



Operational Use of EDS

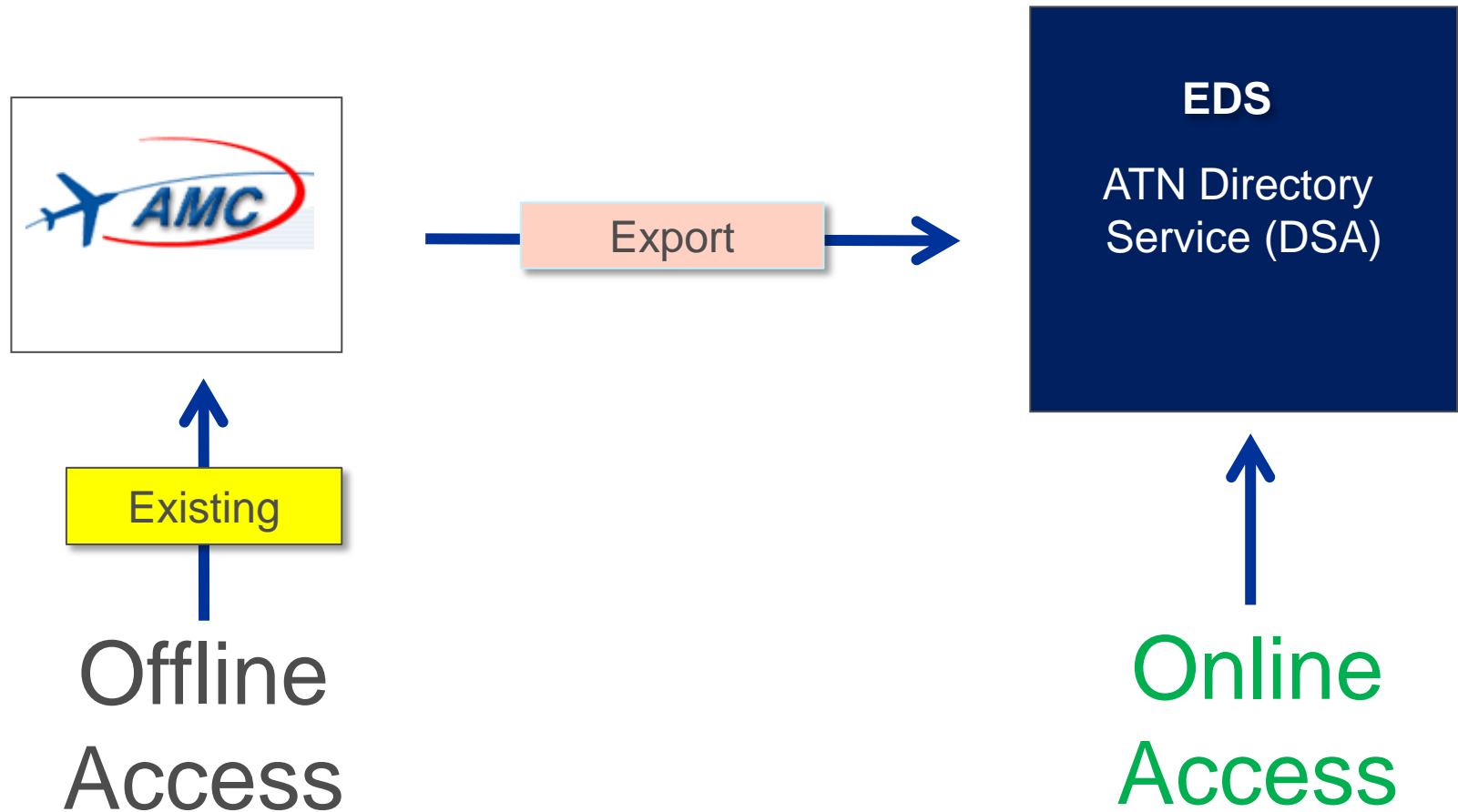
Uwe Kurpat, COMSOFT

ICAO ACSICG/2 Meeting

20 – 22 May 2015

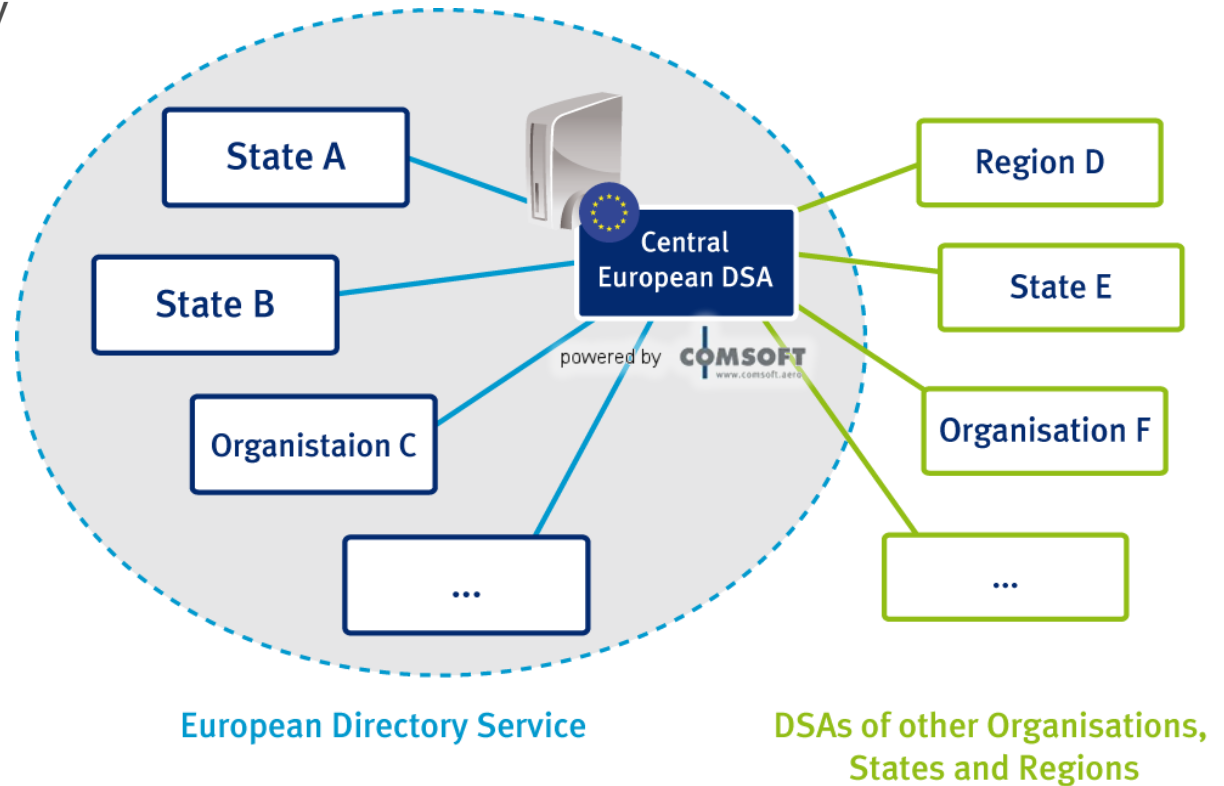
Bangkok, Thailand

EDS - The original Idea

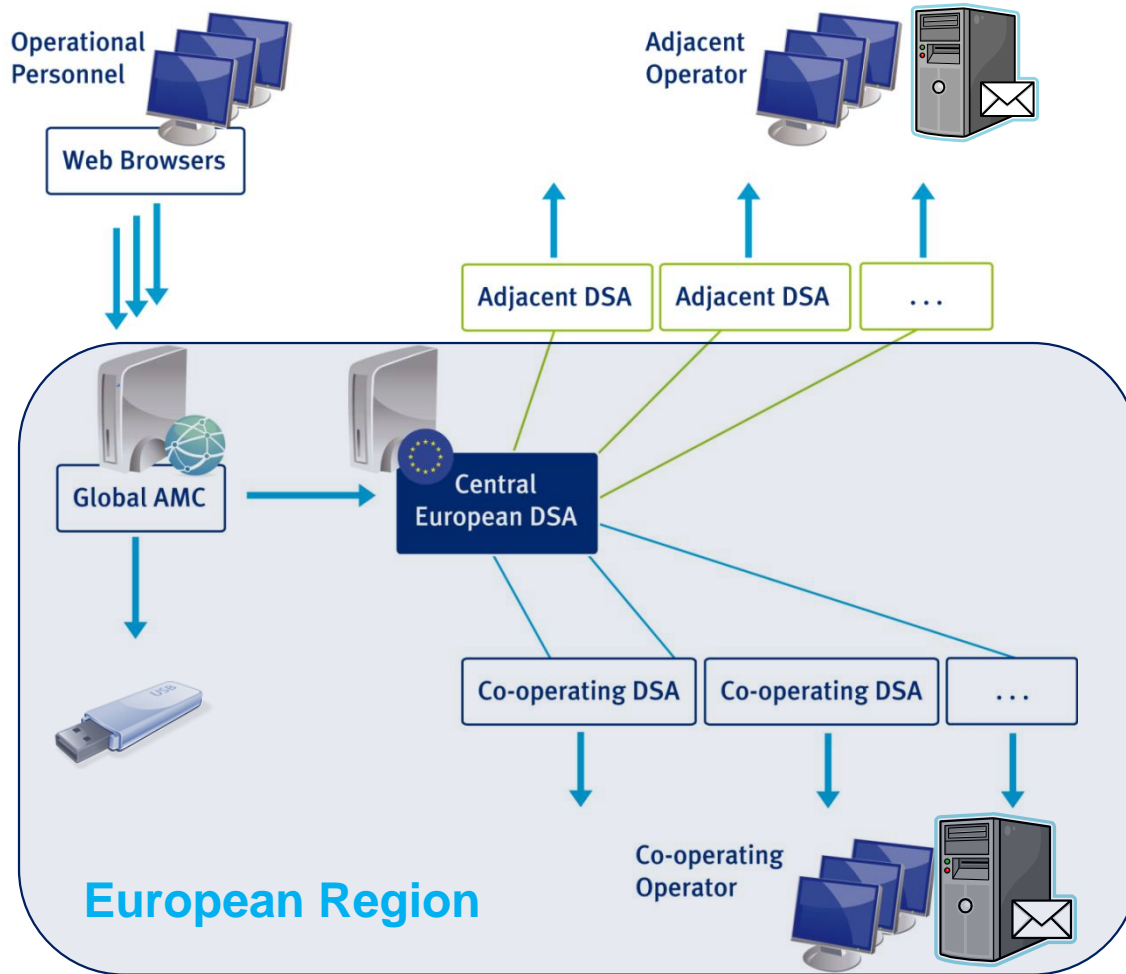


Directory Server Operational Concept (DSOC)

- Reduced complexity
- Centralised Organisation
- Compatible to ATN Directory
- Content rules and Workflows



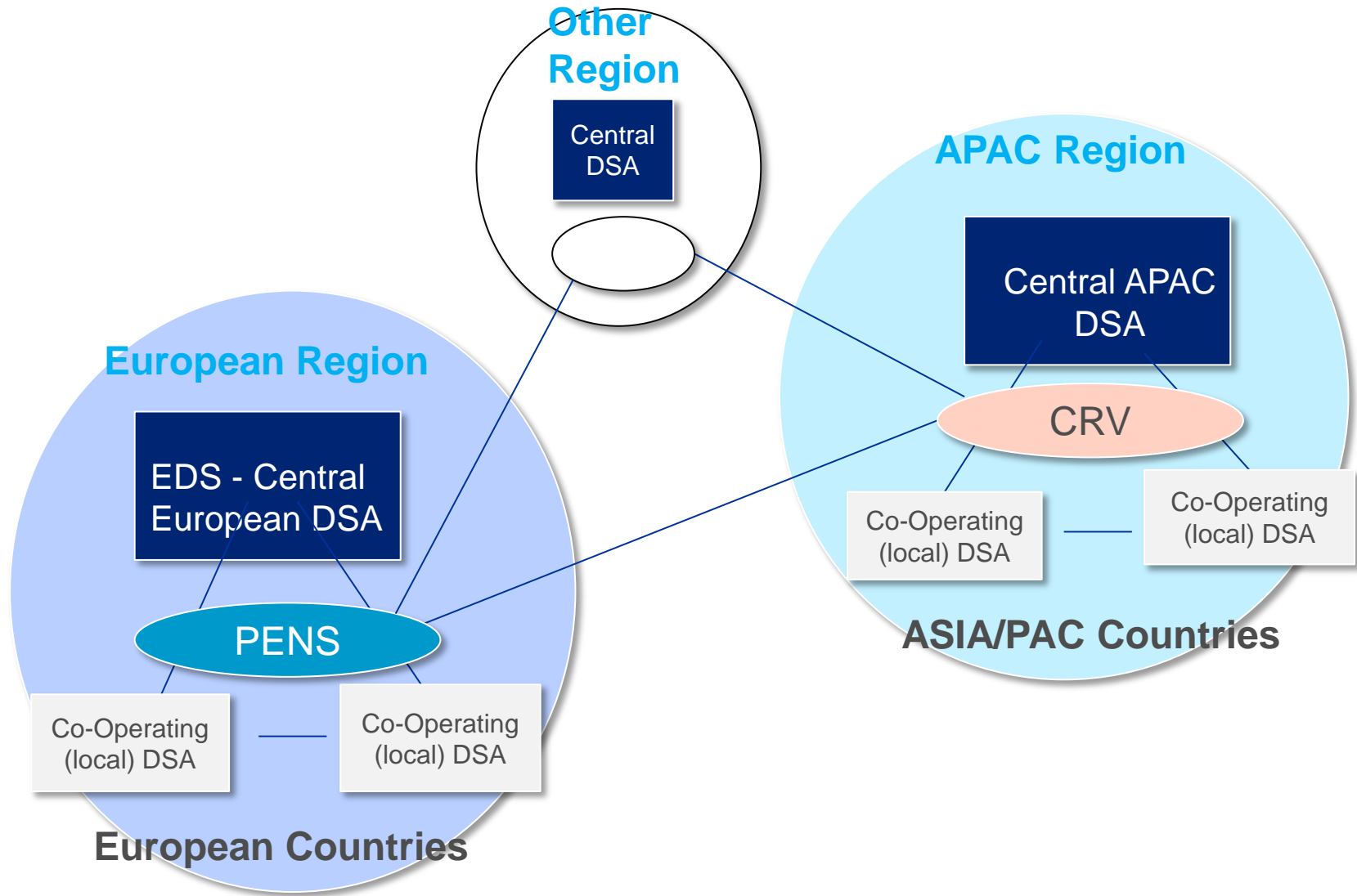
EDS – Integration with AMC



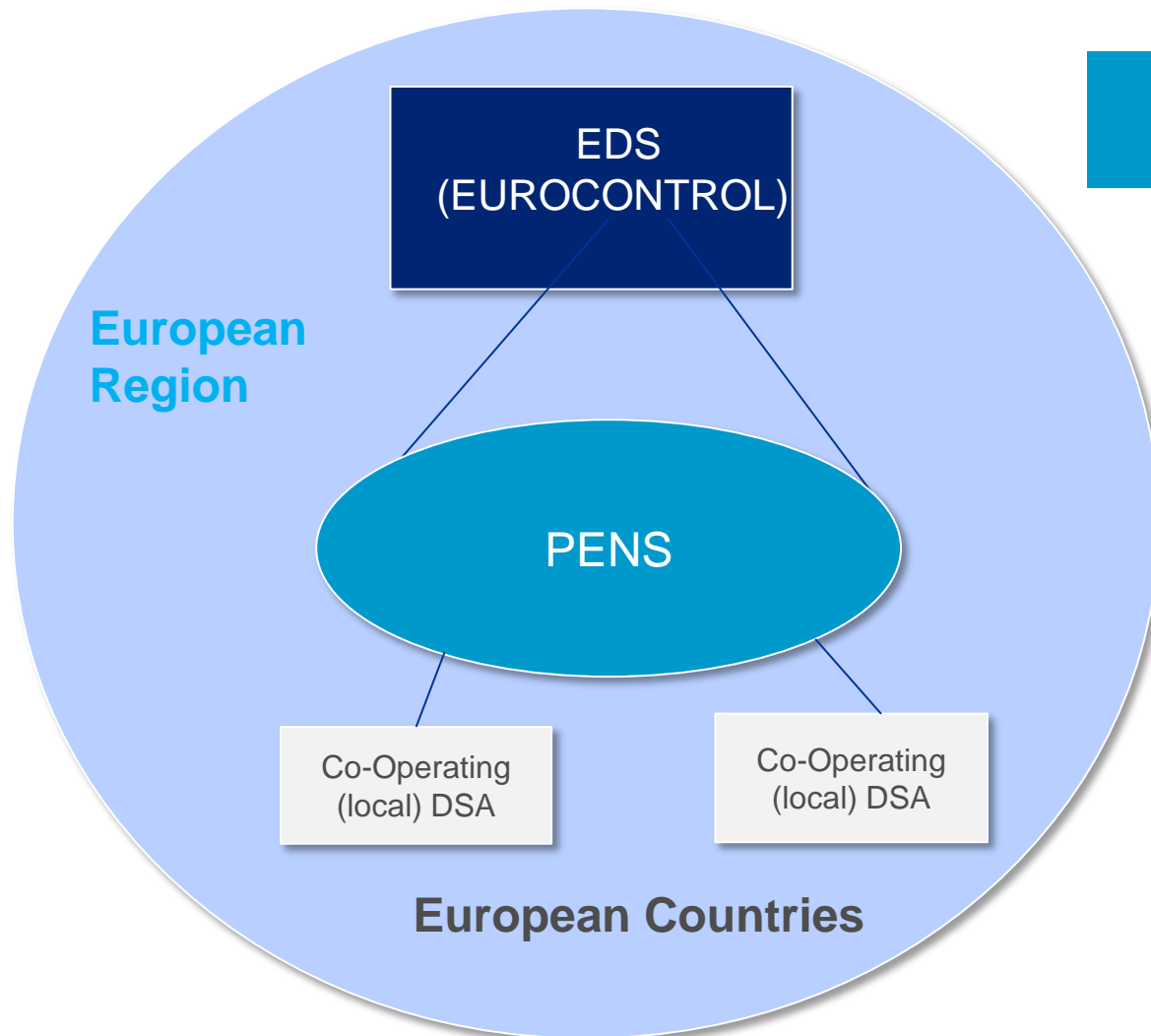
Adjacent

Co-operating

EDS – Worldwide Concept

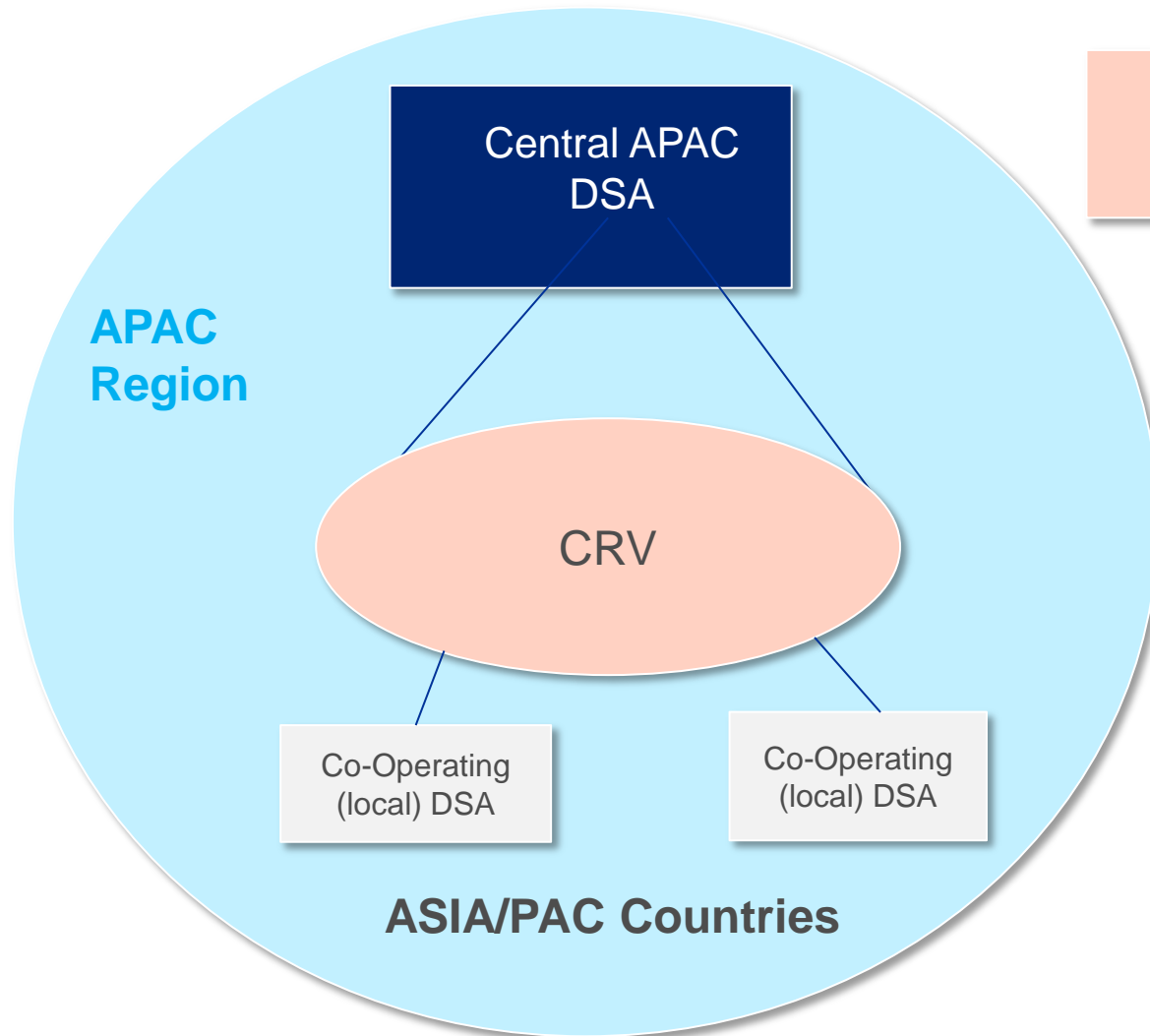


EDS – Central European Directory Service



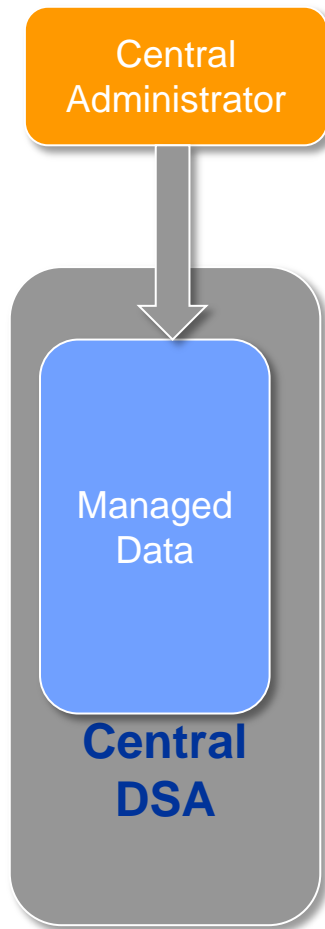
PENS
The Backbone for EDS

EDS – Central European Directory Service



CRV
The Backbone for the
Central APAC DSA

EDS Structure



o = European-Directory

- ou = Admin
- ou = Background
- ou = Pre-Operational
- ou = Operational

- o = Eurocontrol
 - o = LFPY
 - o = ...
- o = ...
- + o = ICAO-MD-

Register

- c = AC
- c = AD
- + c = AE
- c = ...
- c = ZW

EDS - Staging

o = European-Directory

└ ou = Admin

└ ou = Background

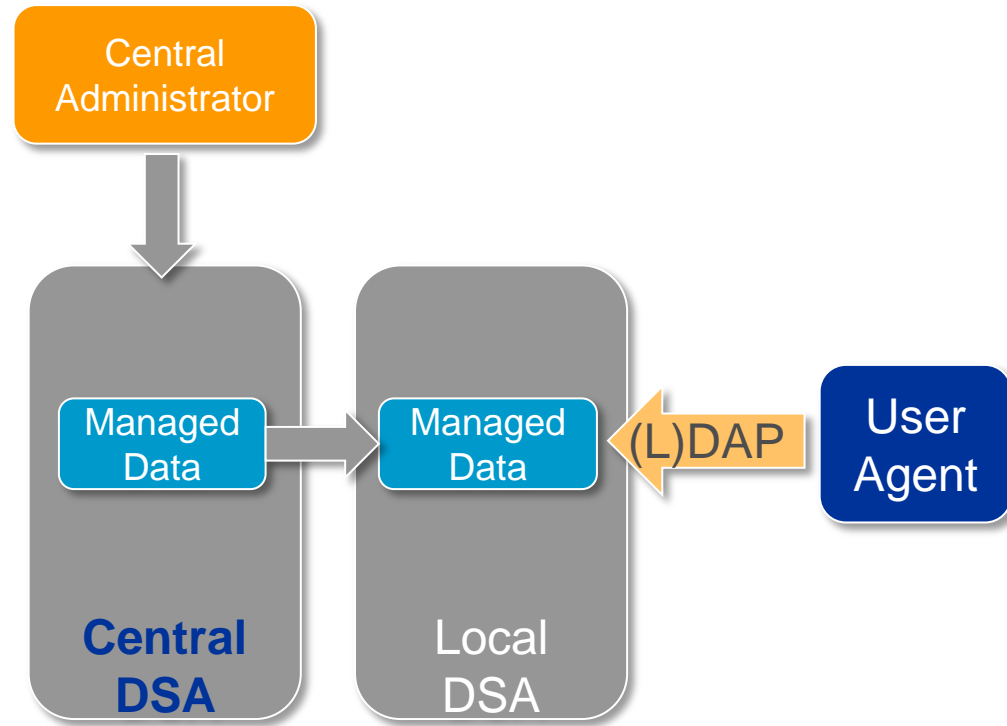
└ ou = Pre-Operational

└ ou = Operational



Local DSA - Direct Access

- Central DSA distributes (pushes) information to local DSA
- Local **User Agent** (DUA) accesses local DSA via (L)DAP
 - INFO** Caching mechanisms can be implemented by user agent
 - INFO** LDAP is available, if required for 3rd party clients
- A full copy of data is not necessary on user agent
- Update of data on the effective date is transparent for user agents



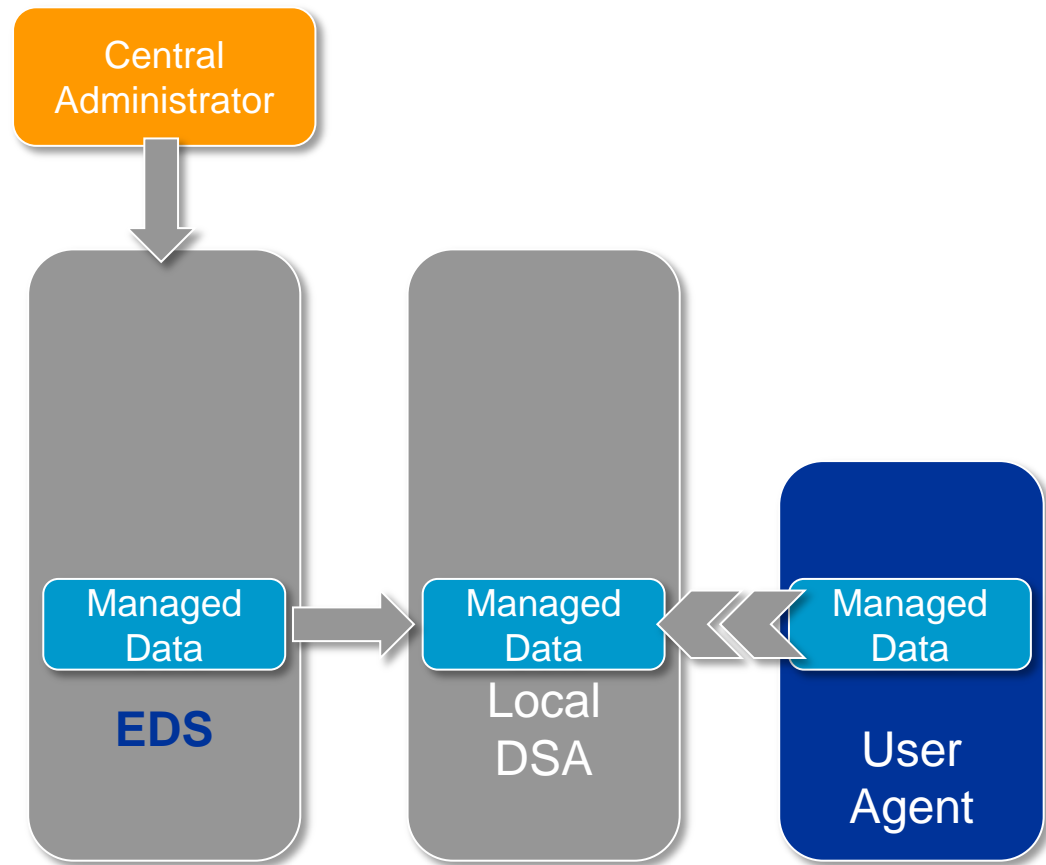
Direct Access

- **The AMHS System (MTA) shall include a DUA:**
 - Access to local DSA via DAP
 - DUA enables MTA to access the distribution lists
 - DUA enables MTCU to lookup
 - AMHS MD Register
 - AMHS CAAS Table
 - AMHS User Address Table (User Look-up Table)
 - AMHS User Capabilities Table

- **The AMHS User Agent shall include a DUA:**
 - Access to local DSA via DAP
 - DUA enables UA to:
 - Determine the capabilities of an AMHS recipient from a DN
 - Determine the OR address from a DN
 - Determine the OR address from an AFTN address (“MD Register”)
 - Retrieve the certificate of a AMHS recipient by using a DN
 - Retrieve the CRL of a certification authority (CA) by using a DN

Indirect Access

- Central DSA distributes (pushes) information to local DSA
- Local **User Agent** (DUA) monitors changes on local DSA
- If changes are available, **User Agent** downloads updated data via DAP
- A copy of data is available on storage of user agent
INFO User agent is responsible to activate the data on the effective (AIRAC) date.

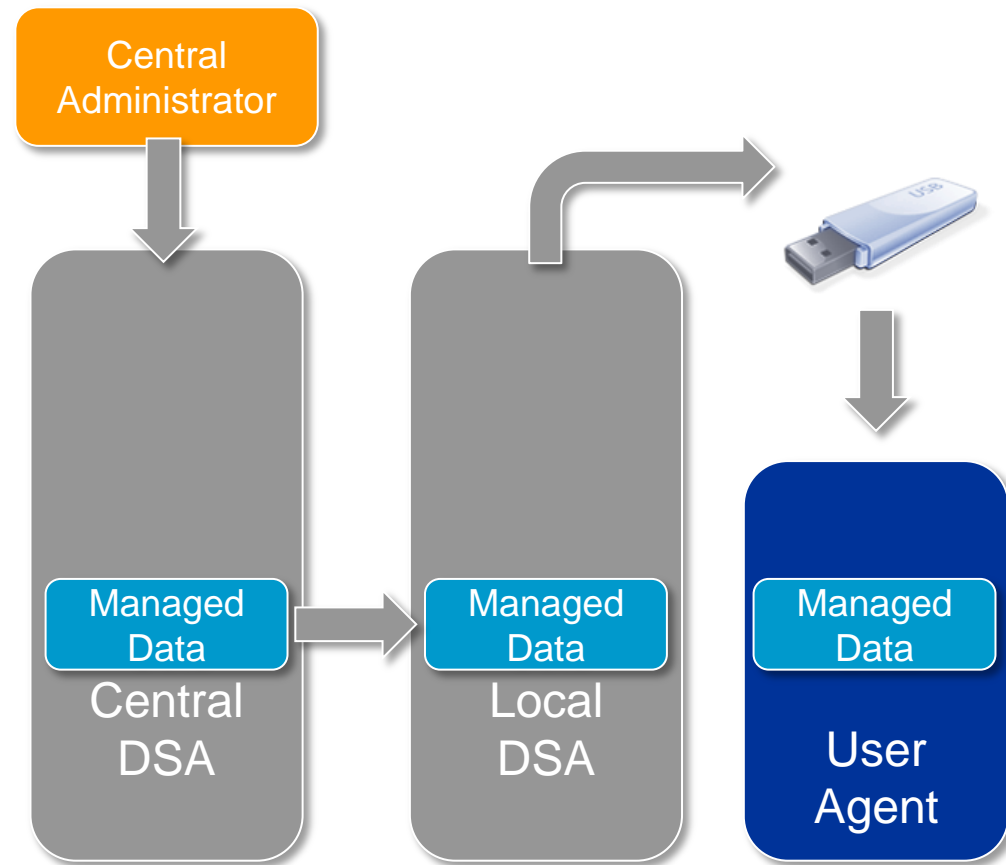


Offline Access

- Central DSA distributes (pushes) information to local DSA
- Local user agent (DUA) monitors changes on local DSA
- If changes are available, local user downloads the updated data via DAP

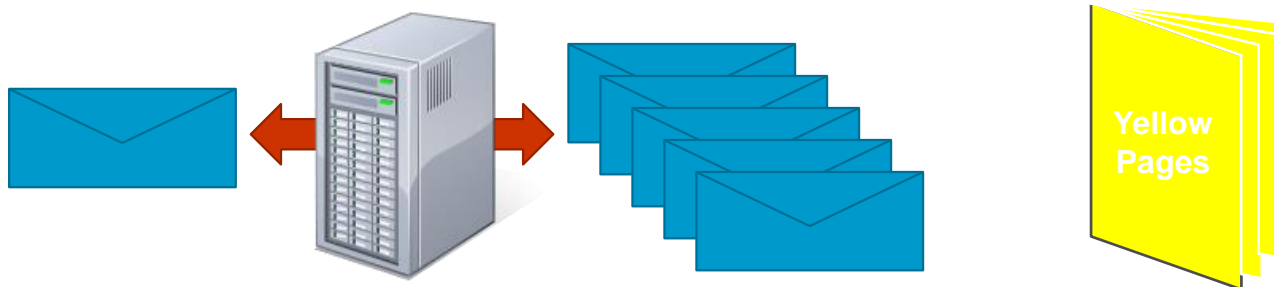
INFO A copy of the data is available on the storage of the user agent

INFO The user agent is responsible to activate the data on the effective date



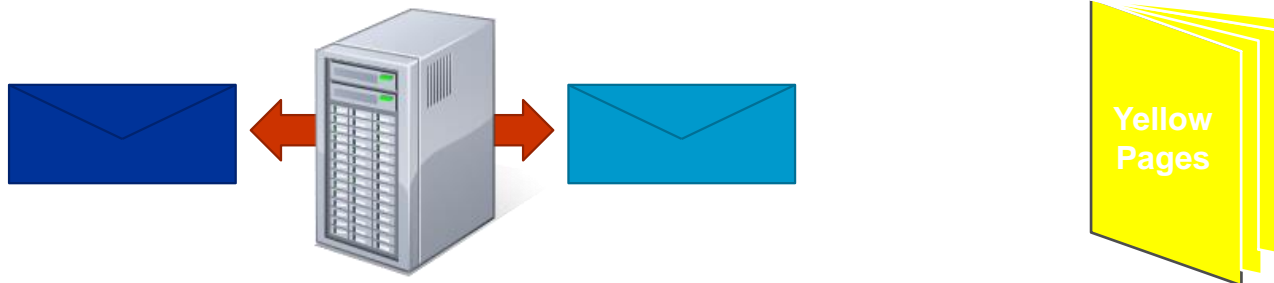
Use Cases – Messaging

- Manage distribution lists
- Distribute, update and synchronise address translation data between AFTN & AMHS
- Allows determining user attributes capabilities (maximum message length, acceptable EITS etc.) of all DL members
- Reduces number of NDRs
- Reduces number of message transmissions



Use Cases – AMHS User Address Book

- Yellow Pages for ATN Users
- Publish user attributes capabilities (maximum message length, acceptable EITS etc.)
- Reduces number of NDRs

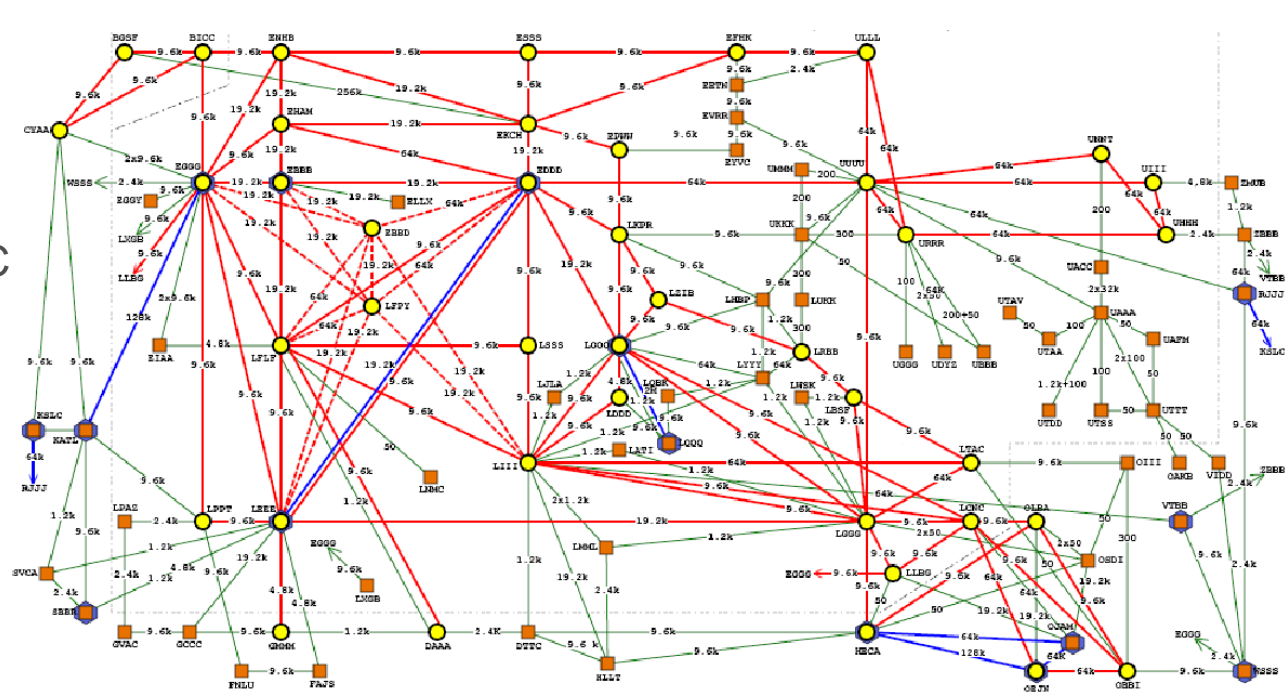


Use Cases – Routing Tables



■ Messaging

- AFTN, CIDIN, AMHS
- Upload by ANSPs
- Management by AMC
- Distributed via EDS



European Directory Services (EDS)



- Title: Implementation of European Directory Service at EUROCONTROL
- Contracted by: ATS Messaging Management Centre (AMC)
- Project launch: End 2012
- End of Development: March 2013
- Resulting ICD: EUR AMHS Manual, Appendix G v1.0 - 08.03.13
- Site acceptance: August 2013
- Validation phase: September 2013 – May 2014
- Live Operation: since April 2015

ICAO Documentation on EDS – Appendix G

➤ AFSG/17 (22 - 26 April 2013)

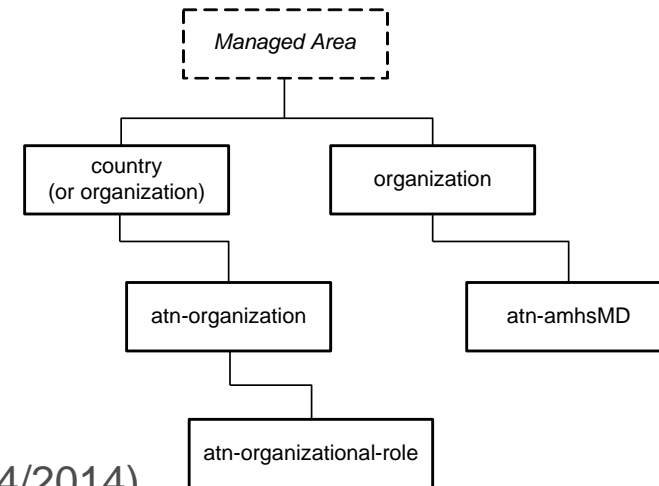
- Adopted initial specification of the European Directory Service (EDS)
- Operational concept (protocols, contents and procedures)
- New Appendix G to the ICAO EUR Doc 020, Version 8.0 (25/04/2013)

➤ Initial Contents in Support of the ATSMHS

- AMHS Management Domain (MD) register
- CAAS mapping information
- AMHS user addresses and capabilities

➤ AFSG/18 (7 - 11 April 2014)

- Adopted amendment to Appendix G, Version 9.0 (10/04/2014)
- Incorporation of AMHS User Address Book



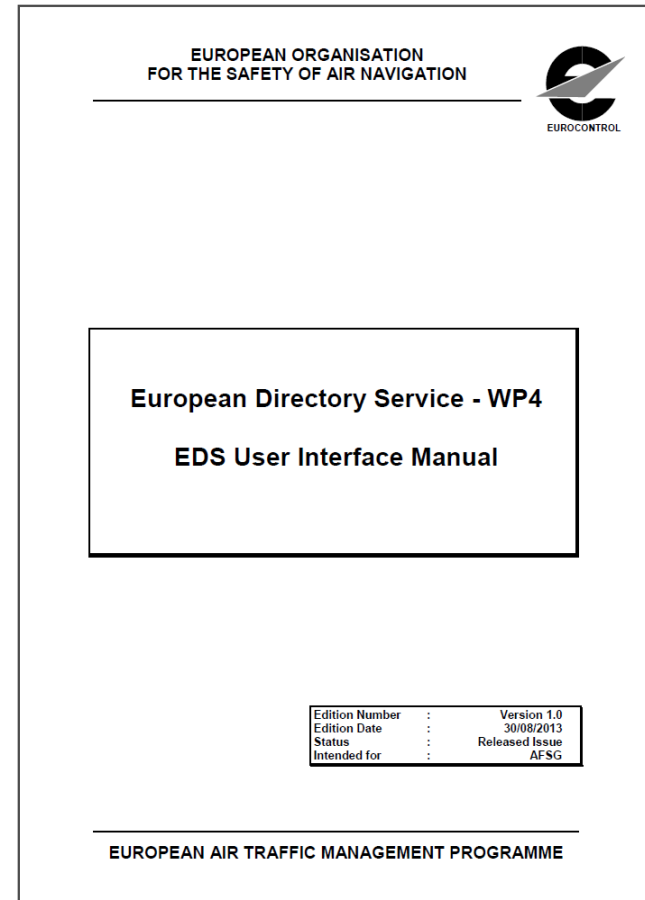
EDS User Interface Manual

➤ EDS User Interface Manual

- Version 1.0 (30/08/2013)
- Requirements
- Guidance

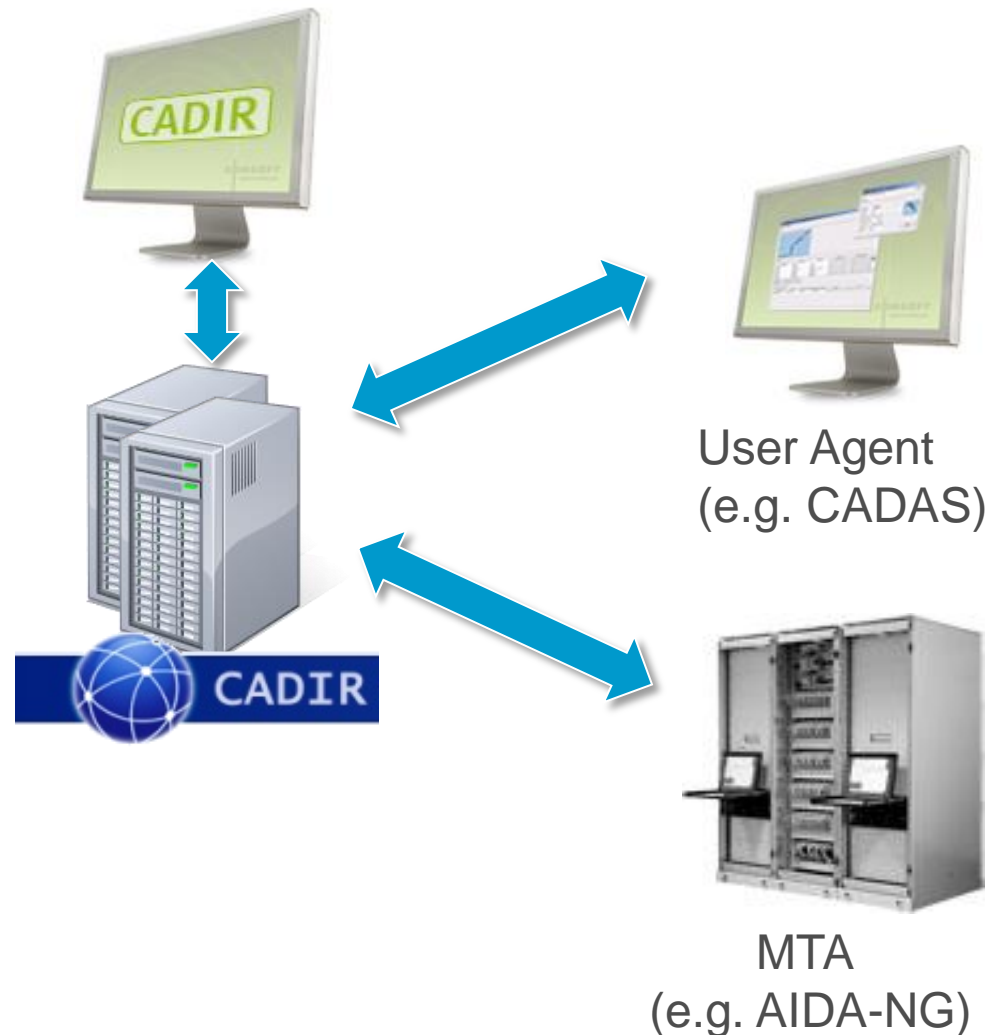
➤ Table of Contents

1. Introduction
2. Overview
3. Interface Protocols
4. Initial Contents
5. Setup of Systems
6. Use of Information
7. Trouble Shooting



COMSOFT CADIR - EDS Operational Solution

- **Local DSA CADIR**
 - COMSOFT is provider of EDS
 - 0% integration risk
- **Built in Directory User Agent**
- Seamless integration into existing infrastructures
 - X.500
 - (L)DAPv2, (L)DAPv3
 - SOAP
- **Different Workflows**
 - Online data access
 - Indirect data access
 - Offline data access
- **Version history**



Conclusion

- EDS is in Europe ready for Deployment
- EDS concepts are ready to be realized in other regions
- The Pan-regional Network Service is a Pre-Requisite





Questions & Answers

COMSOFT
dedicated to ATM



Thank you!

Contact me:
uwe.kurpat@comsoft.aero

COMSOFT
dedicated to ATM