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| SESAAR | | Removed | | | | | | ECAC+ | | |
| COM10 | | Migrate from AFTN to AMHS | | | | | | | | |
| REG | ASP | MIL | APO | USE | INT | IND | NM | MET | AIS | USP |

Subject matter and scope

The purpose of this objective is to enable EATM Network-wide support of a specific profile of the Extended level of service of the ATSMHS (ATS Message Handling Service), as defined by ICAO. An initial transition step supporting migration from the AFTN to the Basic ATSMHS level of service is foreseen.

AFTN, complemented in Europe by the CIDIN, has provided an effective store-and-forward messaging service for the conveyance of text messages, using character-oriented procedures, for many years. However AFTN / CIDIN technology is now becoming obsolescent, and is not sufficiently flexible to support future messaging requirements. It is intended that existing AFTN and CIDIN users and systems will transition to more modern technology, using the ATSMHS application, defined by ICAO to replace the AFTN telegraphic style of working with a store-and-forward message handling system based on international standards and providing enhanced functionality.

This implementation objective makes use of the EUROCONTROL Specification 0136, Edition number 2.0 "EUROCONTROL specification on the Air Traffic Services Message Handling System (AMHS)" recognised as Community Specification in the Official Journal of the European Union (ref. OJ C 323, 31.12.2009, p. 24), to help the ground ATS Messaging systems of the EATM Network to meet the essential requirements for interoperability mandated by Commission Regulation (EC) No 552/2004. In application of Article 4 of Commission Regulation (EC) No 552/2004, compliance with the essential requirements for interoperability shall be presumed for AMHS systems, together with the associated procedures, that meet the AMHS Community Specification.

For global AMHS address management ICAO has strongly recommended the use of the ATS Messaging Management Centre (AMC) implemented by EUROCONTROL under the aegis of the ICAO EUR Office (Paris) to every ICAO Contracting State worldwide, as soon as there is an AMHS project or implementation in that State.

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each military authority to review this Objective IN ITS ENTIRETY and address each of the SLoAs that the military authority considers RELEVANT for itself. This has to be done on top and above of the review of "MIL" SLoAs which identify actions EXCLUSIVE to military authorities.

Applicability Area(s) & Timescale(s)

| Applicability Area | | | |
|--------------------------------|------------|------------|--------------------|
| Timescales: | From: | By: | Applicable to: |
| Initial operational capability | 01/12/2011 | | Applicability Area |
| Full operational capability | | 31/12/2018 | Applicability Area |

References

European ATM Master Plan

| | | | | | | | | | | |
|------------|--------------------------------|--|--|--|--|--|--|--|--|--|
| OI step - | - No OI Link - | | | | | | | | | |
| Enablers - | CTE-C06c | | | | | | | | | |

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|---------|----------|--------------------------------------|-----------------|---|----------|--|
| Legend: | WXYZ-001 | Covered by SLoA(s) in this objective | WXYZ-002 zzz | Covered by SLoA(s) in another objective Objective covering the enabler | WXYZ-003 | Not covered in the Implementation Plan |
|---------|----------|--------------------------------------|-----------------|---|----------|--|

Applicable legislation

-none-

Essential Operational Changes

- none -

SESAAR Solution

ICAO GANP - ASBUs

- none -

Deployment Programme

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| COM10 | Migrate from AFTN to AMHS |
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| - none - | |
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European Plan for Aviation Safety

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| - none - | |
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Operating Environments

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|-------------------|
| Airport |
| En-Route |
| Network |
| Terminal Airspace |

Stakeholder Lines of Action (SLoAs)

| SLoA ref. | Title | From | By |
|-------------|--|------------------|------------|
| COM10-ASP01 | Implement AMHS capability (Basic ATSMHS) and gateway facilities to AFTN | 01/01/2002 | 31/12/2011 |
| COM10-ASP02 | Implement regional boundary gateways | 01/01/2002 | 31/12/2011 |
| COM10-ASP03 | Enhance AMHS capability (Extended ATSMHS) | 01/01/2012 | 31/12/2018 |
| COM10-ASP04 | Ensure the conformity of AMHS systems and associated procedures | 01/01/2002 | 31/12/2018 |
| COM10-ASP05 | Organise personnel awareness and training | 01/01/2002 | 31/12/2018 |
| COM10-ASP06 | Participate in AMC activities for ATS Messaging Management | 01/01/2007 | 31/12/2018 |
| COM10-IND01 | Ensure the conformity of AMHS systems | 01/01/2002 | 31/12/2018 |
| COM10-AGY01 | Provide AMC (ATS Messaging Management Centre) Service | 01/01/2007 | 31/12/2018 |
| COM10-AGY02 | Implement AMHS capability (Basic ATSMHS) and gateway facilities to AFTN | FINALISED | |
| COM10-AGY03 | Enhance AMHS capability (Extended ATSMHS) | 01/01/2012 | 31/12/2018 |
| COM10-AGY04 | Develop further relevant elements of the Extended ATSMHS in AMHS Community Specification | 01/01/2010 | 31/12/2018 |
| COM10-AGY05 | Implement AMHS-Community Specification compliance testing methodology and tools | 01/01/2010 | 31/12/2018 |
| COM10-AGY06 | Support personnel training | 01/01/2002 | 31/12/2018 |

Description of finalised and deleted SLoAs is available on the eATM Portal @ https://www.eatmportal.eu/working/depl/essip_objectives

Expected Performance Benefits

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| Safety: | Benefits resulting from the application of a harmonised set of safety requirements. |
| Capacity: | - |
| Operational Efficiency: | - |
| Cost Efficiency: | Use of COTS messaging systems will de-facto reduce the cost of messaging services and support any kind of message format including the exchange of new binary data leading to lower ANS provision costs. |
| Environment: | - |
| Security: | AMHS security services may help to protect against safety hazards such as accidental or deliberate message corruption and can provide protection against undetected misdelivery. |

Detailed SLoA Descriptions

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|-----------------------------------|--|------------|------------|
| COM10-ASP01 | Implement AMHS capability (Basic ATSMHS) and gateway facilities to AFTN | From: | By: |
| | | 01/01/2002 | 31/12/2011 |
| Action by: | ANS Providers | | |
| Description & purpose: | Upgrade existing COM centres to provide AMHS capability and/or AFTN gateway facilities | | |

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| COM10 | Migrate from AFTN to AMHS |
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| Supporting material(s): | <p>ICAO - Doc 9880-Part II - Manual on Detailed Technical Specifications for the Aeronautical Telecommunication Network (ATN) using ISO/OSI Standards and Protocols - Part II - Ground-Ground Applications - Air Traffic Services Message Handling Services (ATSMHS) - Edition 1 / 12/2010 Url : https://store.icao.int/</p> <p>ICAO - EUR-Doc 020 - EUR AMHS Manual - Version 16 / 10/2021 Url : https://www.icao.int/EURNAT/EUR%20and%20NAT%20Documents/EUR%20Documents/EUR%20Documents/020%20-%20EUR%20AMHS%20Manual/EUR%20Doc%20020%20-%20EUR%20AMHS%20Manual_v16_0.pdf</p> <p>ICAO - EUR-Doc 021 - ATS Messaging Management Manual - Version 16 / 04/2014 Url : https://www.icao.int/EURNAT/EUR%20and%20NAT%20Documents/EUR%20Documents/EUR%20Documents/021%20-%20ATS%20Messaging%20Management%20Manual/EUR%20Doc%20021%20-%20ATS%20Messaging%20Management%20Manual_v16_0.pdf</p> <p>EUROCONTROL - SPEC-0136 - EUROCONTROL Specification on the Air Traffic Services Message Handling System (AMHS) - Edition 2.1 / 09/2018 Url : https://www.eurocontrol.int/publication/eurocontrol-specification-air-traffic-services-message-handling-system-amhs</p> | | |
| ATM Master Plan relationship: | ICTE-C06c-AMHS | | |
| Finalisation criteria: | 1 - AMHS capability has been implemented, documented and in operational service. | | |
| COM10-ASP02 | Implement regional boundary gateways | From: 01/01/2002 | By: 31/12/2011 |
| Action by: | ANS Providers | | |
| Description & purpose: | Provide interfaces between the EUR AMHS and non-European AFTN as well as interfaces to AMHS networks outside the EUR Region. This action is applicable to ANSPs in ICAO EUR Region Boundary States. | | |
| Supporting material(s): | <p>ICAO - Doc 9880-Part II - Manual on Detailed Technical Specifications for the Aeronautical Telecommunication Network (ATN) using ISO/OSI Standards and Protocols - Part II - Ground-Ground Applications - Air Traffic Services Message Handling Services (ATSMHS) - Edition 1 / 12/2010 Url : https://store.icao.int/</p> <p>ICAO - EUR-Doc 020 - EUR AMHS Manual - Version 16 / 10/2021 Url : https://www.icao.int/EURNAT/EUR%20and%20NAT%20Documents/EUR%20Documents/EUR%20Documents/020%20-%20EUR%20AMHS%20Manual/EUR%20Doc%20020%20-%20EUR%20AMHS%20Manual_v16_0.pdf</p> <p>ICAO - EUR-Doc 021 - ATS Messaging Management Manual - Version 16 / 04/2014 Url : https://www.icao.int/EURNAT/EUR%20and%20NAT%20Documents/EUR%20Documents/EUR%20Documents/021%20-%20ATS%20Messaging%20Management%20Manual/EUR%20Doc%20021%20-%20ATS%20Messaging%20Management%20Manual_v16_0.pdf</p> <p>EUROCONTROL - SPEC-0136 - EUROCONTROL Specification on the Air Traffic Services Message Handling System (AMHS) - Edition 2.1 / 09/2018 Url : https://www.eurocontrol.int/publication/eurocontrol-specification-air-traffic-services-message-handling-system-amhs</p> | | |
| Finalisation criteria: | 1 - Seamless cross-boundary operation of the ground ATS Messaging part of the AFS. | | |
| COM10-ASP03 | Enhance AMHS capability (Extended ATSMHS) | From: 01/01/2012 | By: 31/12/2018 |
| Action by: | ANS Providers | | |
| Description & purpose: | Upgrade the AMHS capability in existing COM centres to provide the Extended ATSMHS in accordance with the profile specified in the AMHS Community Specification. | | |
| Supporting material(s): | <p>ICAO - Doc 9880-Part II - Manual on Detailed Technical Specifications for the Aeronautical Telecommunication Network (ATN) using ISO/OSI Standards and Protocols - Part II - Ground-Ground Applications - Air Traffic Services Message Handling Services (ATSMHS) - Edition 1 / 12/2010 Url : https://store.icao.int/</p> <p>ICAO - EUR-Doc 020 - EUR AMHS Manual - Version 16 / 10/2021 Url : https://www.icao.int/EURNAT/EUR%20and%20NAT%20Documents/EUR%20Documents/EUR%20Documents/020%20-%20EUR%20AMHS%20Manual/EUR%20Doc%20020%20-%20EUR%20AMHS%20Manual_v16_0.pdf</p> <p>EUROCONTROL - SPEC-0136 - EUROCONTROL Specification on the Air Traffic Services Message Handling System (AMHS) - Edition 2.1 / 09/2018 Url : https://www.eurocontrol.int/publication/eurocontrol-specification-air-traffic-services-message-handling-system-amhs</p> | | |
| Finalisation criteria: | 1 - Extended ATSMHS capability has been implemented, documented and in operational service. | | |
| COM10-ASP04 | Ensure the conformity of AMHS systems and associated procedures | From: 01/01/2002 | By: 31/12/2018 |
| Action by: | ANS Providers | | |
| Description & purpose: | Ensure that the AMHS systems and associated procedures comply with the AMHS Community Specification | | |

| COM10 | Migrate from AFTN to AMHS | | |
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| Supporting material(s): | ICAO - Doc 9880-Part IV - Manual on Detailed Technical Specifications for the Aeronautical Telecommunication Network (ATN) using ISO/OSI Standards and Protocols - Part IV - Directory Services, Security and Systems Management - Edition 1 / 12/2010 Url : https://store.icao.int/ EUROCONTROL - SPEC-0136 - EUROCONTROL Specification on the Air Traffic Services Message Handling System (AMHS) - Edition 2.1 / 09/2018 Url : https://www.eurocontrol.int/publication/eurocontrol-specification-air-traffic-services-message-handling-system-amhs | | |
| Finalisation criteria: | 1 - EC declaration of verification has been provided. | | |
| COM10-ASP05 | Organise personnel awareness and training | From: 01/01/2002 | By: 31/12/2018 |
| Action by: | ANS Providers | | |
| Description & purpose: | Develop and maintain operations manuals and train personnel accordingly to ensure that: - All COM Centre personnel are adequately trained to AMHS technology; - An AMHS "expertise cell" is available in every COM Centre implementing AMHS; - All ANSP personnel involved in ATS Messaging Management (AMC activities) is adequately trained. | | |
| Supporting material(s): | EUROCONTROL - IANS-COM-AMHS - IANS-COM-AMHS Course Url : https://trainingzone.eurocontrol.int ICAO - EUR-Doc 020 - EUR AMHS Manual - Version 16 / 10/2021 Url : https://www.icao.int/EURNAT/EUR%20and%20NAT%20Documents/EUR%20Documents/EUR%20Documents/020%20-%20EUR%20AMHS%20Manual/EUR%20Doc%20020%20-%20EUR%20AMHS%20Manual_v16_0.pdf ICAO - EUR-Doc 021 - ATS Messaging Management Manual - Version 16 / 04/2014 Url : https://www.icao.int/EURNAT/EUR%20and%20NAT%20Documents/EUR%20Documents/EUR%20Documents/021%20-%20ATS%20Messaging%20Management%20Manual/EUR%20Doc%20021%20-%20ATS%20Messaging%20Management%20Manual_v16_0.pdf EUROCONTROL - SPEC-0136 - EUROCONTROL Specification on the Air Traffic Services Message Handling System (AMHS) - Edition 2.1 / 09/2018 Url : https://www.eurocontrol.int/publication/eurocontrol-specification-air-traffic-services-message-handling-system-amhs | | |
| Finalisation criteria: | 1 - All COM Centre personnel have been adequately trained to AMHS technology. 2 - An AMHS "expertise cell" has been established in every COM Centre implementing AMHS. 3 - All ANSP personnel involved in ATS Messaging Management (AMC activities) has been adequately trained. | | |
| COM10-ASP06 | Participate in AMC activities for ATS Messaging Management | From: 01/01/2007 | By: 31/12/2018 |
| Action by: | ANS Providers | | |
| Description & purpose: | Use the services of the ATS Messaging Management Centre (AMC) for AMHS off-line management | | |
| Supporting material(s): | ICAO - EUR-Doc 021 - ATS Messaging Management Manual - Version 16 / 04/2014 Url : https://www.icao.int/EURNAT/EUR%20and%20NAT%20Documents/EUR%20Documents/EUR%20Documents/021%20-%20ATS%20Messaging%20Management%20Manual/EUR%20Doc%20021%20-%20ATS%20Messaging%20Management%20Manual_v16_0.pdf | | |
| Finalisation criteria: | 1 - AMC Procedures for Cooperating COM Centres (CCC) operators have been implemented as defined in the ATS Messaging Management Manual. | | |
| COM10-IND01 | Ensure the conformity of AMHS systems | From: 01/01/2002 | By: 31/12/2018 |
| Action by: | Industry | | |
| Description & purpose: | AMHS system manufacturers to ensure that the available AMHS systems comply with the AMHS Community Specification. | | |
| Supporting material(s): | ICAO - Doc 9880-Part IV - Manual on Detailed Technical Specifications for the Aeronautical Telecommunication Network (ATN) using ISO/OSI Standards and Protocols - Part IV - Directory Services, Security and Systems Management - Edition 1 / 12/2010 Url : https://store.icao.int/ EUROCONTROL - SPEC-0136 - EUROCONTROL Specification on the Air Traffic Services Message Handling System (AMHS) - Edition 2.1 / 09/2018 Url : https://www.eurocontrol.int/publication/eurocontrol-specification-air-traffic-services-message-handling-system-amhs | | |
| Finalisation criteria: | 1 - Test reports have been completed in accordance with AMHS Community Specification and testing methodology and tools ensured by the EUROCONTROL Agency. 2 - An EC declaration of conformity has been provided. | | |
| COM10-AGY01 | Provide AMC (ATS Messaging Management Centre) Service | From: 01/01/2007 | By: 31/12/2018 |
| Action by: | EUROCONTROL Agency | | |
| Description & purpose: | Provide AMHS off-line network management service defined in the ATS Messaging Management Manual (ICAO EUR Doc 021) | | |

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| Supporting material(s): | ICAO - EUR-Doc 021 - ATS Messaging Management Manual - Version 16 / 04/2014 Url : https://www.icao.int/EURNAT/EUR%20and%20NAT%20Documents/EUR%20Documents/EUR%20Documents/021%20-%20ATS%20Messaging%20Management%20Manual/EUR%20Doc%20021%20-%20ATS%20Messaging%20Management%20Manual_v16_0.pdf | | |
| Finalisation criteria: | 1 - Positive indication in AMC user's satisfaction surveys | | |
| COM10-AGY02 | Implement AMHS capability (Basic ATSMHS) and gateway facilities to AFTN | From: 01/01/2002 | By: 31/12/2011 |
| Action by: | EUROCONTROL Agency | | |
| Description & purpose: | Upgrade existing CFMU COM centres to start providing AMHS operational service | | |
| Supporting material(s): | ICAO - Doc 9880-Part II - Manual on Detailed Technical Specifications for the Aeronautical Telecommunication Network (ATN) using ISO/OSI Standards and Protocols - Part II - Ground-Ground Applications - Air Traffic Services Message Handling Services (ATSMHS) - Edition 1 / 12/2010 Url : https://store.icao.int/ ICAO - EUR-Doc 020 - EUR AMHS Manual - Version 16 / 10/2021 Url : https://www.icao.int/EURNAT/EUR%20and%20NAT%20Documents/EUR%20Documents/EUR%20Documents/020%20-%20EUR%20AMHS%20Manual/EUR%20Doc%20020%20-%20EUR%20AMHS%20Manual_v16_0.pdf ICAO - EUR-Doc 021 - ATS Messaging Management Manual - Version 16 / 04/2014 Url : https://www.icao.int/EURNAT/EUR%20and%20NAT%20Documents/EUR%20Documents/EUR%20Documents/021%20-%20ATS%20Messaging%20Management%20Manual/EUR%20Doc%20021%20-%20ATS%20Messaging%20Management%20Manual_v16_0.pdf EUROCONTROL - SPEC-0136 - EUROCONTROL Specification on the Air Traffic Services Message Handling System (AMHS) - Edition 2.1 / 09/2018 Url : https://www.eurocontrol.int/publication/eurocontrol-specification-air-traffic-services-message-handling-system-amhs | | |
| Finalisation criteria: | 1 - AMHS capability has been implemented and put in operational service. | | |
| COM10-AGY03 | Enhance AMHS capability (Extended ATSMHS) | From: 01/01/2012 | By: 31/12/2018 |
| Action by: | EUROCONTROL Agency | | |
| Description & purpose: | Upgrade the AMHS capability in existing CFMU COM centres to provide the Extended ATSMHS in accordance with the profile specified in the AMHS Community Specification | | |
| Supporting material(s): | ICAO - Doc 9880-Part II - Manual on Detailed Technical Specifications for the Aeronautical Telecommunication Network (ATN) using ISO/OSI Standards and Protocols - Part II - Ground-Ground Applications - Air Traffic Services Message Handling Services (ATSMHS) - Edition 1 / 12/2010 Url : https://store.icao.int/ EUROCONTROL - SPEC-0136 - EUROCONTROL Specification on the Air Traffic Services Message Handling System (AMHS) - Edition 2.1 / 09/2018 Url : https://www.eurocontrol.int/publication/eurocontrol-specification-air-traffic-services-message-handling-system-amhs | | |
| Finalisation criteria: | 1 - Extended ATSMHS capability has been implemented and put in operational service. | | |
| COM10-AGY04 | Develop further relevant elements of the Extended ATSMHS in AMHS Community Specification | From: 01/01/2010 | By: 31/12/2018 |
| Action by: | EUROCONTROL Agency | | |
| Description & purpose: | Developed additional requirements regarding functionality of the relevant elements of the Extended ATSMHS and complete AMHS Community specification accordingly. This refers to a set of testing requirements, conformance, interoperability and pre-operational tests covering the Extended ATSMHS. | | |
| Supporting material(s): | EUROCONTROL - SPEC-0136 - EUROCONTROL Specification on the Air Traffic Services Message Handling System (AMHS) - Edition 2.1 / 09/2018 Url : https://www.eurocontrol.int/publication/eurocontrol-specification-air-traffic-services-message-handling-system-amhs | | |
| Finalisation criteria: | 1 - AMHS Community Specification has been updated with the relevant elements of the Extended ATSMHS. | | |
| COM10-AGY05 | Implement AMHS-Community Specification compliance testing methodology and tools | From: 01/01/2010 | By: 31/12/2018 |
| Action by: | EUROCONTROL Agency | | |
| Description & purpose: | Take measures to ensure availability of test tools with adequate functionality with regard to AMHS Community Specification (particularly regarding Extended ATSMHS) Develop and implement testing methodology enabling Industry manufacturers and ANS Providers to execute AMHS Community Specification conformance tests | | |
| Supporting material(s): | EUROCONTROL - SPEC-0136 - EUROCONTROL Specification on the Air Traffic Services Message Handling System (AMHS) - Edition 2.1 / 09/2018 Url : https://www.eurocontrol.int/publication/eurocontrol-specification-air-traffic-services-message-handling-system-amhs | | |
| Finalisation criteria: | 1 - Test tool has been made available. | | |

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| COM10 | Migrate from AFTN to AMHS |
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| COM10-AGY06 | Support personnel training | From: | By: |
| | | 01/01/2002 | 31/12/2018 |
| Action by: | EUROCONTROL Agency | | |
| Description & purpose: | Support AMHS training of personnel in ANS Providers, including operational procedures | | |
| Finalisation criteria: | 1 - Most people working in AFTN/CIDIN environment have been trained on AMHS before 2011. | | |