SESAR	Achieved									ECAC+
COM10.1	**Migrate from AFTN to AMHS (Basic service)**									
REG	**ASP**	**MIL**	**APO**	**USE**	**INT**	**IND**	**NM**	**MET**	**AIS**	**USP**

Subject matter and scope

This objective covers the initial transitional step supporting migration from the AFTN to the Basic ATSMHS level of service. 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 obsolete, 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 for 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	All ECAC+ States		
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							

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

CNS Infrastructure and Services

SESAR Solution

ICAO GANP - ASBUs

COMI-B0/7	ATS Message Handling System (AMHS)

Deployment Programme

- none -	

COM10.1	Migrate from AFTN to AMHS (Basic service)

European Plan for Aviation Safety

- none -	

Operating Environments

Airport
En-Route
Network
Terminal Airspace

Stakeholder Lines of Action (SLoAs)

SloA ref.	Title	From	By
COM10.1-ASP01	Implement AMHS capability (Basic ATSMHS) and gateway facilities to AFTN	01/01/2002	31/12/2018
COM10.1-ASP02	Implement regional boundary gateways	01/01/2002	31/12/2018
COM10.1-ASP04	Ensure the conformity of AMHS systems and associated procedures	01/01/2002	31/12/2018
COM10.1-ASP05	Organise personnel awareness and training	01/01/2002	31/12/2018
COM10.1-ASP06	Participate in AMC activities for ATS Messaging Management	01/01/2007	31/12/2018
COM10.1-IND01	Ensure the conformity of AMHS systems	01/01/2002	31/12/2018
COM10.1-AGY01	Provide AMC (ATS Messaging Management Centre) Service	01/01/2007	31/12/2018
COM10.1-AGY05	Implement AMHS-Community Specification compliance testing methodology and tools	01/01/2010	31/12/2018
COM10.1-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

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

COM10.1-ASP01	Implement AMHS capability (Basic ATSMHS) and gateway facilities to AFTN	From: 01/01/2002	By: 31/12/2018
Action by:	**ANS Providers**		
Description & purpose:	Upgrade existing COM centres to provide AMHS capability and/or AFTN gateway facilities		
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, documented and in operational service.		
COM10.1-ASP02	**Implement regional boundary gateways**	From:	By:

COM10.1	Migrate from AFTN to AMHS (Basic service)

		01/01/2002	31/12/2018
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):	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 - Seamless cross-boundary operation of the ground ATS Messaging part of the AFS.		

COM10.1-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		
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.		

COM10.1-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.		

COM10.1-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		

COM10.1	Migrate from AFTN to AMHS (Basic service)

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.

COM10.1-IND01	Ensure the conformity of AMHS systems	From:	By:
		01/01/2002	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.

COM10.1-AGY01	Provide AMC (ATS Messaging Management Centre) Service	From:	By:
		01/01/2007	31/12/2018

Action by:	Agency
Description & purpose:	Provide AMHS off-line network management service defined in the ATS Messaging Management Manual (ICAO EUR Doc 021)
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

COM10.1-AGY05	Implement AMHS-Community Specification compliance testing methodology and tools	From:	By:
		01/01/2010	31/12/2018

Action by:	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.

COM10.1-AGY06	Support personnel training	From:	By:
		01/01/2002	31/12/2018

Action by:	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.