accurate and timely information**
- Provides the Airport CDM Partners with adapted **procedures**, processes and tools
- Dynamically **integrates airports** with the Network to give you benefits



Airport CDM...

is all about
ACTING ON SHARED INFORMATION!

Airport CDM Information Sharing & Milestone Approach



What is a “Target Time”



- *In A-CDM a target time relates to the time of an airport milestone and serves as a "contract" between partners who are thus committed to achieving the milestone at this time. The time is derived only through a collaborative process and is used for milestone monitoring**

** Definition for the ATM Lexicon uploaded on 27th Jan 2012*



CFMU

Linking Airports with the Network

DPI

Departure Planning Information

Supply the CFMU with updated information concerning a departure flight at a CDM-A

FUM

Flight Update Message

Inform the Partners at a CDM-A about the progress of an arrival flight



Objective

To share dynamic Airport CDM Information with the ATM Network

Network Ops – Airport – Network Ops

Flight Update Message (FUM)

- *Flight Status, Time over & landing times*

Departure Planning Information (DPI) Message

- *Off-Blocks & Estimated Take-Off Times*
- *Aircraft type, Taxi times & SID*

Benefits

Airports - Arrival estimates (Improved turn-round planning)

Network - Take-Off estimates (improved En route sector planning)

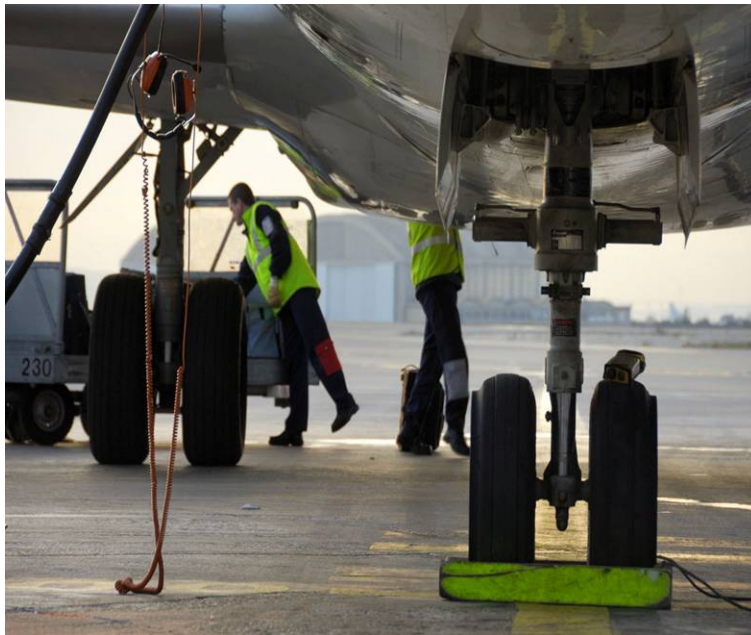
The A-CDM believers and doers...

- Full CDM airports (linked to the ATM network with FUMs & DPIs)
Certificate issued by EUROCONTROL to acknowledge airport partners' efforts for successful A-CDM implementation !
- **Munich - June 2007**
Thanks to Munich the conceptual ideas of the Manual turned into "real" operations !
- **Brussels - June 2010**
- **Paris CDG - November 2010**
- **Frankfurt - February 2011**
- **London Heathrow - June 2012**



A-CDM ‘a game changer’ for airports

- Enhanced punctuality of operations
- Optimised resource management
- Preferences and priorities taken into account



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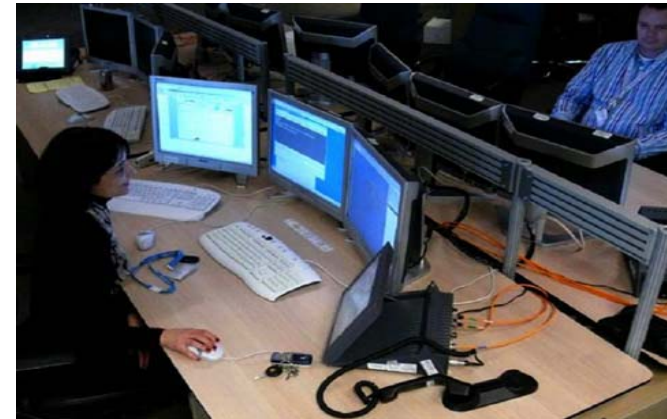
Vision: High-Performance ATM for 2020

- Enable a threefold **increase in capacity**
- **Improve safety** by a factor of 10
- Reduce by 10% the **environmental impact** per flight
- **Cut ATM costs** by 50%

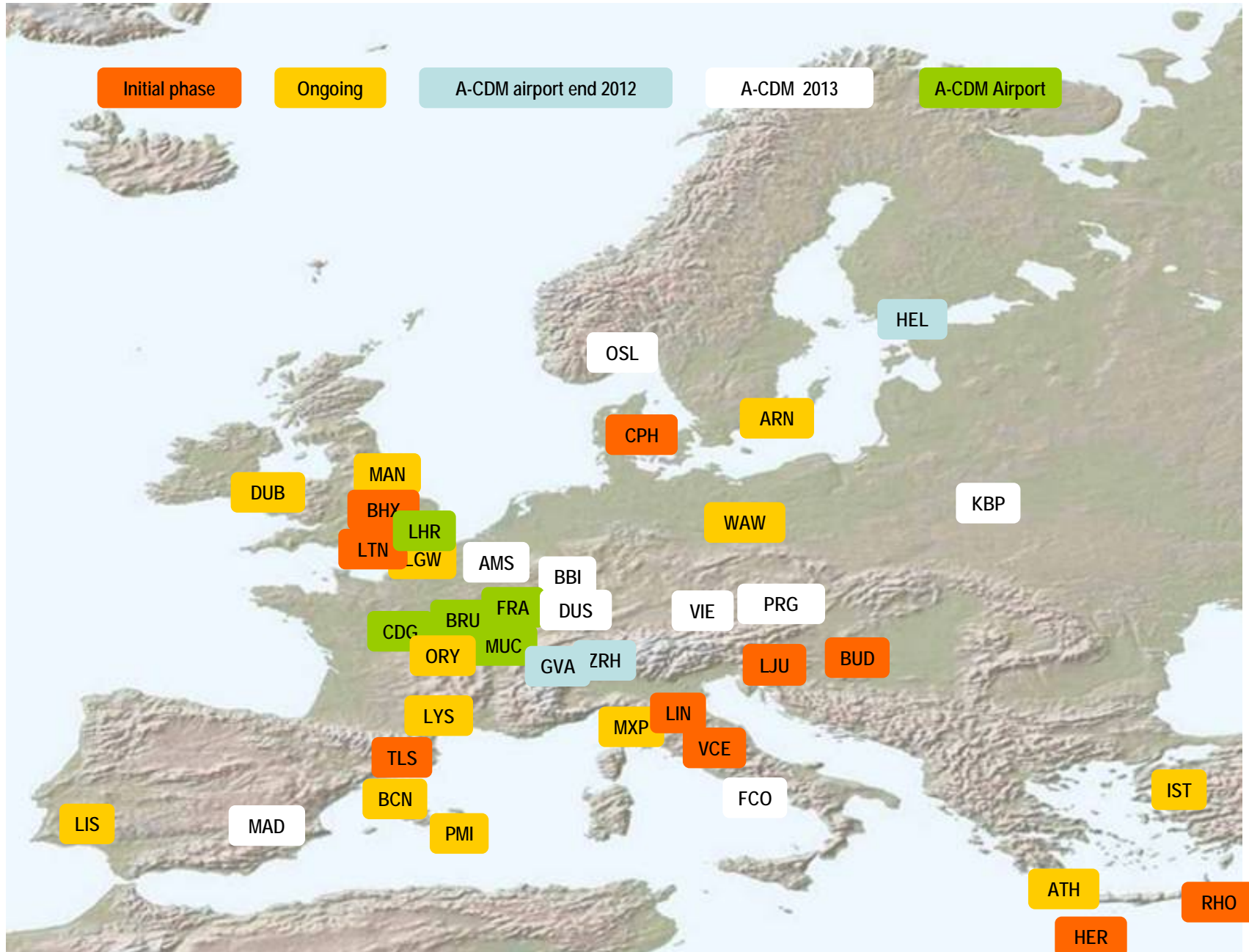


Network Benefits

- Network Ops
 - Improved traffic count predictions
 - Enhance ATFM slot compliance / reduce number of wasted slots
- PAX
 - Reduction of delays
 - Fewer missed connections
 - Better information e.g. during periods of disruption



A-CDM Implementation Status



How does EUROCONTROL assist European Airports

- Local A-CDM project support
- Procedures development
- Expertise and harmonised documentation
- Training (local & e-learning)
- Validation of airport readiness to connect to ATFM Network (DPIs)
- Assistance in operational trials



NEW !!

Current A-CDM Harmonisation TF

Airport CDM Harmonisation Task Force (A-CDM HTF)
35 participants (Airports, ANSPs, Airline & Service providers)

Tasks : Harmonisation of procedures & processes

- **Local e.g. pilot start-up procedure**
- **Network e.g. data quality**
- **Alert Messages & KPIs**

Deliverables by: Dec 2013

Lessons learnt & System deficiencies

- **Not a stand-alone piece of hardware or software**
Example: The Barcelona prototype never became operational due to lack of operational processes and partners' commitment
- **Not a finished process**
Example: CDM airports should continuously improve over time, provide better data quality, harmonise procedures, train staff
- **CDM in Adverse Conditions not yet a mature process**
Example: A-CDM Cell at CDG – fortification of local processes in coordination with the Network Manager required

Lessons learnt & System deficiencies

- **Compromising contrasting requirements**
Example: reduced fuel burn on taxi out against airline on time performance (from off blocks)
- **Cultural and institutional changes needed**
Example: Pilot /controller perception of expediting traffic even if to join the runway queue
- **KPIs adaptation in the CDM spirit**
Example: “The CDM hold on stand” is perceived negatively as “ATC ground delay” - IATA delay code adaptation required

Lessons learnt & System deficiencies

- Common united goals against political tensions and power games
Example: Airports' efforts to implement A-CDM have stalled for months and years
- Service level agreements to include A-CDM requirements
Example: SLAs for TOBT provision not only between Airline & Handlers but also between Airport & Handlers
- Operational efficiency to include passenger satisfaction
Example: check-in-immigration-security are not only extended milestones for increased predictability but the so called "passenger experience" should be linked to airport improved performance

A-CDM Future Outlook

- A-CDM processes implemented at seasonal & small size airports
- A-CDM procedures harmonised through ICAO
- Enhancement of A-CDM through implementation of TAM principles
- Integration of A-CDM with arrival managers en-route and city pair traffic flows



Reference Document & Website

www.euro-cdm.org



The screenshot shows the homepage of the European Airport CDM website. At the top, it features the title "European Airport CDM" and "Airport Collaborative Decision Making" alongside logos for EUROCONTROL, ACFT, and IATA. A navigation menu includes "CONCEPT", "IMPLEMENTATION", "LIBRARY", "RELATED PROJECTS", and "CONTACT". Below the header is a large banner image of an airport terminal with a flight information display and a person on a mobile phone. The main content area is divided into several sections: "Airport Collaborative Decision Making" with a descriptive paragraph and a small diagram; "Quick Links" with a list of navigation options; "Newsroom" with a recent announcement about 2009 Airport CDM training; and "Related Links and Media" at the bottom.

European Airport CDM
Airport Collaborative Decision Making

CONCEPT | IMPLEMENTATION | LIBRARY | RELATED PROJECTS | CONTACT

Airport Collaborative Decision Making

Airport CDM is about partners working together more efficiently and transparently in how they work and share data. Improved decisions based on more accurate and timely information are possible with Airport CDM implementation, resulting in all airport partners having the same operational picture, with the same meaning to all involved. It allows each Airport CDM Partner to optimise their decisions in collaboration with other Airport CDM Partners, knowing their preferences and constraints with the actual and predicted situation.

- You want to know more about Airport CDM?
- You want to know what Airport CDM does for you?

Airport Collaborative Decision Making (CDM) Forum

- Registered users
- New user registration

Quick Links

- Home
- Airports
- Links
- News and Events
- Multimedia
- Acronyms and Definitions
- Forum (registered users)
- Forum (new users)

Newsroom

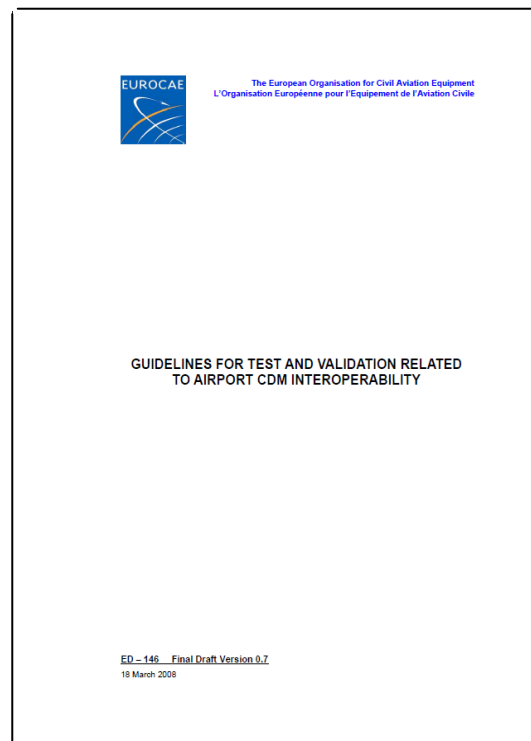
2009 Airport CDM training
03 - 05 Nov 2009 - IANS
Luxembourg (IANS website)

Related Links and Media

- What is Airport CDM
- Airport CDM Implementation Manual



Community Specifications- Common Standard for A-CDM



Thank you!

