*International Civil Aviation Organization*

**MID ATS Messaging Management Centre Steering Group**

**Seventh Meeting (MIDAMC STG/7)**
***(Muscat, Oman, 15-16 May 2022)***

**Agenda Item 3: AMHS Network Performance Matters**

# TRANSITION OF ATN/AMHS BETWEEN MUSCAT AND MUMBAI

*(Presented by Sultanate of Oman.)*

**SUMMARY**

This paper presents the Success deployment of X.400/AMHS communication between Muscat and Mumbai ATS Message Management Centres

Action by the meeting is at paragraph 3.

**REFERENCES**

- MIDANPIRG/15 Report
- MIDANPIRG/17 Report
- ICAO Doc. 9880
- Annex 10 Vol.2 & Vol.3
- ICAO Doc. 4444
- Trail document **Appendix A**

## 1. INTRODUCTION

1.1 The meeting may wish to note that MIDANPIRG/15 meeting held in Bahrain, from 8 to 11 June 2015, through Conclusion 15/30, urged States to refrain from establishing new AFTN and CIDIN connections at the international level, gradually phase out the current connections based on AFTN or CIDIN standards, and expedite their AMHS implementation.

1.2 MIDANPIRG/17 meeting held in Egypt, from 15 to 18 April 2019 agreed that the MID Air Navigation Plan (MID ANP) VOL II table CNS-II should be updated to reflect the Conclusion 15/30 and fulfil the current needs.

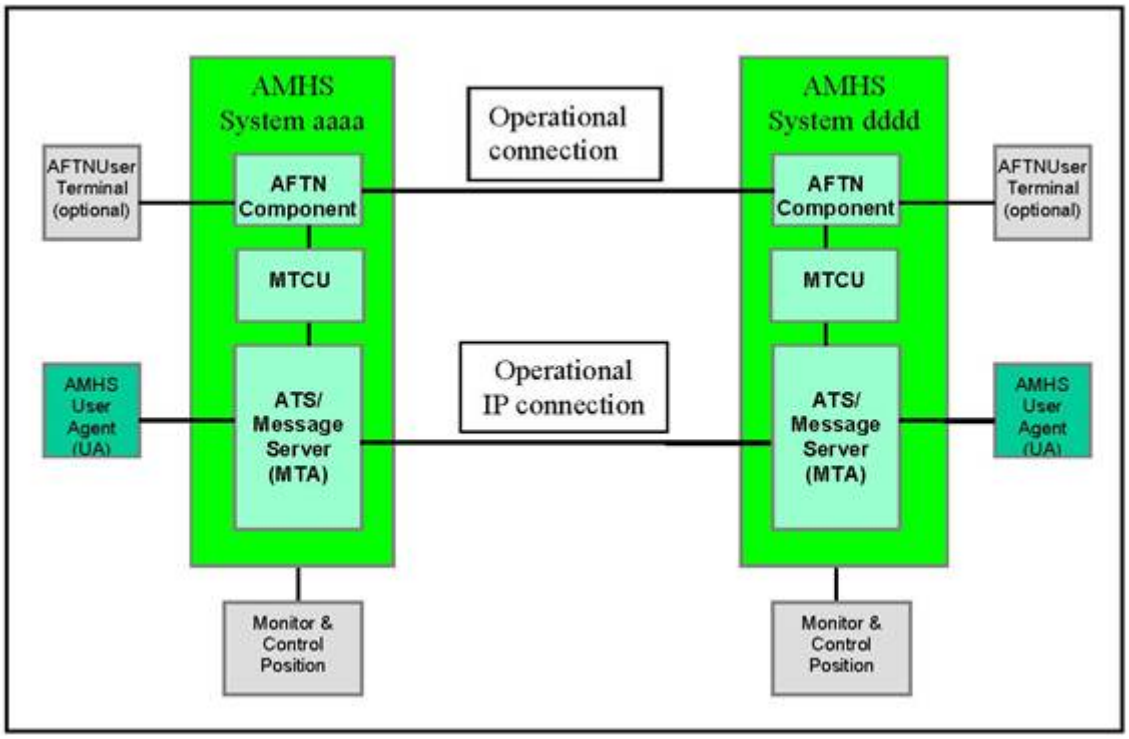
## 2. DISCUSSION

**AMHS implementation between Muscat and Mumbai**

2.1 Muscat COM Centre is an entry/exit points with ASIA/PAC Region according to the MID Air Navigation Plan (MID ANP) VOL II. ATS Message Handling Service (AMHS) between India and Oman in support of the International Civil Aviation Organization (ICAO) Aeronautical Telecommunication Network (ATN)/AMHS implementation plans for the Asia/Pacific Region and MID Region.

2.2 An X.400/AMHS Communication Channel was deployed between both ATS Message Management Centre's Muscat and Mumbai on 8th June 2021, based on the existing ICAO AFTN routing directory for the Asia/Pacific and MID Regions.

2.3 The CNS technical teams between Muscat and Mumbai exchanged Technical Coordination, and the X.400/AMHS was established on the original (TCP/IP) circuit configuration.




2.4 Based on above coordination an ATN/AMHS trails was conducted. This trails were based on the ATN Standards and Recommended Practices (SARPs) contained in ICAO Annex 10 Vol II and Vol III Part 1 Chapter 3 (ATN) and the Technical Provisions contained in ICAO Doc 9880 Part II Manual on detailed Tech. specification for the ATN. Reference **Appendix A.**

2.4.1 ATN Connectivity Bilateral Tests of X.400 P1 Configuration done on 15th June 2021

2.4.2 ATN/AMHS revised Inter-Operability Tests on 21st June 2021

2.4.3 ATN/AMHS Pre-Operational Tests 28th June 2021

2.5 A Technical Memorandum of Cooperation was signed between Civil Aviation Authority Oman (CAA Oman) and Airports Authority of India (AAI), and this ATN/AMHS connection officially became operational on 25th April 2022.

**AMHS implementation Plan and Status in Oman**

2.6 AMHS implementation plan and status according to the MID Air Navigation Plan (MID ANP) VOL II, TABLE CNS II-1 - Aeronautical Fixed Telecommunications Network (AFTN) Plan:

| Centre | AMHS | AFTN |
|---|---|---|
| Abu Dhabi | √ | ------- |
| Mumbai | √ | ------- |
| Bahrain | Plan Q4 2022 | √ |
| Jeddah | Ongoing Circuit Testing | √ |
| Karachi | Planed Q12023 | √ |
| Tehran | ------- | √ |
| Sanaa | ------- | √ |
| Doha | Test is successful, yet to be officially operational. | ------- |

*Table 1: AMHS implementation Plan and Status in Oman.*

## 3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note the content of this working paper;

b) update Oman's AMHS implementation status with India;

c) update ASIA/PAC ROUTING DIRECTORY; and

d) consider Oman's experience and trails doc in **Appendix A** as basis for similar ATN/AMHS Transitions in the Region.

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**APPENDIX A**

# ATN Trial Test (VA-OO)

# Test Records

09/07/2021

## Revision History

| Version | Date | Description |
|---|---|---|
| V.01.10 | 10.10.2013 | Draft Version of the Technical Memorandum of Cooperation (VA-OO) |
| V.01.20 | 12.05.2015 | Modified after the completion of IOT |
| V.01.30 | 21.05.2015 | Final version after completion of POT |
| V.01.40 | 01.07.2021 | Final draft after revised IOT and POT . |
| V.01.50 | 09.07.2021 | Modified for changes to PRE004 test |
| V.01.60 | 13.10.2021 | Modified for DGCAR |
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# 1 Bilateral Test Procedures – Test Scenarios

## 1.1 Introduction

The following tables contain the scenarios for the different Interoperability Tests (IT) described in the previous chapters.

The test scenarios consist of several test-cases. The test-case reference is as follows:

ITxxx/TCzz

Test scenario: Txxx where xxx is the scenario number

Test-case: Czz where zz is the number of test-case.

## 1.2 Submission, Transfer and Delivery Operation (AMHS to AMHS)

| **IT101** | **Submit, transfer and deliver an IPM (UA IUT-A to UA IUT-B)** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT101/TC01** | Tested functionality: Submission, transfer and delivery of messages with different ATS-message-priorities<br>A KK priority message will be submitted from the UA of IUT-A and delivered to the UA of IUT-B. | | |
| **Test description:** | From the User Agent VABBMHSA send the following message to the UA OOMSMHSA:<br>PRI: KK<br>FT: <210644><br>OHI:<br>TEST IT101/TC01<br><br>Get the message with OOMSMHSA (UA-terminal of IUT-B). | | |
| **Test control:** | Check the correct reception of the message at the UA OOMSMHSA of the IUT-B system.<br>Check<br>-the ATS-message-priority: PRI: KK<br>-the ATS-message-filing-time and<br>-the ATS-message-text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| **IT101** | **Submit, transfer and deliver an IPM (UA IUT-A to UA IUT-B)** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT101/TC02** | Tested functionality: Submission, transfer and delivery of messages with different ATS-message-priorities<br>A GG priority message will be submitted from the UA of IUT-A and delivered to the UA of IUT-B. | | |
| **Test description:** | From the User Agent VABBMHSA send the following message to the UA OOMSMHSA:<br>PRI: GG<br>FT: <210645><br>OHI:<br>TEST IT101/TC02<br><br>Get the message with OOMSMHSA (UA-terminal of IUT-B). | | |
| **Test control:** | Check the correct reception of the message at the UA OOMSMHSA of the IUT-B system.<br>Check<br>-the ATS-message-priority: PRI: GG<br>-the ATS-message-filing-time and<br>-the ATS-message-text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| **IT101** | **Submit, transfer and deliver an IPM (UA IUT-A to UA IUT-B)** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT101/TC03** | Tested functionality: Submission, transfer and delivery of messages with different ATS-message-priorities<br>An FF priority message will be submitted from the UA of IUT-A and delivered to the UA of IUT-B. | | |
| **Test description:** | From the User Agent VABBMHSA send the following message to the UA OOMSMHSA:<br>PRI: FF<br>FT: <210645><br>OHI:<br>TEST IT101/TC03<br><br>Get the message with OOMSMHSA (UA-terminal of IUT-B). | | |
| **Test control:** | Check the correct reception of the message at the UA OOMSMHSA of the IUT-B system.<br>Check<br>-the ATS-message-priority: PRI: FF<br>-the ATS-message-filing-time and<br>-the ATS-message-text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| **IT101** | **Submit, transfer and deliver an IPM (UA IUT-A to UA IUT-B)** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT101/TC04** | Tested functionality: Submission, transfer and delivery of messages with different ATS-message-priorities<br>A DD priority message will be submitted from the UA of IUT-A and delivered to the UA of IUT-B. | | |
| **Test description:** | From the User Agent VABBMHSA send the following message to the UA OOMSMHSA:<br>PRI: DD<br>FT: <210646><br>OHI:<br>TEST IT101/TC04<br><br>Get the message with OOMSMHSA (UA-terminal of IUT-B). | | |
| **Test control:** | Check the correct reception of the message at the UA OOMSMHSA of the IUT-B system.<br>Check<br>-the ATS-message-priority: PRI: DD<br>-the ATS-message-filing-time and<br>-the ATS-message-text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| **IT101** | **Submit, transfer and deliver an IPM (UA IUT-A to UA IUT-B)** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT101/TC05** | Tested functionality: Submission, transfer and delivery of messages with different ATS-message-priorities<br>An SS priority message will be submitted from the UA of IUT-A and delivered to the UA of IUT-B. | | |
| **Test description:** | From the User Agent VABBMHSA send the following message to the UA OOMSMHSA:<br>PRI: SS<br>FT: <210646><br>OHI:<br>TEST IT101/TC05<br><br>Get the message with OOMSMHSA (UA-terminal of IUT-B). A RN is submitted when the message is displayed.<br>Note. – Depending on UA implementation the user might be requested to send the RN. | | |
| **Test control:** | Check the correct reception of the message at the UA OOMSMHSA of the IUT-B system.<br>Check<br>-the ATS-message-priority: PRI: SS<br>-the ATS-message-filing-time and<br>-the ATS-message-text<br><br>Check the reception of a RN on the UA VABBMHSA of the IUT-A system. | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| **IT102** | **Submit, transfer and deliver an IPM (UA IUT-B to UA IUT-A)** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT102/TC01** | Tested functionality: Submission, transfer and delivery of messages with different ATS-message-priorities<br>A KK priority message will be submitted from the UA of IUT-B and delivered to the UA of IUT-A. | | |
| **Test description:** | From the User Agent OOMSMHST send the following message to the UA VABBMHSA:<br>PRI: KK<br>FT: <210730><br>OHI:<br>TEST IT102/TC01<br><br>Get the message with VABBMHSA (UA-terminal of IUT-A). | | |
| **Test control:** | Check the correct reception of the message at the UA VABBMHSA of the IUT-A system.<br>Check<br>-the ATS-message-priority: PRI: KK<br>-the ATS-message-filing-time and<br>-the ATS-message-text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| **IT102** | **Submit, transfer and deliver an IPM (UA IUT-B to UA IUT-A)** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT102/TC02** | Tested functionality: Submission, transfer and delivery of messages with different ATS-message-priorities<br>A GG priority message will be submitted from the UA of IUT-B and delivered to the UA of IUT-A. | | |
| **Test description:** | From the User Agent OOMSMHST send the following message to the UA VABBMHSA:<br>PRI: GG<br>FT: <210730><br>OHI:<br>TEST IT102/TC02<br><br>Get the message with VABBMHSA (UA-terminal of IUT-A). | | |
| **Test control:** | Check the correct reception of the message at the UA VABBMHSA of the IUT-A system.<br>Check<br>-the ATS-message-priority: PRI: GG<br>-the ATS-message-filing-time and<br>-the ATS-message-text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| **IT102** | **Submit, transfer and deliver an IPM (UA IUT-B to UA IUT-A)** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT102/TC03** | Tested functionality: Submission, transfer and delivery of messages with different ATS-message-priorities<br>An FF priority message will be submitted from the UA of IUT-B and delivered to the UA of IUT-A. | | |
| **Test description:** | From the User Agent OOMSMHST send the following message to the UA VABBMHSA:<br>PRI: FF<br>FT: <210730><br>OHI:<br>TEST IT102/TC03<br><br>Get the message with VABBMHSA (UA-terminal of IUT-A). | | |
| **Test control:** | Check the correct reception of the message at the UA VABBMHSA of the IUT-A system.<br>Check<br>-the ATS-message-priority: PRI: FF<br>-the ATS-message-filing-time and<br>-the ATS-message-text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| **IT102** | **Submit, transfer and deliver an IPM (UA IUT-B to UA IUT-A)** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT102/TC04** | Tested functionality: Submission, transfer and delivery of messages with different ATS-message-priorities<br>A DD priority message will be submitted from the UA of IUT-B and delivered to the UA of IUT-A. | | |
| **Test description:** | From the User Agent OOMSMHST send the following message to the UA VABBMHSA:<br>PRI: DD<br>FT: <210730><br>OHI:<br>TEST IT102/TC04<br><br>Get the message with VABBMHSA (UA-terminal of IUT-A) | | |
| **Test control:** | Check the correct reception of the message at the UA VABBMHSA of the IUT-A system.<br>Check<br>-the ATS-message-priority: PRI: DD<br>-the ATS-message-filing-time and<br>-the ATS-message-text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| **IT102** | **Submit, transfer and deliver an IPM (UA IUT-B to UA IUT-A)** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT102/TC05** | Tested functionality: Submission, transfer and delivery of messages with different ATS-message-priorities<br>An SS priority message will be submitted from the UA of IUT-B and delivered to the UA of IUT-A. | | |
| **Test description:** | From the User Agent OOMSMHST send the following message to the UA VABBMHSA:<br>PRI: SS<br>FT: <210730><br>OHI:<br>TEST IT102/TC05<br><br>Get the message with VABBMHSA (UA-terminal of IUT-A). A RN is submitted when the message is displayed.<br>*Note. – Depending on UA implementation the user might be requested to send the RN.* | | |
| **Test control:** | Check the correct reception of the message at the UA VABBMHSA of the IUT-A system.<br>Check<br>-the ATS-message-priority: PRI: SS<br>-the ATS-message-filing-time and<br>-the ATS-message-text<br><br>Check the reception of a RN on the UA OOMSMHST of the IUT-B system. | | |
| **Test result:** | **PASS** | FAILED | INCONCLUSIVE |
| **21/06/2021** | PASSED | | |

## 1.3 Gateway Operations (AFTN to AMHS)

| **IT201** | **Convert an AFTN message to AMHS format (IUT-A)** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT201/TC01** | Tested functionality: Conversion of messages with different AFTN priorities<br>A KK priority message will be sent from the AFTN terminal of IUT-A, converted to AMHS and received at the UA of IUT-B. | | |
| **Test description:** | From the AFTN terminal VABBFTNA of IUT-A send the following message to the User Agent (UA) of IUT-B:<br>KK OOMSMHSA<br><210738>VABBFTNA<br>TEST IT201/TC01<br><br>The message is converted from AFTN into AMHS format in the MTCU of IUT-A. | | |
| **Test control:** | Check the correct reception of the message at the UA OOMSMHSA of the IUT-B system.<br>Check<br>-the ATS-message-priority: PRI: KK<br>-the message transfer priority: NON URGENT<br>-the ATS-message-filing-time and<br>-the ATS-message-text | | |
| **Test result:** | **PASS** | FAILED | INCONCLUSIVE |
| **21/06/2021** | PASSED | | |

| **IT201** | **Convert an AFTN message to AMHS format (IUT-A)** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT201/TC02** | Tested functionality: Conversion of messages with different AFTN priorities<br>A GG priority message will be sent from the AFTN terminal of IUT-A, converted to AMHS and received at the UA of IUT-B. | | |
| **Test description:** | From the AFTN terminal VABBFTNA of IUT-A send the following message to the User Agent (UA) of IUT-B:<br>GG OOMSMHSA<br><210739>VABBFTNA<br>TEST IT201/TC02<br><br>The message is converted from AFTN into AMHS format in the MTCU of IUT-A. | | |
| **Test control:** | Check the correct reception of the message at the UA OOMSMHSA of the IUT-B system.<br>Check<br>-the ATS-message-priority: PRI: GG<br>-the message transfer priority: NON URGENT<br>-the ATS-message-filing-time and<br>-the ATS-message-text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| **IT201** | **Convert an AFTN message to AMHS format (IUT-A)** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT201/TC03** | Tested functionality: Conversion of messages with different AFTN priorities<br>An FF priority message will be sent from the AFTN terminal of IUT-A, converted to AMHS and received at the UA of IUT-B. | | |
| **Test description:** | From the AFTN terminal VABBFTNA of IUT-A send the following message to the User Agent (UA) of IUT-B:<br>FF OOMSMHSA<br><210739>VABBFTNA<br>TEST IT201/TC03<br><br>The message is converted from AFTN into AMHS format in the MTCU of IUT-A. | | |
| **Test control:** | Check the correct reception of the message at the UA OOMSMHSA of the IUT-B system.<br>Check<br>-the ATS-message-priority: PRI: FF<br>-the message transfer priority: NORMAL<br>-the ATS-message-filing-time and<br>-the ATS-message-text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| **IT201** | **Convert an AFTN message to AMHS format (IUT-A)** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT201/TC04** | Tested functionality: Conversion of messages with different AFTN priorities<br>A DD priority message will be sent from the AFTN terminal of IUT-A, converted to AMHS and received at the UA of IUT-B. | | |
| **Test description:** | From the AFTN terminal VABBFTNA of IUT-A send the following message to the User Agent (UA) of IUT-B:<br>DD OOMSMHSA<br><210739>VABBFTNA<br>TEST IT201/TC04<br><br>The message is converted from AFTN into AMHS format in the MTCU of IUT-A. | | |
| **Test control:** | Check the correct reception of the message at the UA OOMSMHSA of the IUT-B system.<br>Check<br>-the ATS-message-priority: PRI: DD<br>-the message transfer priority: NORMAL<br>-the ATS-message-filing-time and<br>-the ATS-message-text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| **IT201** | **Convert an AFTN message to AMHS format (IUT-A)** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT201/TC05** | Tested functionality: Conversion of messages with different AFTN priorities<br>An SS priority message will be sent from the AFTN terminal of IUT-A, converted to AMHS and received at the UA of IUT-B. | | |
| **Test description:** | From the AFTN terminal VABBFTNA of IUT-A send the following message to the User Agent (UA) of IUT-B:<br>SS OOMSMHSA<br><210739>VABBFTNA<br>TEST IT201/TC05<br><br>The message is converted from AFTN into AMHS format in the MTCU of IUT-A.<br><br>*Optional:*<br>*Generate a RN at the receiving UA OOMSMHSA of ITU-B.* | | |
| **Test control:** | Check the correct reception of the message at the UA OOMSMHSA of the IUT-B system.<br>Check<br>-the ATS-message-priority: PRI: SS<br>-the message transfer priority: URGENT<br>-the ATS-message-filing-time and<br>-the ATS-message-text<br><br>*Optional:*<br>If a RN is replied from the UA OOMSMHSA of ITU-B, the MTCU of IUT-A converts it into an SS Ack message which is sent to the AFTN terminal of IUT-A.<br>Check the reception of the SS Ack message at the AFTN terminal VABBFTNA of IUT-A. .Its originator indicator shall be the AFTN address OOMSMHSA, and its text shall be “R <FT>VABBFTNA”, where <FT> denotes the filing time of the subject AFTN message. | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| **IT202** | **Convert an AFTN message to AMHS format (IUT-B)** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT202/TC01** | Tested functionality: Conversion of messages with different AFTN priorities<br>A KK priority message will be sent from the AFTN terminal of IUT-B, converted to AMHS and received at the UA of IUT-A. | | |
| **Test description:** | From the AFTN terminal OOMSFTNA of IUT-B send the following message to the User Agent (UA) of IUT-A:<br>KK VABBMHSA<br><210741>OOMSFTNA<br>TEST IT202/TC01<br><br>The message is converted from AFTN into AMHS format in the MTCU of IUT-B. | | |
| **Test control:** | Check the correct reception of the message at the UA VABBMHSA of the IUT-A system.<br>Check<br>-the ATS-message-priority: PRI: KK<br>-the message transfer priority: NON URGENT<br>-the ATS-message-filing-time and<br>-the ATS-message-text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| **IT202** | **Convert an AFTN message to AMHS format (IUT-B)** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT202/TC02** | Tested functionality: Conversion of messages with different AFTN priorities<br>A GG priority message will be sent from the AFTN terminal of IUT-B, converted to AMHS and received at the UA of IUT-A. | | |
| **Test description:** | From the AFTN terminal OOMSFTNA of IUT-B send the following message to the User Agent (UA) of IUT-A:<br>GG VABBMHSA<br><210741>OOMSFTNA<br>TEST IT202/TC02<br><br>The message is converted from AFTN into AMHS format in the MTCU of IUT-B. | | |
| **Test control:** | Check the correct reception of the message at the UA VABBMHSA of the IUT-A system.<br>Check<br>-the ATS-message-priority: PRI: GG<br>-the message transfer priority: NON URGENT<br>-the ATS-message-filing-time and<br>-the ATS-message-text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| **IT202** | **Convert an AFTN message to AMHS format (IUT-B)** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT202/TC03** | Tested functionality: Conversion of messages with different AFTN priorities<br>An FF priority message will be sent from the AFTN terminal of IUT-B, converted to AMHS and received at the UA of IUT-A. | | |
| **Test description:** | From the AFTN terminal OOMSFTNA of IUT-B send the following message to the User Agent (UA) of IUT-A:<br>FF VABBMHSA<br><210741>OOMSFTNA<br>TEST IT202/TC03<br><br>The message is converted from AFTN into AMHS format in the MTCU of IUT-B. | | |
| **Test control:** | Check the correct reception of the message at the UA VABBMHSA of the IUT-A system.<br>Check<br>-the ATS-message-priority: PRI: FF<br>-the message transfer priority: NORMAL<br>-the ATS-message-filing-time and<br>-the ATS-message-text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| **IT202** | **Convert an AFTN message to AMHS format (IUT-B)** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT202/TC04** | Tested functionality: Conversion of messages with different AFTN priorities<br>A DD priority message will be sent from the AFTN terminal of IUT-B, converted to AMHS and received at the UA of IUT-A. | | |
| **Test description:** | From the AFTN terminal OOMSFTNA of IUT-B send the following message to the User Agent (UA) of IUT-A:<br>DD VABBMHSA<br><210741>OOMSFTNA<br>TEST IT202/TC04<br>The message is converted from AFTN into AMHS format in the MTCU of IUT-B.<br>Test message ID: IT202M05 | | |
| **Test control:**<br><FT>OOMSFTNA<br>TEST IT202/TC05 | Check the correct reception of the message at the UA VABBMHSA of the IUT-A system.<br>Check<br>-the ATS-message-priority: PRI: DD<br>-the message transfer priority: NORMAL<br>-the ATS-message-filing-time and<br>-the ATS-message-text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| | | | |
|---|---|---|---|
| **Test-case id:**<br>**IT202/TC05** | Tested functionality: Conversion of messages with different AFTN priorities<br>An SS priority message will be sent from the AFTN terminal of IUT-B, converted to AMHS and received at the UA of IUT-A. | | |
| **Test description:** | From the AFTN terminal OOMSFTNA of IUT-B send the following message to the User Agent (UA) of IUT-A:<br>SS VABBMHSA<br><210741>OOMSFTNA<br>TEST IT202/TC05<br><br>The message is converted from AFTN into AMHS format in the MTCU of IUT-B.<br><br>Optional:<br>Generate a RN at the receiving UA VABBMHSA of ITU-A. | | |
| **Test control:** | Check the correct reception of the message at the UA VABBMHSA of the IUT-A system.<br>Check<br>-the ATS-message-priority: PRI: SS<br>-the message transfer priority: URGENT<br>-the ATS-message-filing-time and<br>-the ATS-message-text<br><br>Optional:<br>If a RN is replied from the UA VABBMHSA of ITU-A, the MTCU of IUT-B converts it into an SS Ack message which is sent to the AFTN terminal of IUT-B.<br>Check the reception of the SS Ack message at the AFTN terminal OOMSFTNA of IUT-B. Its originator indicator shall be the AFTN address VABBMHSA, and its text shall be “R <FT>OOMSFTNA”, where <FT> denotes the filing time of the subject AFTN message. | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

## 1.4 Gateway Operations (AMHS to AFTN)

| **IT301** | **Convert an IPM to AFTN format (IUT-B)** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT301/TC01** | Tested functionality: Conversion of messages with different ATS-message-priorities<br>A KK priority message will be submitted from the UA of IUT-A, converted to AFTN in IUT-B and received at the AFTN terminal of IUT-B. | | |
| **Test description:** | From the User Agent VABBMHSA send the following message to the AFTN terminal OOMSFTNA of IUT-B:<br>PRI: KK<br>FT: <210749><br>OHI:<br>TEST IT301/TC01<br><br>The message is converted from AMHS into AFTN format in the MTCU of IUT-B. | | |
| **Test control:** | Check the correct reception of the message at the AFTN terminal OOMSFTNA of the IUT-B system.<br>Check<br>-the AFTN priority: KK<br>-the AFTN filing time and<br>-the AFTN message text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| | | | |
|---|---|---|---|
| **IT301** | **Convert an IPM to AFTN format (IUT-B)** | | |
| **Test-case id:**<br>**IT301/TC02** | Tested functionality: Conversion of messages with different ATS-message-priorities<br>A GG priority message will be submitted from the UA of IUT-A, converted to AFTN in IUT-B and received at the AFTN terminal of IUT-B. | | |
| **Test description:** | From the User Agent VABBMHSA send the following message to the AFTN terminal OOMSFTNA of IUT-B:<br>PRI: GG<br>FT: <210749><br>OHI:<br>TEST IT301/TC02<br><br>The message is converted from AMHS into AFTN format in the MTCU of IUT-B. | | |
| **Test control:** | Check the correct reception of the message at the AFTN terminal OOMSFTNA of the IUT-B system.<br>Check<br>-the AFTN priority: GG<br>-the AFTN filing time and<br>-the AFTN message text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| | | | |
|---|---|---|---|
| **IT301** | **Convert an IPM to AFTN format (IUT-B)** | | |
| **Test-case id:**<br>**IT301/TC03** | Tested functionality: Conversion of messages with different ATS-message-priorities<br>An FF priority message will be submitted from the UA of IUT-A, converted to AFTN in IUT-B and received at the AFTN terminal of IUT-B. | | |
| **Test description:** | From the User Agent VABBMHSA send the following message to the AFTN terminal OOMSFTNA of IUT-B:<br>PRI: FF<br>FT: <210749><br>OHI:<br>TEST IT301/TC03<br><br>The message is converted from AMHS into AFTN format in the MTCU of IUT-B. | | |
| **Test control:** | Check the correct reception of the message on the AFTN terminal OOMSFTNA of the IUT-B system.<br>Check<br>-the AFTN priority: FF<br>-the AFTN filing time and<br>-the AFTN message text | | |
| **Test result:** | **PASS** | FAILED | INCONCLUSIVE |
| **21/06/2021** | PASSED | | |

| **IT301** | **Convert an IPM to AFTN format (IUT-B)** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT301/TC04** | Tested functionality: Conversion of messages with different ATS-message-priorities<br>A DD priority message will be submitted from the UA of IUT-A, converted to AFTN in IUT-B and received at the AFTN terminal of IUT-B. | | |
| **Test description:** | From the User Agent VABBMHSA send the following message to the AFTN terminal OOMSFTNA of IUT-B:<br>PRI: DD<br>FT: <210749><br>OHI:<br>TEST IT301/TC04<br><br>The message is converted from AMHS into AFTN format in the MTCU of IUT-B. | | |
| **Test control:** | Check the correct reception of the message on the AFTN terminal OOMSFTNA of the IUT-B system.<br>Check<br>-the AFTN priority: DD<br>-the AFTN filing time and<br>-the AFTN message text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| **IT301** | **Convert an IPM to AFTN format (IUT-B)** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT301/TC05** | Tested functionality: Conversion of messages with different ATS-message-priorities<br>An SS priority message will be submitted from the UA of IUT-A, converted to AFTN in IUT-B and received at the AFTN terminal of IUT-B | | |
| **Test description:** | From the User Agent VABBMHSA send the following message to the AFTN terminal OOMSFTNA of IUT-B:<br>PRI: SS<br>FT: <210750><br>OHI:<br>TEST IT301/TC05<br><br>The message is converted from AMHS into AFTN format in the MTCU of IUT-B.<br><br>*Optional:*<br>*Send an SS Acknowledgement message from the receiving AFTN terminal.* | | |
| **Test control:** | Check the correct reception of the message on the AFTN terminal OOMSFTNA of the IUT-B system.<br>Check<br>-the AFTN priority: SS<br>-the AFTN filing time and<br>-the AFTN message text<br><br>*Optional:*<br>*When the SS Ack message is replied, the MTCU of IUT-B converts it into a RN.*<br>*Check the reception of the RN at the UA VABBMHSA of ITU-A.* | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| **IT302** | **Convert an IPM to AFTN format (IUT-A)** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT302/TC01** | Tested functionality: Conversion of messages with different ATS-message-priorities<br>A KK priority message will be submitted from the UA of IUT-B, converted to AFTN in IUT-A and received at the AFTN terminal of IUT-A. | | |
| **Test description:** | From the User Agent OOMSMHST send the following message to the AFTN terminal VABBFTNA of IUT-A:<br>PRI: KK<br>FT: <210754><br>OHI:<br>TEST IT302/TC01<br><br>The message is converted from AMHS into AFTN format in the MTCU of IUT-A. | | |
| **Test control:** | Check the correct reception of the message on the AFTN terminal VABBFTNA of the IUT-A system.<br>Check<br>-the AFTN priority: KK<br>-the AFTN filing time and<br>-the AFTN message text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| **IT302** | **Convert an IPM to AFTN format (IUT-A)** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT302/TC02** | Tested functionality: Conversion of messages with different ATS-message-priorities<br>A GG priority message will be submitted from the UA of IUT-B, converted to AFTN in IUT-A and received at the AFTN terminal of IUT-A. | | |
| **Test description:** | From the User Agent OOMSMHST send the following message to the AFTN terminal VABBFTNA of IUT-A:<br>PRI: GG<br>FT: <210754><br>OHI:<br>TEST IT302/TC02<br><br>The message is converted from AMHS into AFTN format in the MTCU of IUT-A. | | |
| **Test control:** | Check the correct reception of the message on the AFTN terminal VABBFTNA of the IUT-A system.<br>Check<br>-the AFTN priority: GG<br>-the AFTN filing time and<br>-the AFTN message text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| **IT302** | **Convert an IPM to AFTN format (IUT-A)** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT302/TC03** | Tested functionality: Conversion of messages with different ATS-message-priorities<br>An FF priority message will be submitted from the UA of IUT-B, converted to AFTN in IUT-A and received at the AFTN terminal of IUT-A. | | |
| **Test description:** | From the User Agent OOMSMHST send the following message to the AFTN terminal VABBFTNA of IUT-A:<br>PRI: FF<br>FT: <210754><br>OHI:<br>TEST IT302/TC03<br><br>The message is converted from AMHS into AFTN format in the MTCU of IUT-A. | | |
| **Test control:** | Check the correct reception of the message on the AFTN terminal VABBFTNA of the IUT-A system.<br>Check<br>-the AFTN priority: FF<br>-the AFTN filing time and<br>-the AFTN message text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| **IT302** | **Convert an IPM to AFTN format (IUT-A)** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT302/TC04** | Tested functionality: Conversion of messages with different ATS-message-priorities<br>A DD priority message will be submitted from the UA of IUT-B, converted to AFTN in IUT-A and received at the AFTN terminal of IUT-A. | | |
| **Test description:** | From the User Agent OOMSMHST send the following message to the AFTN terminal VABBFTNA of IUT-A:<br>PRI: DD<br>FT: <210754><br>OHI:<br>TEST IT302/TC04<br><br>The message is converted from AMHS into AFTN format in the MTCU of IUT-A. | | |
| **Test control:** | Check the correct reception of the message on the AFTN terminal VABBFTNA of the IUT-A system.<br>Check<br>-the AFTN priority: DD<br>-the AFTN filing time and<br>-the AFTN message text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| **IT302** | **Convert an IPM to AFTN format (IUT-A)** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT302/TC05** | Tested functionality: Conversion of messages with different ATS-message-priorities<br>An SS priority message will be submitted from the UA of IUT-B, converted to AFTN in IUT-A and received at the AFTN terminal of IUT-A. | | |
| **Test description:** | From the User Agent OOMSMHST send the following message to the AFTN terminal VABBFTNA of IUT-A:<br>PRI: SS<br>FT: <210754><br>OHI:<br>TEST IT302/TC05<br><br>The message is converted from AMHS into AFTN format in the MTCU of IUT-A.<br><br>*Optional:*<br>*Send an SS Acknowledgement message from the receiving AFTN terminal.* | | |
| **Test control:** | Check the correct reception of the message on the AFTN terminal VABBFTNA of the IUT-A system.<br>Check<br>-the AFTN priority: SS<br>-the AFTN filing time and<br>-the AFTN message text<br><br>*Optional:*<br>*When the SS Ack message is replied, the MTCU of IUT-A converts it into a RN.*<br>*Check the reception of the RN at the UA OOMSMHSA of ITU-B.* | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

## 1.5 Gateway Operations (AFTN to AMHS to AFTN)

| | | | |
|---|---|---|---|
| **IT401** | **Convert an AFTN message to an IPM and back to AFTN format (IUT-A to IUT-B)** | | |
| **Test-case id:**<br>**IT401/TC01** | Tested functionality: Conversion of messages with different AFTN priorities<br>An AFTN message with KK priority will be sent from the AFTN terminal of IUT-A to the AFTN terminal of IUT-B. | | |
| **Test description:** | From the AFTN terminal VABBFTNA send the following message to the AFTN terminal OOMSFTNA of IUT-B:<br>KK OOMSFTNA<br><210759>VABBFTNA<br>TEST IT401/TC01<br><br>The message is - converted from AFTN into AMHS format in the MTCU of IUT-A, - transferred via the MTA of IUT A to the MTA of IUT-B, - routed to the MTCU of IUT-B and - converted from AMHS into AFTN format in the MTCU of IUT-B.<br>. | | |
| **Test control:** | Check the correct reception of the message on the AFTN terminal OOMSFTNA of the IUT-B system.<br>Check<br>-the AFTN priority: KK<br>-the AFTN filing time and<br>-the AFTN message text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| | | | |
|---|---|---|---|
| **IT401** | **Convert an AFTN message to an IPM and back to AFTN format (IUT-A to IUT-B)** | | |
| **Test-case id:**<br>**IT401/TC02** | Tested functionality: Conversion of messages with different AFTN priorities<br>An AFTN message with GG priority will be sent from the AFTN terminal of IUT-A to the AFTN terminal of IUT-B. | | |
| **Test description:** | From the AFTN terminal VABBFTNA send the following message to the AFTN terminal OOMSFTNA of IUT-B:<br>GG OOMSFTNA<br><210759>VABBFTNA<br>TEST IT401/TC02<br><br>The message is - converted from AFTN into AMHS format in the MTCU of IUT-A, - transferred via the MTA of IUT A to the MTA of IUT-B, - routed to the MTCU of IUT-B and - converted from AMHS into AFTN format in the MTCU of IUT-B. | | |
| **Test control:** | Check the correct reception of the message on the AFTN terminal OOMSFTNA of the IUT-B system.<br>Check<br>-the AFTN priority: GG<br>-the AFTN filing time and<br>-the AFTN message text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| | | | |
|---|---|---|---|
| **IT401** | **Convert an AFTN message to an IPM and back to AFTN format (IUT-A to IUT-B)** | | |
| **Test-case id:**<br>**IT401/TC03** | Tested functionality: Conversion of messages with different AFTN priorities<br>An AFTN message with FF priority will be sent from the AFTN terminal of IUT-A to the AFTN terminal of IUT-B. | | |
| **Test description:** | From the AFTN terminal VABBFTNA send the following message to the AFTN terminal OOMSFTNA of IUT-B:<br>FF OOMSFTNA<br><210759>VABBFTNA<br>TEST IT401/TC03<br><br>The message is - converted from AFTN into AMHS format in the MTCU of IUT-A, - transferred via the MTA of IUT A to the MTA of IUT-B, - routed to the MTCU of IUT-B and - converted from AMHS into AFTN format in the MTCU of IUT-B.<br>. | | |
| **Test control:** | Check the correct reception of the message on the AFTN terminal OOMSFTNA of the IUT-B system.<br>Check<br>-the AFTN priority: FF<br>-the AFTN filing time and<br>-the AFTN message text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| | | | |
|---|---|---|---|
| **IT401** | **Convert an AFTN message to an IPM and back to AFTN format (IUT-A to IUT-B)** | | |
| **Test-case id:**<br>**IT401/TC04** | Tested functionality: Conversion of messages with different AFTN priorities<br>An AFTN message with DD priority will be sent from the AFTN terminal of IUT-A to the AFTN terminal of IUT-B. | | |
| **Test description:** | From the AFTN terminal VABBFTNA send the following message to the AFTN terminal OOMSFTNA of IUT-B:<br>DD OOMSFTNA<br><210759>VABBFTNA<br>TEST IT401/TC04<br><br>The message is - converted from AFTN into AMHS format in the MTCU of IUT-A, - transferred via the MTA of IUT A to the MTA of IUT-B, - routed to the MTCU of IUT-B and - converted from AMHS into AFTN format in the MTCU of IUT-B.<br>. | | |
| **Test control:** | Check the correct reception of the message on the AFTN terminal OOMSFTNA of the IUT-B system.<br>Check<br>-the AFTN priority: DD<br>-the AFTN filing time and<br>-the AFTN message text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| | | | |
|---|---|---|---|
| **IT401** | **Convert an AFTN message to an IPM and back to AFTN format (IUT-A to IUT-B)** | | |
| **Test-case id:**<br>**IT401/TC05** | Tested functionality: Conversion of messages with different AFTN priorities<br>An AFTN message with SS priority will be sent from the AFTN terminal of IUT-A to the AFTN terminal of IUT-B. | | |
| **Test description:** | From the AFTN terminal VABBFTNA send the following message to the AFTN terminal OOMSFTNA of IUT-B:<br>SS OOMSFTNA<br><210804>VABBFTNA<br>TEST IT401/TC05<br><br>The message is - converted from AFTN into AMHS format in the MTCU of IUT-A, - transferred via the MTA of IUT A to the MTA of IUT-B, - routed to the MTCU of IUT-B and - converted from AMHS into AFTN format in the MTCU of IUT-B.<br><br>*Optional:*<br>*Send an SS Acknowledgement message from the receiving AFTN terminal.* | | |
| **Test control:** | Check the correct reception of the message on the AFTN terminal OOMSFTNA of the IUT-B system.<br>Check<br>-the AFTN priority: SS<br>-the AFTN filing time and<br>-the AFTN message text<br><br>*Optional:*<br>*When the SS Ack message is replied, the MTCU of IUT-B converts it into a RN, the RN is re-converted to an SS Acknowledgement message in the MTCU of IUT-A.*<br>*Check the reception of the SS Acknowledgement at the AFTN terminal VABBFTNA of ITU-A.* | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| | | | |
|---|---|---|---|
| **IT402** | **Convert an AFTN message to an IPM and back to AFTN format (IUT-B to IUT-A)** | | |
| **Test-case id:**<br>**IT402/TC01** | Tested functionality: Conversion of messages with different AFTN priorities<br>An AFTN message with KK priority will be sent from the AFTN terminal of IUT-B to the AFTN terminal of IUT-A. | | |
| **Test description:** | From the AFTN terminal OOMSFTNA send the following message to the AFTN terminal VABBFTNA of IUT-A:<br>KK VABBFTNA<br><210804>OOMSFTNA<br>TEST IT402/TC01<br><br>The message is - converted from AFTN into AMHS format in the MTCU of IUT-B, - transferred via the MTA of IUT B to the MTA of IUT-A, - routed to the MTCU of IUT-A and - converted from AMHS into AFTN format in the MTCU of IUT-A. | | |
| **Test control:** | Check the correct reception of the message on the AFTN terminal VABBFTNA of the IUT-A system.<br>Check<br>-the AFTN priority: KK<br>-the AFTN filing time and<br>-the AFTN message text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| | | | |
|---|---|---|---|
| **IT402** | **Convert an AFTN message to an IPM and back to AFTN format (IUT-B to IUT-A)** | | |
| **Test-case id:**<br>**IT402/TC02** | Tested functionality: Conversion of messages with different AFTN priorities<br>An AFTN message with GG priority will be sent from IUT-B to the AFTN terminal of IUT-A. | | |
| **Test description:** | From the AFTN terminal OOMSFTNA send the following message to the AFTN terminal VABBFTNA of IUT-A:<br>GG VABBFTNA<br><210804>OOMSFTNA<br>TEST IT402/TC02<br><br>The message is - converted from AFTN into AMHS format in the MTCU of IUT-B, - transferred via the MTA of IUT B to the MTA of IUT-A, - routed to the MTCU of IUT-A and - converted from AMHS into AFTN format in the MTCU of IUT-A. | | |
| **Test control:** | Check the correct reception of the message on the AFTN terminal VABBFTNA of the IUT-A system.<br>Check<br>-the AFTN priority: GG<br>-the AFTN filing time and<br>-the AFTN message text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| | | | |
|---|---|---|---|
| **IT402** | **Convert an AFTN message to an IPM and back to AFTN format (IUT-B to IUT-A)** | | |
| **Test-case id:**<br>**IT402/TC03** | Tested functionality: Conversion of messages with different AFTN priorities<br>An AFTN message with FF priority will be sent from the AFTN terminal of IUT-B to the AFTN terminal of IUT-A. | | |
| **Test description:** | From the AFTN terminal OOMSFTNA send the following message to the AFTN terminal VABBFTNA of IUT-A:<br>FF VABBFTNA<br><210804>OOMSFTNA<br>TEST IT402/TC03<br><br>The message is - converted from AFTN into AMHS format in the MTCU of IUT-B, - transferred via the MTA of IUT B to the MTA of IUT-A, - routed to the MTCU of IUT-A and - converted from AMHS into AFTN format in the MTCU of IUT-A. | | |
| **Test control:** | Check the correct reception of the message on the AFTN terminal VABBFTNA of the IUT-A system.<br>Check<br>-the AFTN priority: FF<br>-the AFTN filing time and<br>-the AFTN message text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| | | | |
|---|---|---|---|
| **IT402** | **Convert an AFTN message to an IPM and back to AFTN format (IUT-B to IUT-A)** | | |
| **Test-case id:**<br>**IT402/TC04** | Tested functionality: Conversion of messages with different AFTN priorities<br>An AFTN message with DD priority will be sent from the AFTN terminal of IUT-B to the AFTN terminal of IUT-A. | | |
| **Test description:** | From the AFTN terminal OOMSFTNA send the following message to the AFTN terminal VABBFTNA of IUT-A:<br>DD VABBFTNA<br><210804>OOMSFTNA<br>TEST IT402/TC04<br><br>The message is - converted from AFTN into AMHS format in the MTCU of IUT-B, - transferred via the MTA of IUT B to the MTA of IUT-A, - routed to the MTCU of IUT-A and - converted from AMHS into AFTN format in the MTCU of IUT-A. | | |
| **Test control:** | Check the correct reception of the message on the AFTN terminal VABBFTNA of the IUT-A system.<br>Check<br>-the AFTN priority: DD<br>-the AFTN filing time and<br>-the AFTN message text | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| | | | |
|---|---|---|---|
| **IT402** | **Convert an AFTN message to an IPM and back to AFTN format (IUT-B to IUT-A)** | | |
| **Test-case id:**<br>**IT402/TC05** | Tested functionality: Conversion of messages with different AFTN priorities<br>An AFTN message with SS priority will be sent from the AFTN terminal of IUT-B to the AFTN terminal of IUT-A. | | |
| **Test description:** | From the AFTN terminal of OOMSFTNA send the following message to the AFTN terminal VABBFTNA of IUT-A:<br>SS VABBFTNA<br><210804>OOMSFTNA<br>TEST IT402/TC05<br><br>The message is - converted from AFTN into AMHS format in the MTCU of IUT-B, - transferred via the MTA of IUT B to the MTA of IUT-A, - routed to the MTCU of IUT-A and - converted from AMHS into AFTN format in the MTCU of IUT-A.<br>Optional:<br>Send an SS Acknowledgement message from the receiving AFTN terminal. | | |
| **Test control:** | Check the correct reception of the message on the AFTN terminal VABBFTNA of the IUT-A system.<br>Check<br>-the AFTN priority: SS<br>-the AFTN filing time and<br>-the AFTN message text<br>Optional:<br>When the SS Ack message is replied, the MTCU of IUT-A converts it into a RN, the RN is re-converted to an SS Acknowledgement message in the MTCU of IUT-B.<br>Check the reception of the SS Acknowledgement at the AFTN terminal OOMSFTNA of ITU-B. | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

## 1.6 Gateway Operations – special cases

| **IT501** | **Distribute an IPM to AMHS and AFTN users** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT501/TC01** | Tested functionality: Distribution of IPM<br>A message will be sent from a UA on IUT-A to IUT-B with Primary Recipients addressing an AFTN terminal and a UA in IUT-B. | | |
| **Test description:** | From VABBMHSA send the following message to:<br>Primary Recipients: OOMSMHST and OOMSFTNA<br>PRI: FF<br>FT: <210816><br>TEST IT501/TC01<br><br>Get the message at the UA- and AFTN terminals of IUT-B. | | |
| **Test control:** | Check the correct reception of the message by<br>OOMSFTNA and<br>OOMSMHSA in the IUT-B configuration. | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| **IT501** | **Distribute an IPM to AMHS and AFTN users** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT501/TC02** | Tested functionality: Distribution of IPM<br>A message will be sent from a UA on IUT-B to IUT-A with Primary Recipients addressing an AFTN terminal and a UA in IUT-A. | | |
| **Test description:** | From OOMSMHST send the following message to:<br>Primary Recipients: VABBMHSA and VABBFTNA<br>PRI: FF<br>FT: <210815><br>TEST IT501/TC02<br><br>Get the message at the UA- and AFTN terminals of IUT-A. | | |
| **Test control:** | Check the correct reception of the message by<br>VABBFTNA and<br>VABBMHSA in the IUT-A configuration. | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| **IT501** | **Distribute an IPM to AMHS and AFTN users** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT501/TC03** | Tested functionality: Distribution of IPM<br>A message will be sent from a UA on IUT-A to IUT-B with Primary Recipients and Copy Recipients, addressing AFTN terminals and UAs in IUT-B. | | |
| **Test description:** | From VABBMHSA send the following message to:<br>Primary Recipients: OOMSMHST and OOMSFTNA<br>Copy Recipients: OOMSMHSB and OOMSFTNB<br>PRI: FF<br>FT: <210821><br>TEST IT501/TC03<br><br>Get the message at the UA- and AFTN terminals of IUT-B. | | |
| **Test control:** | Check the correct reception of the message by<br>OOMSFTNA, OOMSFTNB and<br>OOMSMHST, OOMSMHSB in the IUT-B configuration. | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| **IT501** | **Distribute an IPM to AMHS and AFTN users** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT501/TC04** | Tested functionality: Distribution of IPM<br>A message will be sent from a UA on IUT-B to IUT-A with Primary Recipients and Copy Recipients, addressing AFTN terminals and UAs in IUT-A. | | |
| **Test description:** | From OOMSMHST send the following message to:<br>Primary Recipients: VABBMHSA and VABBFTNA<br>Copy Recipients: VABBMHSB and VABBFTNB<br>PRI: FF<br>FT: <210824><br>TEST IT501/TC04<br><br>Get the message at the UA- and AFTN terminals of IUT-A. | | |
| **Test control:** | Check the correct reception of the message by<br>VABBFTNA, VABBFTNB and<br>VABBMHSA, VABBMHSB in the IUT-A configuration. | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| **IT501** | **Distribute an IPM to AMHS and AFTN users** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT501/TC05** | Tested functionality: Distribution of IPM<br>A message will be sent from a UA on IUT-A to IUT-B with Primary Recipients, Copy Recipients and Blind Copy Recipients, addressing AFTN terminals and UAs in IUT-B. | | |
| **Test description:** | From VABBAMHS send the following message to:<br>Primary Recipients: OOMSMHST and OOMSFTNA<br>Copy Recipients: OOMSMHSB and OOMSFTNB<br>Blind Copy Recipients: OOMSMHSC and OOMSFTNC<br>PRI: FF<br>FT: <210826><br>TEST IT501/TC05<br><br>Get the message at the UA- and AFTN terminals of IUT-B. | | |
| **Test control:** | Check that at the AFTN Station of IUT-B one message with addresses OOMSFTNA, OOMSFTNB and another message with the address OOMSFTNC is received.<br>Check that at the UA OOMSMHST one IPM is received which contains the Primary Recipients OOMSMHST, OOMSFTNA and the Copy Recipients OOMSMHSB, OOMSFTNB, but no Blind Copy Recipients.<br>Check that at the UA OOMSMHSC one IPM is received which contains the Primary Recipients OOMSMHST, OOMSFTNA, the Copy Recipients OOMSMHSB, OOMSFTNB and one Blind Copy Recipient OOMSMHSC. | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| **IT501** | **Distribute an IPM to AMHS and AFTN users** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT501/TC06** | Tested functionality: Distribution of IPM<br>A message will be sent from a UA on IUT-B to IUT-A with Primary Recipients, Copy Recipients and Blind Copy Recipients, addressing AFTN terminals and UAs in IUT-A. | | |
| **Test description:** | From OOMSMHST send the following message to:<br>Primary Recipients: VABBMHSA and VABBFTNA<br>Copy Recipients: VABBMHSB and VABBFTNB<br>Blind Copy Recipients: VABBMHSC and VABBFTNC<br>PRI: FF<br>FT: <210830><br>TEST IT501/TC06<br><br>Get the message at the UA- and AFTN terminals of IUT-A. | | |
| **Test control:** | Check that at the AFTN Station of IUT-A one message with addresses VABBFTNA, VABBFTNB and another message with the address VABBFTNC is received.<br>Check that at the UA VABBMHSA one IPM is received which contains the Primary Recipients VABBMHSA, VABBFTNA and the Copy Recipients VABBMHSB, VABBFTNB, but no Blind Copy Recipients.<br>Check that at the UA VABBMHSC one IPM is received which contains the Primary Recipients VABBMHSA, VABBFTNA, the Copy Recipients VABBMHSB, VABBFTNB and one Blind Copy Recipient VABBMHSC. | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **21/06/2021** | PASSED | | |

| **IT502** | **Expand a DL addressing both AMHS and AFTN users** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT502/TC01** | Tested functionality: Expanding of Distribution list<br>The message will be sent from a UA on IUT-A addressing a local DL which contains addresses of AFTN terminals and the UA in IUT-B. | | |
| **Test description:** | VABBDLLO must be configured as a local DL entry in IUT-A containing the addresses OOMSFTNAOOMSFTNB and OOMSMHST.<br><br>From VABBMHSA send the following message to VABBDLLO:<br>PRI: FF<br>FT: <220854><br>TEST IT502/TC01<br><br>Get the message at the UA and AFTN terminals of IUT-B. | | |
| **Test control:** | Check the correct reception of the message by AFTN terminals OOMSFTNA, OOMSFTNB and UA OOMSMHST in the IUT-B configuration. | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **22/06/2021** | PASSED | | |

| **IT502** | **Expand a DL addressing both AMHS and AFTN users** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT502/TC02** | Tested functionality: Expanding of Distribution list<br>The message will be sent from a UA on IUT-B addressing a local DL which contains addresses of AFTN terminals and the UA in IUT-A. | | |
| **Test description:** | OOMSDLLO must be configured as a local DL entry in IUT-A containing the addresses VABBFTNA, VABBFTNB and VABBMHSA.<br><br>From OOMSMHST send the following message to OOMSDLLO:<br>PRI: FF<br>FT: <220823><br>TEST IT502/TC02<br><br>Get the message at the UA and AFTN terminals of IUT-A. | | |
| **Test control:** | Check the correct reception of the message by AFTN terminals VABBFTNA, VABBFTNB and UA VABBMHSA in the IUT-A configuration. | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **22/06/2021** | PASSED | | |

| **IT502** | **Expand a DL addressing both AMHS and AFTN users** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT502/TC03** | Tested functionality: Expanding of Distribution list<br>The message will be sent from a UA on IUT-A addressing a remote DL in IUT-B which contains addresses of AFTN terminals and the UA in IUT-B | | |
| **Test description:** | OOMSDLRE must be configured as a local DL entry in IUT-B containing the addresses OOMSFTNA, OOMSFTNB and OOMSMHST.<br><br>From VABBMHSA send the following message to OOMSDLRE:<br>PRI: FF<br>FT: <220857><br>TEST IT502/TC03<br><br>Get the message at the UA and AFTN terminals of IUT-B. | | |
| **Test control:** | Check the correct reception of the message by AFTN terminals OOMSFTNA, OOMSFTNB and UA OOMSMHST in the IUT-B configuration. | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **22/06/2021** | PASSED | | |

| **IT502** | **Expand a DL addressing both AMHS and AFTN users** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT502/TC04** | Tested functionality: Expanding of Distribution list<br>The message will be sent from a UA on IUT-B addressing a remote DL in IUT-A which contains addresses of AFTN terminals and the UA in IUT-A | | |
| **Test description:** | VABBDLRE must be configured as a local DL entry in IUT-A containing the addresses VABBFTNA, VABBFTNB and VABBMHSA.<br><br>From OOMSMHST send the following message to VABBDLRE:<br>PRI: FF<br>FT: <220843><br>TEST IT502/TC04<br><br>Get the message at the UA- and AFTN terminals of IUT-B. | | |
| **Test control:** | Check the correct reception of the message by AFTN terminals VABBFTNA, VABBFTNB and UA VABBMHSA in the IUT-A configuration. | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **22/06/2021** | PASSED | | |

| | | | |
|---|---|---|---|
| **IT503** | **Convert or reject an IPM, if the ATS-message-text contains more than 1800 characters** | | |
| **Test-case id:**<br>**IT503/TC01** | Tested functionality: Conversion of “long” messages<br>A message with normal priority and length of about 4500 characters is sent from the IUT-A to the IUT-B | | |
| **Test description:** | From UA VABBMHSA of IUT-A send the following message to the AFTN terminal OOMSFTNA:<br>PRI: FF<br>FT: <220906><br>OHI:<br>TEST IT503/TC01<br>TEXT 4500 CHARACTERS<br>123456789012345678901234567890123456789012345678901234567890123456789<br>123456789012345678901234567890123456789012345678901234567890123456789<br>123456789012345678901234567890123456789012345678901234567890123456789<br>…<br>123456789012345678901234567890123456789012345678901234567890123456789<br>END | | |
| **Test control:** | The SARPs (3.1.2.3.5.2.1.7) specify that the message can be rejected (case a) or split into several messages (case b). If the system provides “long AFTN message” capability the message will be converted (case c).<br><u>If case a is implemented:</u><br>The message is not conveyed to the AFTN component.<br>Check the Report received at the User Agent position VABBMHSA<br>Verify the following Per-Recipient-Report Non-Delivery information:<br>- Actual-recipient-name: MF-form address of OOMSFTNA<br>- reason code 1 signifies "unable-to-transfer"<br>- diagnostic code 7 signifies "content-too-long".<br>- supplementary information: "unable to convert to AFTN due to message text length".<br><br><u>If case b is implemented:</u><br>Check that OOMSFTNA receives several messages.<br><br><u>If case c is implemented:</u><br>Check that OOMSFTNA receives one message. | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **22/06/2021** | Test Case ‘c’ ok<br>PASSED | | |

| | | | |
|---|---|---|---|
| **IT503** | **Convert or reject an IPM, if the ATS-message-text contains more than 1800 characters** | | |
| **Test-case id:**<br>**IT503/TC02** | Tested functionality: Conversion of “long” messages<br>A message with normal priority and length of about 4500 characters is sent from the IUT-B to the IUT-A | | |
| **Test description:** | From UA OOMSMHST of IUT-B send the following message to the AFTN terminal VABBFTNA:<br>PRI: FF<br>FT: <220915><br>OHI:<br>TEST IT503/TC02<br>TEXT 4500 CHARACTERS<br>123456789012345678901234567890123456789012345678901234567890123456789<br>123456789012345678901234567890123456789012345678901234567890123456789<br>123456789012345678901234567890123456789012345678901234567890123456789<br>…<br>123456789012345678901234567890123456789012345678901234567890123456789<br>END | | |
| **Test control:** | The SARPs (3.1.2.3.5.2.1.7) specify that the message can be rejected (case a) or split into several messages (case b). If the system provides “long AFTN message” capability the message will be converted (case c).<br><br><u>If case a is implemented:</u><br>The message is not conveyed to the AFTN component.<br>Check the Report received at the User Agent position OOMSMHST<br>Verify the following Per-Recipient-Report Non-Delivery information:<br>- Actual-recipient-name: MF-form address of VABBFTNA<br>- reason code 1 signifies "unable-to-transfer"<br>- diagnostic code 7 signifies "content-too-long".<br>- supplementary information: "unable to convert to AFTN due to message text length".<br><br><u>If case b is implemented:</u><br>Check that VABBFTNA receives several messages.<br><u>If case c is implemented:</u><br>Check that VABBFTNA receives one message. | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **22/06/2021** | Case‘c’ Checked ok<br>PASSED | | |

| **IT504** | **Split an incoming IPM addressing more than 21 AFTN users** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT504/TC01** | Tested functionality: Conversion of messages with more than 21 addresses<br>A message with normal priority containing 50 recipients is sent from the IUT-A to the IUT-B. | | |
| **Test description:** | From VABBMHSA send the following message to the following addressees (all recipients in the corresponding MF-Form):<br>OOMSFTNA, OOMSFTNB, OOMSFTNC, OOMSFTND, OOMSFTNE, OOMSFTNF, OOMSFTNG, OOMSFTNH, OOMSFTNI, OOMSFTNJ, OOMSFTNK, OOMSFTNL, OOMSFTNM, OOMSFTNN, OOMSFTNO, OOMSFTNP, OOMSFTNQ, OOMSFTNR, OOMSFTNS, OOMSFTNT, OOMSFTNU, OOMSFTNV, OOMSFTNW, OOMSFTNX, OOMSFTNY,<br>OOMSFTAA, OOMSFTAB, OOMSFTAC, OOMSFTAD, OOMSFTAE, OOMSFTAF, OOMSFTAG, OOMSFTAH, OOMSFTAI, OOMSFTAJ, OOMSFTAK, OOMSFTAL, OOMSFTAM, OOMSFTAN, OOMSFTAO, OOMSFTAP, OOMSFTAQ, OOMSFTAR, OOMSFTAS, OOMSFTAT, OOMSFTAU, OOMSFTAV, OOMSFTAW, OOMSFTAX, OOMSFTAY<br>PRI: FF<br>FT: <220924><br>OHI:<br>TEST IT504/TC01 | | |
| **Test control:** | PDR M4050004 (Title: AMHS - Too Many Recipients) is resolved. Therefore the message shall be split into several messages.<br>The message is split into 3 copies, each conveyed to the AFTN component.<br>The first copy is addressed to 21 of the 50 addressee indicators.<br>The second copy is addressed to further 21 addressee indicators.<br>The third copy is addressed to the remaining 8 of the 50 addressee indicators.<br>Check the correct reception of the messages on the AFTN terminal of IUT-B. | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **22/06/2021** | PASSED | | |

| IT504 | Split an incoming IPM addressing more than 21 AFTN users | | |
|---|---|---|---|
| **Test-case id:**<br>**IT504/TC02** | Tested functionality: Conversion of messages with more than 21 addresses<br>A message with normal priority containing 50 recipients is sent from the IUT-B to the IUT-A. | | |
| **Test description:** | From OOMSMHST send the following message to the following addressees (all recipients in the corresponding MF-Form):<br>VABBFTNA, VABBFTNB, VABBFTNC, VABBFTND, VABBFTNE, VABBFTNF, VABBFTNG, VABBFTNH, VABBFTNI, VABBFTNJ, VABBFTNK, VABBFTNL, VABBFTNM, VABBFTNN, VABBFTNO, VABBFTNP, VABBFTNQ, VABBFTNR, VABBFTNS, VABBFTNT, VABBFTNU, VABBFTNV, VABBFTNW, VABBFTNX, VABBFTNY,<br>VABBFTAA, VABBFTAB, VABBFTAC, VABBFTAD, VABBFTAE, VABBFTAF, VABBFTAG, VABBFTAH, VABBFTAI, VABBFTAJ, VABBFTAK, VABBFTAL, VABBFTAM, VABBFTAN, VABBFTAO, VABBFTAP, VABBFTAQ, VABBFTAR, VABBFTAS, VABBFTAT, VABBFTAU, VABBFTAV, VABBFTAW, VABBFTAX, VABBFTAY<br><br>PRI: FF<br>FT: <220928><br>OHI:<br>TEST IT504/TC02 | | |
| **Test control:** | PDR M4050004 (Title: AMHS - Too Many Recipients) is resolved. Therefore the message shall be split into several messages.<br>The message is split into 3 copies, each conveyed to the AFTN component.<br>The first copy is addressed to 21 of the 50 addressee indicators.<br>The second copy is addressed to further 21 addressee indicators.<br>The third copy is addressed to the remaining 8 of the 50 addressee indicators.<br>Check the correct reception of the messages on the AFTN terminal of IUT-A. | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **22/06/2021** | PASSED | | |

| **IT505** | **Probe Conveyance Test** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT505/TC01** | Tested functionality: Processing of Probe Messages by UA and MTCU.<br>The messages will be sent from a UA on IUT-A to IUT-B, addressing AFTN terminals and UAs in IUT-B. | | |
| **Test description:** | From VABBMHSA send a probe to OOMSFTNA, OOMSFTNB, OOMSMHSA. | | |
| **Test control:** | On IUT-A UA VABBMHSA:<br>One Delivery Report (DR) with 2 AFTN recipients from the MTCU and one DR with one recipient from the MTA<br><br>Verify that the DR reporting about the AFTN addresses contains the supplementary information “This report only indicates successful (potential) conversion to AFTN, not delivery to a recipient”. | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **22/06/2021** | PASSED | | |

| **IT505** | **Probe Conveyance Test** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT505/TC02** | Tested functionality: Processing of Probe Messages by UA and MTCU.<br>The messages will be sent from a UA on IUT-B to IUT-A, addressing AFTN terminals and UAs in IUT-A. | | |
| **Test description:** | From OOMSMHST send a probe to VABBFTNA, VABBFTNB, VABBMHSA. | | |
| **Test control:** | On IUT-B UA OOMSMHSA:<br><br>One Delivery Report (DR) with 2 AFTN recipients from the MTCU and one DR with one recipient from the MTA<br><br>Verify that the DR reporting about the AFTN addresses contains the supplementary information “This report only indicates successful (potential) conversion to AFTN, not delivery to a recipient”. | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **22/06/2021** | PASSED | | |

| **IT505** | **Probe Conveyance Test** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT505/TC03** | Tested functionality: Processing of Probe Messages by UA and MTCU.<br>The messages will be sent from a UA on IUT-A to IUT-B, containing the address of an AFTN terminal of IUT-B and an MF address which cannot be translated by the MTCU of IUT-B. | | |
| **Test description:** | From VABBMHSA send a probe to OOMSFTNA, OOMSFTUU (address is not provided in the look-up table of IUT-B). | | |
| **Test control:** | Verify that at UA VABBMHSA:<br><br>A Delivery Report, containing the reported recipient OOMSFTNA and a NDR, containing the reported recipient OOMSFTUU, with:<br>- non-delivery-reason-code set to “unable-to-transfer”,<br>- non-delivery-diagnostic-code set to “unrecognized-OR-name”<br>are received.<br><br>Verify that the DR reporting about the address which could be translated contains the supplementary information “This report only indicates successful (potential) conversion to AFTN, not delivery to a recipient”. | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **23/06/2021** | PASSED | | |

| **IT505** | **Probe Conveyance Test** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT505/TC04** | Tested functionality: Processing of Probe Messages by UA and MTCU.<br>The messages will be sent from a UA on IUT-B to IUT-A, containing the address of an AFTN terminal of IUT-A and an MF address which cannot be translated by the MTCU of IUT-A. | | |
| **Test description:** | From OOMSMHST send a probe to VABBFTNA, VABBFTUU (address is not provided in the look-up table of IUT-A) | | |
| **Test control:** | Verify that at UA OOMSMHST:<br>A Delivery Report, containing the reported recipient VABBFTNA and a NDR, containing the reported recipient VABBFTUU, with:<br>- non-delivery-reason-code set to “unable-to-transfer”,<br>- non-delivery-diagnostic-code set to “unrecognized-OR-name”<br>are received.<br>Verify that the DR reporting about the address which could be translated contains the supplementary information “This report only indicates successful (potential) conversion to AFTN, not delivery to a recipient”. | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **23/06/2021** | PASSED | | |

## 1.7 Stress traffic situations

| **IT601** | **Stress load** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT601/TC01** | Tested functionality: AMHS traffic interchange after queuing of an amount of messages<br>After queuing of an amount of messages both IUTs start sending a burst of messages | | |
| **Test description:** | Interrupt the connection between IUT-A and IUT-B by disabling the physical connector used to send information to the underlying network in one of the IUTs.<br>Select from the data base or generated by the UA and/or the AFTN terminal 100 messages in both IUTs.<br>For example, from VABBFTNA send 100 messages to OOMSFTNA, OOMSMHSA. and from OOMSFTNA send 100 messages to VABBFTNA, VABBMHSA,<br>In the result on IUT-A and IUT-B there are 100 messages queued in direction to the peer IUT.<br><br>Re-establish the connection between IUT-A and IUT-B. The queued messages will be sent simultaneously from both IUTs.<br><br>Measure the time: from re-establishing the connection till sending the first message and from sending the first till sending the last message.<br>Measure the time: from re-establishing the connection till receiving the first message and from receiving the first message till receiving the last message. | | |
| **Test control:** | Check that all 100 messages are received at the addressed terminals.<br>Check that no errors or malfunction are reported or observed at the IUTs during the interchange period.<br>Analyse the measured time. Calculate at both sides the amount of time needed to flush the queues. Unacceptable delays shall be treated as "FAILED". | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **23/06/2021** | PASSED | | |

**The following table can be used to make notes of the Test Control Result.**

| **Test Control** | **Result IT601/TC01** | **Result IT601/TC02** | **Result IT601/TC03** |
|---|---|---|---|
| 1.Notice the time of re-establishing the connection sending direction. | 08:41:12 | 08:52:07 | 09:01:59 |
| 2.Notice the time of sending the first message. | 08:41:12 | 08:52:09 | 09:01:55 |
| 3.Notice the time of sending the last message. | 08:41:36 | 08:52:34 | 09:02:58 |
| 4.Notice the time of re-establishing the connection receiving direction. | 08:41:20 | 08:52:26 | 09:02:19 |
| 5.Notice the time of receiving the first message. | 08:41:20 | 08:56:36 | 09:05:16 |
| 6.Notice the time of receiving the last message. | 08:41:44 | 08:56:57 | 09:06:34 |
| 7.Notice the number of messages received (shall be equal to the number of messages expected.) | 100/100 | 200/200 | 400/400 |
| 8.Check the event logging of the system for abnormalities in the area of AMHS / X.400 / AFTN/AMHS Gateway. | NIL | NIL | NIL |
| 9.Check the event logging / traffic traces for NDRs. (No NDRs are awaited.) | NIL | NIL | NIL |
| 10.Check for Control Position events. (No related events are awaited.) | NIL | NIL | NIL |
| 11.Check the X.400 / AMHS diagnostics, check the number of associations used (in particular possible hanging/unused associations). | 5/5 | 5/5 | 5/5 |
| 12.Monitor the underlying network infrastructure (network specialist). | NIL | NIL | NIL |
| 13.At both sides note the amount of time needed to flush the queues. (Unacceptable delays shall be treated as “FAILED”) | RX. 00:00:24<br>TX. 00:00:24 | RX. 00:00:21<br>TX. 00:00:25 | RX. 00:01:18<br>TX. 00:01:03 |

| **IT601** | **Stress load** | | |
|---|---|---|---|
| **Test-case id:**<br>**IT601/TC02** | Tested functionality: AMHS traffic interchange after queuing of an amount of messages<br>After queuing of an amount of messages both IUTs start sending a burst of messages | | |
| **Test description:** | Interrupt the connection between IUT-A and IUT-B by disabling the physical connector used to send information to the underlying network in one of the IUTs.<br>Select from the data base or generated by the UA and/or the AFTN terminal 200 messages in both IUTs.<br>For example, from VABBFTNA send 200 messages to OOMSFTNA, OOMSMHSA. and from OOMSFTNA send 200 messages to VABBFTNA, VABBMHSA,<br>In the result on IUT-A and IUT-B there are 200 messages queued in direction to the peer IUT.<br>Re-establish the connection between IUT-A and IUT-B.<br>The queued messages will be sent simultaneously from both IUTs.<br>Measure the time:<br>•from re-establishing the connection till sending the first message and<br>•from sending the first till sending the last message.<br>Measure the time:<br>•from re-establishing the connection till receiving the first message and<br>•from receiving the first message till receiving the last message. | | |
| **Test control:** | Check that all 200 messages are received at the addressed terminals.<br>Check that no errors or malfunction are reported or observed at the IUTs during the interchange period.<br>Analyse the measured time. Calculate at both sides the amount of time needed to flush the queues. Unacceptable delays shall be treated as “FAILED”. | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **23/06/2021** | PASSED | | |

| | | | |
|---|---|---|---|
| **IT601** | **Stress load** | | |
| **Test-case id:**<br>**IT601/TC03** | Tested functionality: AMHS traffic interchange after queuing of an amount of messages<br>After queuing of an amount of messages both IUTs start sending a burst of messages | | |
| **Test description:** | Interrupt the connection between IUT-A and IUT-B by disabling the physical connector used to send information to the underlying network in one of the IUTs.<br>Select from the data base or generated by the UA and/or the AFTN terminal 400 messages in both IUTs.<br>For example, from VABBFTNA send 400 messages to OOMSFTNA, OOMSMHSA. and from OOMSFTNA send 400 messages to VABBFTNA, VABBMHSA,<br>In the result on IUT-A and IUT-B there are 400 messages queued in direction to the peer IUT.<br><br>Re-establish the connection between IUT-A and IUT-B.<br>The queued messages will be sent simultaneously from both IUTs.<br><br>Measure the time:<br>•from re-establishing the connection till sending the first message and<br>•from sending the first till sending the last message.<br>Measure the time:<br>•from re-establishing the connection till receiving the first message and<br>•from receiving the first message till receiving the last message. | | |
| **Test control:** | Check that all 400 messages are received at the addressed terminals.<br><br>Check that no errors or malfunction are reported or observed at the IUTs during the interchange period.<br><br>Analyse the measured time. Calculate at both sides the amount of time needed to flush the queues. Unacceptable delays shall be treated as “FAILED”. | | |
| **Test result:** | **PASS** | **FAILED** | **INCONCLUSIVE** |
| **23/06/2021** | PASSED | | |

## 1.1 Pre-operational AMHS Tests (POT)

This section contains the test-cases. Each test-case is written on a test sheet, which should be completed during testing.

The top of test-sheet contains the **test-case id** and a description of the **tested functionality**.

The **Test description** contains the instructions for the tester, the addresses used and the test message used.

The **Test control** contains the expected reaction/observation of the Systems under Test (SUTs).

The section **Test result** is used to log the test results.

### 1.1.1 Go-NoGo test(Partner 1 to Test Partner 2)

| Test Reference | Tested Functionality |
|---|---|
| **PRE001** | This is a simple test with the purpose to check that the configuration and underlying network work correctly. It is a prerequisite for subsequent tests.<br>An FF priority message is sent from Test partner 1 to Test partner2. |

**Test description:**

From VABBMHSA send the following FF priority message to OOMSMHST:

```
PRE001
12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC

(and so on till)

ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ
```

Check the correct reception at OOMSMHSA and send the following acknowledgement if the message is received correctly.

From OOMSMHST send the following message to VABBMHSA:

ACK001 PLS CONTINUE WITH PRE002

**Test control:**

Check the correct reception of the message at OOMSMHST. No difference must exist between the message as defined above and the received message.

**Test result:**

| PASS | FAILED | INCONCLUSIVE |
|---|---|---|
| PASSED.<br>Test carried out on **28/06/2021** | | |

### 1.1.2 Go-NoGo test Test partner 2 to Test partner 1

| Test Reference | Tested Functionality |
|---|---|
| **PRE002** | This is a simple test with the purpose to check that the configuration and underlying network work correctly. It is a prerequisite for subsequent tests.<br>An FF priority message is sent from Test partner 2 to Test partner1. |

**Test description:**

From OOMSMHST send the following message to VABBMHSA:

```
PRE002
 12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789
 AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
 BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB
 CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC

 (and so on till)

 ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ
```

Check the correct reception at VABBMHSA and send the following acknowledgement if the message is received correctly.

From VABBMHSA send the following message to OOMSMHST:

```
ACK002 PLS CONTINUE WITH PRE003
```

**Test control:**

Check the correct reception of the message at VABBMHSA. No difference must exist between the message as defined above and the received message.

**Test result:**

| PASS | FAILED | INCONCLUSIVE |
|---|---|---|
| PASSED<br>Test carried out on **28/06/2021** | | |

### 1.1.3 Duplicated message exchange

| Test Reference | Tested Functionality |
|---|---|

| | |
|---|---|
| **PRE003** | For selected AFTN destination addresses all traffic will be duplicated to corresponding AMHS recipient addresses at the remote system. At the remote system the AFTN messages received will be compared with the copies transmitted via AMHS. |

**Test description:**

- On the system of Test partner 1 enable the duplication of Operational traffic for the agreed AFTN addressee indicators:

  The duplication shall remain active for 3 days.

- On the system of Test partner 2 enable the duplication of Operational traffic for agreed AFTN addressee indicators:

  The duplication shall remain active for 3 days.

**Test control:**

Note: Not all details of test control can be defined since two different systems are involved. Therefore the control is done in a general form. The main purpose of this test is to prove the integrity of the message exchange. At the same time, it is possible to detect problems which have not been spotted during previous tests.

1. Compare the number of messages received at the AFTN addresses with the number of messages received as copies at the corresponding AMHS addresses (check if all duplicated messages are received).

2. Compare the contents of the messages received for one randomly selected hour of traffic per day. The method of comparison is a local matter. Some options are:

   a) the messages can be displayed on two screens and compared one by one,

   b) the traffic log can be exported and compared (partly) electronically/in an automated way.

3. Check the event logging of the system for abnormalities in the area of AMHS/X.400/AFTN/AMHS Gateway.

4. Check the event logging / traffic traces for NDRs.

5. Check for Control Position events.

6. Check the X.400/AMHS Diagnostics; check the number of associations used (in particular possible hanging/unused associations).

7. Monitor the underlying network infrastructure (network specialist).

The following table can be used to make notes of the Test Control result:

| Test Control | Result |
|---|---|
| 1.Compare the number of messages received as AFTN copy with the number of messages received as AMHS copy. | Received 3866 messages in UA and AFTN BOX<br>Transmitted 1184 messages to<br>OOMSMHSA/OOMSFTNA |
| 2.Compare the contents of the messages. | OK |
| 3.The messages can be displayed on two screens and compared one by one. | OK |
| 4.The traffic log can be exported and compared (partly) electronically/in an automated way. | OK |
| 5.Check the event logging of the system for abnormalities in the area of AMHS / X.400 / AFTN/AMHS Gateway. | NIL |
| 6.Check whether NDRs have been received or transmitted. | NIL |
| 7.Check for events at the Control Position. | NIL EVENTS |
| 8.X.400 / AMHS diagnostics, check the number of associations used (in particular possible hanging/unused associations). | 1/1 |
| 9.Monitor the underlying network infrastructure (network specialist). | NIL |

The test is failed if messages are lost, duplicated or corrupted. The other observations have to be forwarded to each other in the form of a test log and discussed in a test review.

**Test result:**

| PASS | FAILED | INCONCLUSIVE |
|---|---|---|
| PASSED, Test carried from 202106280900-202107010900UTC | | |

### 1.1.4 Stress / Load Test (Optional)

| Test Reference | Tested Functionality |
|---|---|
| **PRE004** | This test is performed to observe the behavior of both systems during a load/stress situation. The traffic exchanged in test PRE003 is repeated in a burst fashion. |

The Stress/Load test (PRE004) was skipped since the same test was successfully conducted in IOT as IT601 on 23.06.2021.

### 1.1.5 Additional selected and agreed Interoperability Tests

(Here the selected and bilaterally agreed Test cases should be listed. )

Nil.

-END-