Subject: Management and update of air traffic services (ATS) message handling system (AMHS) address information

Action required: Register a COM Centre representative to become a user of the ATS messaging management centre (AMC) using the procedures outlined in Attachment B

Sir/Madam,

1. I have the honour to invite your attention to a recent development regarding the global management of the emerging air traffic services (ATS) message handling system (AMHS). The methods and procedures outlined in this letter will become important to those involved in the planning and operation of your message switching systems.

2. The transition from the ageing aeronautical fixed telecommunication network (AFTN) to the AMHS is under way and continuing at a good pace. For the orderly operation of the AMHS on a global scale, it is necessary to coordinate and synchronize the allocation of AMHS addresses. In response to this, ICAO, in cooperation with the European Organisation for the Safety of Air Navigation (EUROCONTROL), has established procedures for the coordination and synchronization of AMHS addresses in the short- to medium-term.

3. Before discussing the procedures, I would like to provide you with the background to this development. State letter SP 54/1-03/39, dated 30 May 2003, sought input from States and interested international organizations, to allow ICAO to establish the AMHS Management Domains and Addressing Information Register. This register has now been established and is now available on the ICAO-Net, at the following URL: www.icaonet.int/anb/panels/acp/amhs/amhs_cfm.

4. With the register established, a means of address coordination was necessary. At the forty-ninth meeting of the European Air Navigation Planning Group (EANPG), two conclusions were reached which dealt with the following:
Conclusion 49/23 – AMHS Address Coordination

That ICAO be invited to utilize the European ATS Messaging Management Centre facility at the earliest opportunity, in support of the initial AMHS implementation and based on the proposed draft AMHS address coordination procedures between the ICAO AMHS MD Register and the ATS Messaging Management Centre.

Conclusion 49/24 – AMHS Messaging Management Centre Users

That ICAO be invited to address States outside the ICAO EUR Region to register with the ATS Messaging Management Centre as external COM centre operators, as soon as possible.

5. This State letter is a response to the EANPG conclusions above. 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 using the procedure described in Attachment B.

6. The procedures for AMHS address coordination through the AMC are given in Attachment A. Users need to be trained before they are actually allowed to enter data in the AMC (http://www.eurocontrol.int/amc). A two-day training session will be delivered from 3 to 4 June 2009 (free of charge) to all registered users. The training session will be held at the EUROCONTROL Institute of Air Navigation Services (IANS), located in Luxembourg.

7. 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.

8. For the long-term, a truly global method of AMHS address management will be required. Staff within the CNS/AIRS Section of the Air Navigation Bureau will take the necessary action to develop appropriate recommendations for the establishment of management centres in the ICAO Regions and also the cooperation between such centres.

Accept, Sir/Madam, the assurances of my highest consideration.

Taïeb Chérif
Secretary General

Enclosures:
A — Proposed short-term procedures for global AMHS address coordination
B — Registration procedure
ATTACHMENT A to State letter AN 7/49.1-09/34

PROPOSED SHORT-TERM PROCEDURES FOR
GLOBAL AMHS ADDRESS COORDINATION
(Based on Appendix O to the EANPG/49 Report)

1. INTRODUCTION

1.1 This paper was developed by the air traffic services (ATS) message handling system (AMHS) Inter-Regional Coordination Team (in short, the IRC Team) formed to address inter-regional air traffic services (ATS) message handling system (AMHS) issues under coordination by the ICAO European and North Atlantic Office (Paris) (EUR/NAT) Office, with the endorsement of the European Air Navigation Planning Group (EANPG).

1.2 The IRC Team action plan included, as part of the definition of short-term working arrangements for the global use of the ATS messaging management centre (AMC) for the AMHS Management Domain (MD) Register, draft procedures to be developed for global AMHS address management in the short term using AMC1.

1.3 The AMC is a concept defined in the ATS Messaging Management Manual (ICAO EUR Doc 021), for the off-line management of the integrated, heterogeneous messaging environment made of the aeronautical fixed telecommunication network (AFTN), common ICAO data interchange network (CIDIN) and AMHS. The concept describes the management organization and includes a set of functions and procedures which are implemented in AMC systems to deliver services to AMC users in ANSPs, and particularly in their international communications (COM) centres.

1.4 This paper provides the proposed procedures. The overall goal of these procedures is to ensure for the short-term that the global AMHS address management is performed in a consistent manner, both from an operational viewpoint and from an official (institutional) viewpoint.

1.5 For the medium and longer term a task force will be set up by the Air Navigation Bureau to develop appropriate recommendations regarding the future evolution of AMHS address management, including the potential establishment of management centres in ICAO Regions, if needed. This task force should be composed of representatives of ICAO Contracting States in various regions.

2. BACKGROUND ON GLOBAL AMHS ADDRESS MANAGEMENT IN THE SHORT-TERM USING AMC

2.1 The approach for global AMHS address management in the short-term is the following:

a) for operational purposes, there is an agreement to use the AMC in the short-term by the European (EUR) and the Asia/Pacific (ASIA/PAC) Regions, as well as by the United States Federal Aviation Administration (FAA). Other regions which have not discussed AMHS management so far should be encouraged to use the AMC as soon as they start studying AMHS implementation; and

1 More information is available at http://www.eurocontrol.int/amc/
b) for institutional aspects, ICAO intends to publish, on its web site, an official version of the register.

2.2 Furthermore, the official ICAO Register and the operational AMC contain the same data and must be periodically aligned.

2.3 The working arrangements proposed in this paper are designed for a global AMHS address management using AMC. This implies that the use of AMC should be strongly recommended to every ICAO Contracting State worldwide, as soon as there is an AMHS project or implementation in that State. The procedures rely upon the fact that all States be involved in AMHS, i.e. all States which may declare changes in AMHS addressing are AMC users.

2.4 The basis for these procedures should be that AMC is used operationally and that ICAO Headquarters publishes the AMHS MD Register officially on its website using AMC data.

3. **SCOPE OF ENVISAGED AMHS ADDRESS CHANGES**

3.1 The possible changes in AMHS addresses which need to be managed as part of the AMHS address management are classified in two categories and include the following modifications:

a) Major changes (should not be frequent):

1) Modification\(^2\) of PRMD-name,

2) Change of addressing scheme, among those defined in ICAO Docs 9705/9880, from “XF” to “CAAS” or vice-versa (less likely to happen);

b) Minor changes (should be more frequent):

1) Modifications in CAAS table (associations between location indicator – “OU” address attribute value and “O” address attribute value).

3.2 Major changes have either an institutional impact or a major operational impact.

3.3 Minor changes have only an operational impact, which may be much more limited, depending on the magnitude of changes which may be roughly assessed on the basis of:

a) the number of location indicators impacted by the change; and/or

b) the frequency of messages to/from users in the locations of which the location indicators are impacted.

3.4 Exceptionally, a minor change may have an institutional impact. However this should be very rare and as no specific procedure is defined for this such situations will be handled case by case on an ad hoc basis.

---

\(^2\) The term “modification” should be understood here in a general way, meaning addition, modification or deletion.
4. ASSUMPTIONS RELATED TO THE PROCEDURES

4.1 Official interactions

4.1.1 Major changes, due to their institutional impact or major operational impact, must be subject to official interactions between the States and ICAO. These interactions are assumed to be based on the exchange of written documents by fax or letter. Pro formas for such documents are provided in Attachment A to this letter.

4.2 Systems

4.2.1 In the short-term, only two systems are available to contribute to AMHS address management, as mentioned above:

a) the AMC implemented by EUROCONTROL under the aegis of the ICAO EUR Office (Paris), for all operational purposes, following an EANPG/45 conclusion; and

b) the ICAO AMHS MD Register, for official purposes. This system is loaded with AMC data to ensure consistency with the operational status of the AMHS network.

4.3 Participants

4.3.1 The procedures rely upon the fact that all States/ANSPs involved in AMHS participate in AMC activity. Participants to the procedures are expected to be:

a) States, both as the potential initiators of changes in AMHS addressing and as implementers of AMHS systems. The notion of “State” therefore includes:

1) the people in charge of official declarations, for major changes;

2) Cooperating COM Centre (CCC) Operators in charge of operational management of AMHS. They use AMC data to configure their message switches and AFTN/AMHS gateways;

3) Other AMC users, such as AMHS project managers, engineers involved in AMHS projects, COM Centre personnel, etc. (several AMC user categories are defined for them, including “AMF-I User” and “Read-only user”);

b) ICAO Regional Offices as a possible interface for the States in each ICAO Region. The regional office is represented by the CNS Officer;

c) ICAO Headquarters, represented by the Air Navigation Bureau and more specifically (if needed) by its Communications, Navigation and Surveillance/Aeronautical Information Resource Services Section (CNS/AIRS) Section;

d) AMC Operators, responsible for overall operation of the AMC and of associated procedures.

---

3 In the current AMC terminology, the term CCC is limited to Europe, and External COM Centre is used for States outside Europe. This distinction should disappear, and the terminology/documentation should be updated, when global use of AMC is started based on these procedures.

4 The term “AMF-I User” denotes an AMC user specifically involved in AMHS Off-Line Management – Implementation Support functions, on behalf of his/her State or ANSP, e.g. the project leader for AMHS implementation.
5. **PROCEDURE FOR MAJOR CHANGES**

5.1 A simplified diagram of the proposed procedure for major changes is provided in Figure 1. The main stages are as follows:

1. an accredited person in the considered State declares the change to ICAO, using a standard written pro forma – “ICAO” in this case means the regional office for the ICAO Region where the State is located. The pro forma includes the applicability date of the change (an AIRAC date);

2. the CNS Officer in the regional office, in coordination with ICAO Headquarters as appropriate\(^5\), validates the acceptability of the declared change from an official and institutional viewpoint;

3. after validation, the CNS Officer forwards the declaration of change to the AMC operator, using appropriate means such as fax, e-mail, etc. (different from data entry in AMC);

4. the AMC operator enters data in the AMC based on the input received from the regional office, at the appropriate time considering the applicability date of the change and using the AMC operational procedures;

5. at the date of applicability, i.e. at each AIRAC cycle date, the ICAO Headquarters CNS/AIRS Section retrieves an AMHS address management export file from the AMC and uploads it to the ICAO Official AMHS MD Register.

5.2 Steps 3 to 5 are performed as part of the normal AMC operation. This means that, in parallel with this process, standard AMC procedures are followed by the AMC operator and by AMHS managers in other States. The CCC operators exploit the AMC data reflecting the change, together with other AMHS management data, to update their systems.

5.3 At each stage, coordination may take place, if needed, between the different parties involved to ensure the correctness of the proposed change.

\(^5\) e.g. to ensure global uniqueness of a requested PRMD-name with respect to other requests under consideration in other regions.
Figure 1: Procedure to handle major AMHS address changes

Procedure for major changes

State initiating a change

1. Exchange of written documents
2. Data entry
3. Data reading or retrieval

Figure 6.1

PROCEDURE FOR MINOR CHANGES

6.1 A simplified diagram of the proposed procedure for minor changes is provided in Figure 2. The main stages are as follows:

1. the CCC operator in the considered State enters data corresponding to the intended change in the AMC, using the standard AMC operational procedures, taking into account the applicability date of the change (an AIRAC date);

2. the AMC operator performs the standard AMC operational procedures, such that the status of changed data is passed to “operational” at the applicability date;

3. at the date of applicability, i.e. at each AIRAC cycle date, the ICAO HQ CNS/AIRS Section retrieves an AMHS address management export file from the AMC and uploads it to the ICAO Official AMHS MD Register (this is identical to stage 5 in the procedure for major changes).

6.2 This is performed as part of normal AMC operation. This means that in parallel with this process, standard AMC procedures are followed by the CCC operators and other AMC users to exploit
the AMC data reflecting the change, together with other AMHS management data, to update their systems.

6.3 At each stage, coordination may take place if needed between the different parties involved, and with the CNS Officer in the regional office if needed\(^6\), to ensure the correctness of the proposed change.

\[\text{Figure 2: Procedure to handle minor AMHS address changes}\]
Part 1: Modification of PRMD-name Registration

State: ........................................

Nationality letters: ......................

PRMD-name registered before modification: ...........................................

Please consider the following options in case of modification:

Option A: the PRMD-name to be the following reserved identifier.

Option B: the PRMD-name to be modified as proposed below, after validation by the Secretariat.

Option C: the PRMD-name to remain unchanged (only the addressing scheme is modified, see Part 2).

Please specify your choice (A, B or C): 

If choice is B, please specify the proposed PRMD-name identifier: 
P =

Proposed applicability date for the modification (an AIRAC date): ........................................

Name of organization managing the AMHS MD (if applicable): ............................................

The contact point: ................................................................................................................

Postal/electronic mail address and telephone/fax number: ......................................................

Additional comments:
Part 2: Modification of declaration of addressing scheme

State: .................................

Nationality letters: .........................

PRMD-name registered before modification: .................................

Addressing scheme declared before modification: .................................

Please select one of the following options in case of modification:

Choice A: AMHS user addresses to be allocated by application of the (recommended) CAAS addressing scheme in the AMHS MD operated in the above State.

Choice B: AMHS user addresses to be allocated by application of the (default) XF addressing scheme in the AMHS MD operated in the above State.

Choice C: the addressing scheme to remain unchanged (only the PRMD-name is modified, see Part 1).

Please specify your choice (A, B or C):

If choice is A (CAAS), please fill in the following table for all location indicators found in Doc 7910 under the above nationality letters.

<table>
<thead>
<tr>
<th>Organization-name for the group of locations</th>
<th>location indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(table to be expanded as appropriate)
Proposed applicability date for the modification (an AIRAC date): .................................................

Name of organization managing the AMHS MD (if applicable): .................................................

The contact point: ..........................................................................................................................

Postal/electronic mail address and telephone/fax number: ...............................................................
ATTACHMENT B to State letter AN 7/49.1-09/34

REGISTRATION PROCEDURE
(based on *ATS Messaging Management Manual*, section 2.5.2.4)

1. In order to carry out the procedures described in Attachment A, each State/ANSP should designate an AMC User associated to its COM Centre. A second person may also be designated as a back-up.

2. The AMC User has to register using the following link:


3. Once this is performed, the user accreditation procedure defined in section 2.5.2 of the *ATS Messaging Management Manual* will start.

4. After the accreditation of the user, an AMC account will be created by EUROCONTROL AMC Support Team and details of the account will be sent to the users. Training of the user will also be planned at this stage.

5. After training, the user can start accessing the AMC using [http://www.eurocontrol.int/amc/](http://www.eurocontrol.int/amc/).

— END —