



NAM/CAR Air Traffic Services Inter-facility Data Communication (AIDC) and North American Interface Control Document (NAM/IDC) Implementation Follow-up Meeting

Mexico City, 08 – 11 April 2019

**ATS MESSAGING MANAGEMENT
MANUAL (EUR DOC 021)
BASE DOCUMENT FOR
GLOBAL AMHS MANAGEMENT**



SCOPE AND OBJECTIVES OF THE PRESENTATION

- ◆ To recall of ICAO State letter AN 7/49.1-09/34 from 14th of April 2009
- ◆ To provide an overview of the content of EUR Doc 021
ATS Messaging Management Manual
- ◆ To focus on:
 - ◆ Accreditation: How to become a User of the AMC ?
 - ◆ Entering of Information – Data Entry: How and when every information should be provided and prepared ?
 - ◆ Address Management: How to update AMHS addressing and to provide User Addresses of Third-party Providers (e.g. SITA)



ICAO STATE LETTER AN 7/49.1-09/34 FROM 14TH OF APRIL 2009

)r On 14 April 2009, ICAO issued State letter AN 7/49.1-09/34 indicating that for the orderly operation of the AMHS on a global scale, a Directory Service was necessary to coordinate and synchronize the allocation of AMHS addresses, for which ICAO, in cooperation with the European Organization for the Safety of Air Navigation (EUROCONTROL), established procedures for the coordination and synchronization of AMHS addresses in the short- to medium-term. ICAO's letter emphasizes the agreed procedures for minor and major changes in the management of the addresses and the role of the States, ICAO and EUROCONTROL.

)r This State letter was a response to the EANPG conclusions and stated that in the short- to medium-term, ICAO will utilize the European ATS Messaging Management Centre (AMC), provided by EUROCONTROL, to coordinate the allocation and management of AMHS addresses. All States are therefore invited to designate representatives to register as AMC users.

)r All States and/or ANSPs, operating international COM Centres, with the intention of implementing AMHS in the foreseeable future, should engage themselves into the AMHS address coordination process without delay.



EUR Doc 021



ATS Messaging Management Manual

ATS Messaging Management Manual	
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SCOPE OF THE DOCUMENT (ATS MESSAGING MANAGEMENT MANUAL – EUR DOC 021)

- ◆ Gives all information necessary for the understanding of the integrated AFTN/CIDIN/AMHS Off-line Management
- ◆ Is written for those
 - ◆ performing management operations as well as
 - ◆ implementing and planning the procurement of ATS Messaging systems.
- ◆ It is assumed that the reader of the Manual is familiar with the AFTN, CIDIN and AMHS concepts as described in the relevant ICAO Manuals.

STRUCTURE OF THE DOCUMENT (ATS MESSAGING MANAGEMENT MANUAL – EUR DOC 021)

◆ Chapters

1. Introduction
2. Overall framework for ATS Messaging Management, which defines the concepts, terms and organisation that are used for the definition of ATS Messaging Off-Line Management Functions;
3. AMHS Implementation Support Functions, which provides the identification of requirements, and a specification of AMF-I functions and associated procedures;
4. AFTN/CIDIN/AMHS Operational Functions, which provides the identification of requirements, and a specification of AMF-O functions and associated procedures.
5. AMC Procedures (operational, two kinds)
 - AMC Operational Procedures, specify how AMC Systems must be used by Operators.
 - AMHS Operational Procedures of special importance to AMHS operation (included in Appendices).

STRUCTURE OF THE DOCUMENT (ATS MESSAGING MANAGEMENT MANUAL – EUR DOC 021)

◆ Attachments

Attachment A Change Control Mechanism of the ATS Messaging Management Manual

Attachment B Abbreviations

◆ Appendixes

Appendix A Procedure for the introduction of a new COM Centre in the EUR/NAT AMHS network

Appendix B Detailed access rights for each user category

Appendix C Definition of collected statistics

Appendix D Description of AMC CSV files

Appendix E Short term Procedures for Global AMHS Address Coordination

Appendix F Pro forma for modification of AMHS MD Identifier and/or Addressing Scheme (major change)



ACCREDITATION OF EXTERNAL COM OPERATORS

SECTION 2.5.2

- ◆ Each External COM Centre shall be allowed to designate one External COM Operator + backup associated to its COM Centre.
- ◆ For the case of such States, with whom there is not necessarily a direct contact yet established, the goal of the procedure is to make sure that only well-identified people with an appropriate level of responsibility are authorised to access the AMC. Support of the ICAO Regional Offices is needed in this regard as they maintain permanent contacts with the considered ANSPs.

ACCREDITATION OF EXTERNAL COM OPERATORS

SECTION 2.5.2

◆ The request to register the selected person as an External COM Operator shall be submitted to EUROCONTROL according to one of the following methods:

◆ by the ANSP of the COM Centre, at any time of the year. Such a request needs to be validated as follows:

◆ in a first stage the request is sent to the CNS Officer of the corresponding ICAO Regional Office, who ensures that the request is submitted by a due representative of the ANSP before endorsing the request;

◆ the request is endorsed by the CNS Officer of the ICAO Regional Office, and then relayed to EUROCONTROL who accepts the request;

◆ by the representative of the State to the AFSG, taking the opportunity of the yearly AFSG meeting, for States outside the EUR/NAT Regions who participate in the meeting.



ACCREDITATION OF EXTERNAL COM OPERATORS

SECTION 2.5.2

❖ Demonstration

❖ There are various entry points to access the AMC:

❖ www.eurocontrol.int/amc/

❖ Access the AMC (registered users only)

❖ Register to become an AMC user

Make it now, if you will be the External COM Operator of your COM Centre !

❖ www.paris.icao.int
will be activated



OneSky Online Extranet registration

Contact details

First name *

Last name *

Job title

Work e-mail *

Confirm Work e-mail *

Phone *

Mobile

Your organisation *

Your department

Gender *

Language *

Business justification

Business justification *

Submit

Address

Address *

Postcode * City *

Country *

Select your country

Login details

Username *

Suggest

Choose your username: your username must have at least 8 characters. You can ask the system to suggest one for you by clicking on 'Suggest'. You can always modify the suggested username.

Password *

Re type password *

The passwords are case sensitive and its length must be at least 8 characters. Your password must respect at least 3 of 4 of the following rules: 1st must at least contain an upper case letter; 2nd must at least contain a lower case letter; 3rd must at least contain a digit; 4th must at least contain a special character.

Business Justification:

External COM Operator for
COM Centre <Location Indicator>,
State

or
Read Only User of
COM Centre <Location Indicator>,
State

ENTERING OF INFORMATION SCHEDULE (SECTION 5.1.1)

- ◆ The AMC is working on AIRAC Cycles
- ◆ Each AIRAC Date, at 11:00 UTC the information in AMC becomes “Operational”.
- ◆ The cycle between the AIRAC Dates is fixed scheduled and divided in the following Phases:
 - ◆ Data Entry Phase Day 1 – Day 7
 - ◆ Data Validation and Processing Phase Day 8 – Day 14
 - ◆ Acknowledgement Phase Day 15 – Day 20
 - ◆ Acknowledgement Processing Phase Day 21 – Day 24
 - ◆ Data Retrieval and Implementation Phase Day 25 – Day 28



ENTERING OF INFORMATION SCHEDULE (SECTION 5.1.1)

General View						
Day in Cycle	Calendar date	Data Entry	Data Validation and Processing	ACK Phase	ACK Processing	Data Retrieval and Implementation (by CCC)
		by CCC / Ext COM / AMC	by AMC	by CCC	by AMC	Data Publication (by AMC)
1	13/02					
2	14/02					
3	15/02					
4	16/02					
5	17/02					
6	18/02					
7	19/02					
8	20/02					
9	21/02					
10	22/02					
11	23/02					
12	24/02					
13	25/02					
14	26/02					
15	27/02					
16	28/02					
17	01/03					
18	02/03					
19	03/03					
20	04/03					
21	05/03					
22	06/03					
23	07/03					
24	08/03					
25	09/03					
26	10/03					
27	11/03					
28	12/03					

LEGEND		AMC Operator locks COM Centres		AMC Operator releases the data
		AMC Operator transfers to pre-operational area		AMC Operator moves data to operational area, unlocks COM Centres and makes official publication; CCC / Ext COM Operators use new data for operational service; AMC Operator sends export files to ICAO HQ
		Weekends		



ENTERING OF INFORMATION NETWORK INVENTORY UPDATE (SECTION 5.1.2)

◆ Actors

- ◆ the CCC Operators,
- ◆ the External COM Operators,
- ◆ the AMC Operator (also co-ordinates with the Participating COM Centres)

◆ Purpose

New or modified data has to be entered into the database in a co-operative effort by CCC Operators, External COM Operators and the AMC Operator.

ENTERING OF INFORMATION NETWORK INVENTORY UPDATE (SECTION 5.1.2)

◆ Description

New or modified data on the configuration of their own Centre(s) as well as planning information is entered by CCC Operators and External COM Operators into the Background Area. It is validated against known data by the AMC Operator before being moved into the Pre-Operational Area.

ENTERING OF INFORMATION ROUTING UPDATE (SECTION 5.1.4)

◆ Actors

- ◆ the CCC Operators
- ◆ the External COM Operators
- ◆ the AMC Operator

◆ Purpose

This is one of the major procedures in ATS Messaging Management Centre. Its purpose is to derive optimal routing tables from the configuration description in the database, publish the routing tables, agree them with CCC Operators and to implement them in COM Centres.

The Routing Tables in other ICAO Regions are maintained and coordinated by External COM Operators. The AMC Operator checks and publishes these Routing Tables, which are or will be implemented in the COM Centres.

ENTERING OF INFORMATION ROUTING UPDATE (SECTION 5.1.4)

◆ Description

The AMC Operator creates at the beginning of each operational cycle (preferable at Day 1) a new Routing Matrix (Routing Tables) in the Background Area with OPER.<number of the latest Operational Routing Matrix+1>. The initial status of this Routing Matrix is “in preparation”. External COM Operators check the Routing Tables for their Area of Responsibility and provide/import updates during the Data Entry Phase (Day 1-7).

The AMC Operator decides, possibly in co-operation with CCC and External COM Operators, whether new routing tables should be generated and published in this cycle (for example when a new AMHS link is available). During Data Validation and Routing Generation Phase the AMC Operator creates routing tables for the EUR/NAT and validates the routing tables entered by other ICAO Regions and set a trigger in the Bulletin Board.



ENTERING OF INFORMATION ROUTING UPDATE (SECTION 5.1.4)

◆ Description continued

The CCC and External COM Operators monitor the Bulletin Board for triggers to start the Routing Update Procedure. If such a trigger is found, all CCC and External COM Operators check their routing tables and acknowledge the **proposed** Routing Matrix with an ACK/NACK before the end of the ACK Phase in order to ensure that their (new) Routing Tables are noted and will be implemented latest 1100 UTC on Day 28.

The AMC Operator processes the acknowledgements in the ACK Processing Phase and decides whether or not the new Routing Matrix to be implemented. He may need to co-ordinate with CCC Operators for this. The acknowledgements received from the External COM Operators will not block the EUR/NAT AIRAC Cycle, which means that a NACK from outside of EUR/NAT will be processed by the AMC Operator and depending on the impact to the global network he will decide whether or not the cycle will continue.



ENTERING OF INFORMATION ROUTING UPDATE (SECTION 5.1.4)

◆ Description continued

If a new Routing Matrix is to be implemented, the **proposed** version is modified to have “**released**” status, indicating that this version is to be implemented in this cycle.

If a new Routing Matrix is to be implemented, CCC Operators and External COM Operators can prepare for entering the necessary tables into their systems. The actual implementation takes place on Day 28, the AIRAC Date.

On Day 28 the AMC Operator transfers the contents of the Pre-Operational Area to the Operational Area. If a new Routing Matrix is to be implemented, this is transferred, otherwise the old Routing Matrix is restored.

ENTERING OF INFORMATION

AMHS MD REGISTER UPDATE (SECTION 5.1.5)

◆ Actors

- ◆ CCC Operators,
- ◆ External COM Operators,
- ◆ AMC Operator (also coordinating with Participating COM Centres),
- ◆ ICAO Headquarters and Regional Offices (as a source of information and for official publication)

◆ Purpose

New or modified data has to be entered into the AMHS MD Register.

ENTERING OF INFORMATION

AMHS MD REGISTER UPDATE (SECTION 5.1.5)

◆ Description

Modification requests submitted by States regarding major changes (change of PRMD-name, change of addressing scheme) are received from ICAO, after validation for official purposes, by the AMC Operator. The AMHS MD Register Update is executed for all changes applicable at the end of the current AIRAC cycle.

The AMC Operator updates the AMHS MD Register during the Data Entry Phase in the Background Area, taking special care of any interaction with other functions. Actions described in this section are strictly relevant to the AMHS MD Register Update procedure, but a collateral effect of these can be to trigger the execution of another procedure. Coordination may take place at this stage; in particular to tackle such potential interactions, based on the information provided by the CCC Operators/External COM Operators, to make sure that the foreseen changes are agreeable.

ENTERING OF INFORMATION

AMHS MD REGISTER UPDATE (SECTION 5.1.5)

↔ Description continued

On Day 14, the AMC Operator transfers all tables with the status set to “proposed” to the Pre-Operational Area, and sets a trigger in the Bulletin Board to inform CCC Operators/External COM Operators of the proposed changes.

During the Acknowledgement Processing Phase (Days 21 to 24), the AMC Operator sets the status of the agreed tables in the Pre-Operational Area to “released”, and sets a trigger in the Bulletin Board to inform CCC Operators/External COM Operators of the change to be implemented on Day 28.

CCC Operators/External COM Operators monitor the Bulletin Board for triggers to start the AMHS MD Register Update Procedure. If such a trigger is found, CCC Operators/External COM Operators react and prepare the implementation of the new AMHS Address Management tables.

On Day 28, the AMC Operator transfers the contents of the Pre-Operational Area (only if status “released” was reached) to the Operational Area. The AMC Operator exports the Address Management files and sends them to ICAO for synchronisation of the official Register of AMHS MDs.



ENTERING OF INFORMATION

INTRA-MD ADDRESSING UPDATE (SECTION 5.1.6)

◆ Actors

- ◆ CCC Operators,
- ◆ External COM Operators,
- ◆ AMC Operator (also coordinating with Participating COM Centres),
- ◆ ICAO Headquarters and Regional Offices (as a source of information and for official publication)

◆ Purpose

New or modified data concerning intra-MD addressing, has to be entered into the Intra MD Addressing CAAS table and/or Intra MD Addressing User Address table (depending on the elements to be modified) in a co-operative effort by CCC Operators, External COM Operators and the AMC Operator.

ENTERING OF INFORMATION

INTRA-MD ADDRESSING UPDATE (SECTION 5.1.6)

◆ Description

During the Data Entry Phase, CCC Operators/External COM Operators enter new or modified data for intra-MD addressing of their own Centre(s) into the Background Area. It is validated against known data by the AMC Operator before being moved into the Pre-Operational Area.

Note.— The update of the User Address table is a special case which requires close cooperation with the CCC Operators/External COM Operators of the States concerned. The CCC Operators/External COM Operators responsible for an AMHS Management Domain without assigned Nationality Letters have to ensure that the AF-Address of the respective State has been coordinated and agreed by the State/COM Centre concerned, before the assignment to the own PRMD by entering in the User Address table is executed. The CCC Operators/External COM Operators of the States concerned have the right to delete uncoordinated entries in the User Address Table.

ENTERING OF INFORMATION INTRA-MD ADDRESSING UPDATE (SECTION 5.1.6)

◆ Description continued

On Day 14, the AMC Operator transfers the tables with status set to “proposed” to the Pre-Operational Area, and sets a trigger in the Bulletin Board to inform CCC Operators/External COM Operators of the proposed changes.

During the Acknowledgement Processing Phase (Days 21 to 24), the AMC Operator sets the status of the agreed tables in the Pre-Operational Area to “released”, and sets a trigger in the Bulletin Board to inform CCC Operators/External COM Operators of the change to be implemented on Day 28.

The CCC Operators/External COM Operators prepare for entering the necessary tables into their systems. The actual implementation takes place on Day 28, the AIRAC Date. On Day 28, the AMC Operator transfers the contents of the Pre-Operational Area to the Operational Area.



ENTERING OF INFORMATION

AMHS USER CAPABILITIES UPDATE (SECTION 5.1.7)

◆ Actors

- ◆ CCC Operators,
- ◆ External COM Operators,
- ◆ AMC Operator (also coordinating with Participating COM Centres)

◆ Purpose

New or modified data has to be entered into the User table in co-operative effort by CCC Operators/External COM Operators and the AMC Operator.

ENTERING OF INFORMATION

AMHS USER CAPABILITIES UPDATE (SECTION 5.1.7)

◆ Description

During the Data Entry Phase, new or modified data on the configuration of their own Centre(s) is entered by CCC Operators/External COM Operators into the Background Area. It is validated against known data by the AMC Operator before being moved into the Pre-Operational Area.

At the beginning of the Data Validation Phase the AMC Operator sets a trigger in the Bulletin Board. CCC Operators/External COM Operators monitor the Bulletin Board for triggers to start the User table Update. If such a trigger is found, CCC Operators/External COM Operators can prepare for entering the User table into their systems. The actual implementation takes place on Day 28, the AIRAC Date.

On Day 28 the AMC Operator transfers the contents of the Pre-Operational Area to the Operational Area.



Thank you for your attention

End

