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# ACCESS

ATN Compliant Communications  
European Strategy Study

ATSMHS Interoperability Tests Specification

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## COPYRIGHT STATEMENT

The work described herein has been undertaken by the author(s) as part of the European Community ACCESS project, within the framework of the TEN-T programme, with a financial contribution by the European Commission. The following companies and administrations are involved in the project: National Air Traffic Services (NATS), Deutsche Flugsicherung (DFS) and Service Technique de la Navigation Aérienne (STNA). The ACCESS final report has been synthesized from the original work packages developed during the ACCESS project.

# EXECUTIVE SUMMARY

The "ATN Compliant Communication European Strategy Study" (ACCESS) project aims at defining the initial architecture of the ATN in Europe (i.e. selection of the initial applications, definition of the initial network topology, definition of the routing organisation and addressing plan, etc.) and participating in the ATSMHS interoperability testing activities set up in Europe.

The document concerns the ATSMHS interoperability testing. Its objectives are to list and specify the tests of which Operating Scenarios have been clarified and described in the Work Package 261 : "ATSMHS Interoperability Operating Scenarios".

This document contains the two deliverables of work package 262:

1. The list of the interoperability tests proposes a description of each test with a high level definition to give the general purpose of a given test. This list should facilitate the execution of the tests as well as the analysis of the test results.
2. The specification of the interoperability tests implies the accurate description of the test itself by showing the role of each functional element of the test configuration. Each object used to perform the test is presented as well as its behaviour during the test execution. Finally the Expected results are given.

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# 1. Introduction

## 1.1 Background

The "ATN Compliant Communications European Strategy Study" (ACCESS) project that is being run under the European Commission's programme for financial aid in the field of Trans-European Transport Network (TEN-T), ATM Task UK/96/94, aims at defining the initial architecture of the ATN in Europe (i.e. selection of the initial applications, definition of the initial network topology, definition of the routing organisation and addressing plan, etc.) and participating in the ATSMHS interoperability testing activities set up in Europe.

## 1.2 Scope

This document is part of a set of documents in relation with the ATSMHS interoperability testing activities. The necessity of performing ATSMHS interoperability testing originates from two main reasons:

- firstly because the ATSMHS SARPs have been elaborated in reference to the OSI model, thus products developed by different companies may be interconnected to provide the expected services.
- Secondly, the complexity of softwares such as messaging software makes not practically possible a formal verification of them.

Therefore the interoperability testing remains a reasonable and feasible way to validate the ATSMHS functionalities.

This document mainly derives from the WP 261 describing the ATSMHS interoperability scenarios. 50 scenarios are presented corresponding to 5 configurations as follows:

- Two configurations involving the AMHS Gateway to be tested in combination with either an other AMHS Gateway (configuration 1) or an ATS Message Server (configuration 2). The set of tests corresponds to an amount of 25 scenarios. In this case the AMHS Gateway to be tested represents the IUT (Implementation Under Test).
- Three configurations involving the ATS Message Servers to be tested, an AMHS Gateway, an ATS Message Stores and an ATS Message User Agents. This whole set of tests corresponds to the remaining 25 scenarios. In this case the ATS Message Server to be tested represents the IUT.

Each ATSMHS interoperability scenario may be composed of one or more ATSMHS interoperability tests. So a scenario may:

- Apply to different configurations for instance configurations 1 and 2 when referring to the first set of tests concerning the IUT AMHS Gateway.
- Apply to the two different communication directions (case of message throughput scenario).
- Apply to different message parameters (case of message priority scenarios or probe scenarios).

Finally 55 tests are specified when testing the IUT Gateway and 51 tests when testing the ATS Message Server.

The intended audience of this document is:

- on one side, the author of the next document of the project as for the ATSMHS part: the ATSMHS Interoperability Test Schedule and
- on the other side the people who will be in charge of performing the ATSMHS Interoperability tests.

## 1.3 Document organisation

The document is divided into 3 sections:

- The first one being the current section (Introduction),
- The second one corresponds to the first deliverable being the list of the ATSMHS interoperability tests,
- The third one corresponds to the second deliverable being the tests specification.

## 1.4 References

Reference	Title
[A260]	WP260 Define Trials Objectives
[A261]	WP261 Define Operating Scenarios
[A262]	WP262 Produce Test Specification
[A263]	WP263 Produce Test Schedule
[A264]	WP264 Define Interoperability Test Tools
[A265]	WP265 Configure Trials Scenario
[A266]	WP266 Conduct ATSMHS Trials
[A270]	WP270 Conformance Test Requirements
[A271]	WP271 Conformance Test Specification
[ICAO1]	ICAO, Aeronautical Telecommunications Network (ATN), Standards and Recommended Practices (SARPs), Sub-Volume 3, Ground-Ground Applications, Version 2.2, January 1998
[ICAO2]	Guidance Material on [ICAO1]

## 1.5 Glossary

ACCESS	ATN Compliant Communications European Strategy Study
AFTN	Aeronautical Fixed Telecommunications Network
AMHS	ATS Message Handling System
ATN	Aeronautical Telecommunications Network
ATS	Air Traffic Services
ATSMHS	Air Traffic Services Message Handling Services
IPM	Interpersonal Message
IUT	Implementation Under Test
MS	Message Server
UA	User Agent



## 2. Deliverable 1: ATSMHS Interoperability Tests List

### 2.1 Background

#### 2.1.1 Tests identifications

Each test is identified by a reference with the following format.

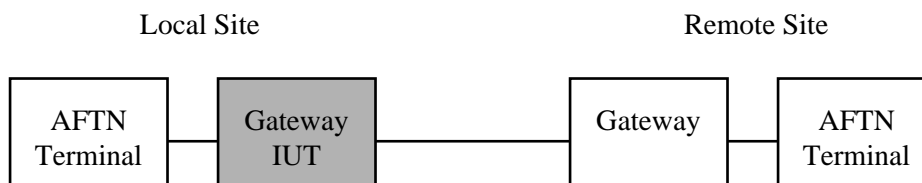
The reference numbers used for each test are based on the reference numbers attributed for the Interoperability Operating Scenarios. Thus each reference test has 5 fields:

- OSC - Operating Scenario
- XX - identifies the type of IUT - GW for a Gateway, MS for a Message Server and UA for a User Agent
- nn - is a serial number which qualifies the Operating Scenario reference (Range from 1 to 50)
- CT - C for Configuration T for Test
- ct - serial number referencing the test: « c » corresponding to the type of configuration (Range from 1 to 5) ; « t » referencing the test itself.

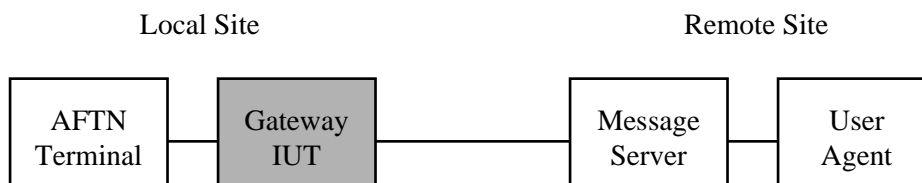
#### 2.1.2 Different types of configurations

This paragraph reminds the 5 different types of configurations defined in the document ATSMHS Interoperability Operating Scenarios corresponding to the serial number “c”.

##### 2.1.2.1 Configurations applying to the Gateway as an IUT



**Figure 1: Configuration 1 - gateway to gateway**



**Figure 2: Configuration 2 - gateway to message server**

2.1.2.2 Configurations applying to the ATS Message Server as an IUT

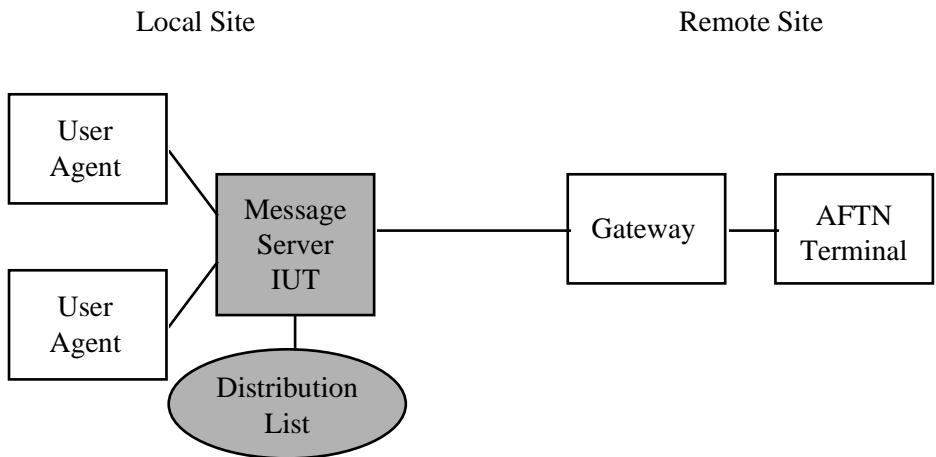


Figure 3: Configuration 3 - message server to gateway

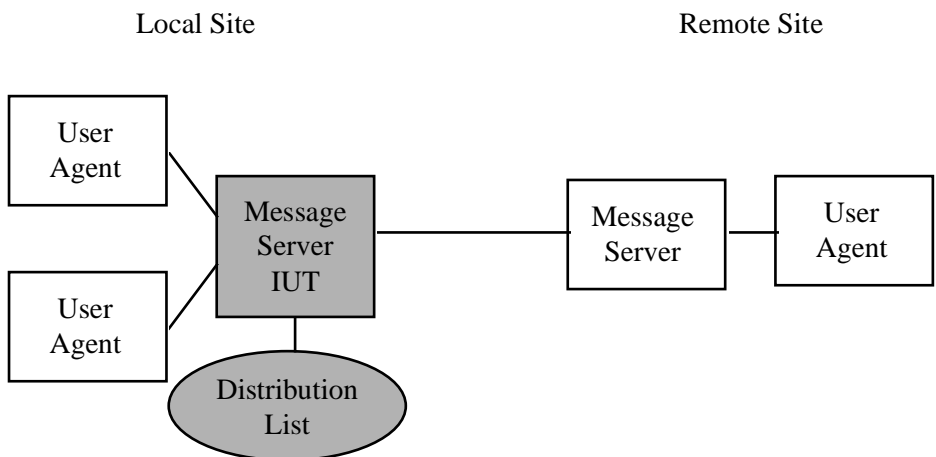


Figure 4: Configuration 4 - message server to message server

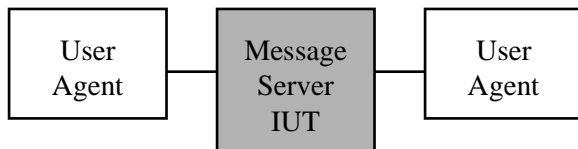


Figure 5: Configuration 5 - user agent to message server

### **2.1.3 Notations**

In the definition of tests below:

- For the configurations 1 and 3: in the Remote AFTN site the “Gateway” is also named the “Auxiliary Gateway”,
- For the configuration 2 and 4: in the Remote AMHS site the Message Server is also named the “ATS Message Server” in reference to the ATSMHS SARPs.

## 2.2 Gateway tests

### 2.2.1 Normal Condition tests

#### 2.2.1.1 Sending a priority two message from a gateway to the remote system

<b>Test n°:</b>	OSC-GW-01-CT-11
<b>Test Type:</b>	Send a message from the Local AFTN site with a DD priority to the Remote AFTN site.
<b>Test n°:</b>	OSC-GW-01-CT-12
<b>Test Type:</b>	Send a message from the Local AFTN site with a FF priority to the Remote AFTN site.
<b>Test n°:</b>	OSC-GW-01-CT-21
<b>Test Type:</b>	Send a message from the Local AFTN site with a DD priority to the Remote AMHS site.
<b>Test n°:</b>	OSC-GW-01-CT-22
<b>Test Type:</b>	Send a message from the Local AFTN site with a FF priority to the Remote AMHS site.

#### 2.2.1.2 Sending a priority three message from a gateway to the remote system

<b>Test n°:</b>	OSC-GW-02-CT-11
<b>Test Type:</b>	Send a message from the Local AFTN site with GG priority to several AFTN addressees with one among them unknown in the Remote Gateway (Auxiliary Gateway).
<b>Test n°:</b>	OSC-GW-02-CT-12
<b>Test Type:</b>	Send a message from the local AFTN site with KK priority to several AFTN addressees with one among them unknown in the Remote Gateway (Auxiliary Gateway).
<b>Test n°:</b>	OSC-GW-02-CT-21
<b>Test Type:</b>	Send a message from the Local AFTN site with GG priority, to several AMHS recipients with one among them unknown by the Message Server.
<b>Test n°:</b>	OSC-GW-02-CT-22
<b>Test Type:</b>	Send a message from AFTN with KK priority, to several AMHS recipients with one among them unknown by the Message Server.

### 2.2.1.3 Sending a priority one message from a gateway to the remote system

**Test n°:** OSC-GW-03-CT-11  
**Test Type:** Send a message from the Local AFTN site to the Remote AFTN site with SS priority.

**Test n°:** OSC-GW-03-CT-22  
**Test Type:** Send a message from the Local AFTN site to the Remote AMHS site with SS priority.

### 2.2.1.4 Receiving a priority two message from a remote system

**Test n°:** OSC-GW-04-CT-11  
**Test Type:** Send a message from the Remote AFTN site with DD priority to several AFTN addressees with one among them unknown in the Local AFTN site.

**Test n°:** OSC-GW-04-CT-12  
**Test Type:** Send a message from the Remote AFTN site with FF priority to several AFTN addressees with one among them unknown in the Local AFTN site.

**Test n°:** OSC-GW-04-CT-21  
**Test Type:** Send a message from the Remote AMHS site with DD priority to several AFTN addressees with one among them unknown in the Local AFTN site.

**Test n°:** OSC-GW-04-CT-22  
**Test Type:** Send a message from the Remote AMHS site with FF priority to several AFTN addressees with one among them unknown in the Local AFTN site.

### 2.2.1.5 Receiving a priority one message from a remote system

**Test n°:** OSC-GW-05-CT-11  
**Test Type:** Send a message from the Remote AFTN site with SS priority to an AFTN destination in the Local AFTN site.

**Test n°:** OSC-GW-05-CT-21  
**Test Type:** Send a message from the Remote AMHS site with SS priority to an AFTN destination in the Local AFTN site.

### 2.2.1.6 Receiving a long message from a remote system

**Test n°:** OSC-GW-06-CT-21  
**Test Type:** Send a message from the Remote AMHS site with 4500 characters in the ATS-Message-Text to an AFTN destination.

2.2.1.7 Receiving a message with more than 21 recipients from a remote system

**Test n°:** OSC-GW-07-CT-21  
**Test Type:** Send a message from the Remote AMHS site containing 50 recipients to the Local AFTN site.

2.2.1.8 Receiving a large message with more than 21 recipients from a remote system

**Test n°:** OSC-GW-08-CT-21  
**Test Type:** Send a message of 100K characters containing 50 recipients from the Remote AMHS site to the Local AFTN site.

2.2.1.9 Conversion from AMHS IP RN to AFTN Acknowledgement Message

**Test n°:** OSC-GW-09-CT-11  
**Test Type:** Send an AFTN Acknowledgement Service Message from the Remote AFTN site to the Local AFTN site.  
Note:  
Follows the test: OSC-GW-03-CT-11

**Test n°:** OSC-GW-09-CT-21  
**Test Type:** Send an AMHS Receipt Notification from the Remote AMHS site to the Local AFTN site.  
Note:  
Follows the test: OSC-GW-03-CT-21

2.2.1.10 Conversion from AFTN Acknowledgement Message to AMHS IP RN

**Test n°:** OSC-GW-10-CT-11  
**Test Type:** Send an AFTN Acknowledgement Service Message from the Local AFTN site to the Remote AFTN site.  
Note:  
Follows the Test n°: OSC-GW-05-CT-11.

**Test n°:** OSC-GW-10-CT-21  
**Test Type:** Send an AFTN Acknowledgement Service Message from the Local AFTN site to the Remote AMHS site.  
Note:  
Follows the Test n°: OSC-GW-05-CT-21.

### 2.2.1.11 Conversion from AMHS NDR (unrecognised O/R name) to AFTN Unknown Addressee Service Message

**Test n°:** OSC-GW-11-CT-11  
**Test Type:** Send a « Non Delivery Report » (AFTN Unknown Addressee Service Message converted into a NDR) from the Remote AFTN site to the Local AFTN Site.  
Note:  
follows Test n°: OSC-GW-02-CT-11, or Test n°: OSC-GW-02-CT-12.

**Test n°:** OSC-GW-11-CT-21  
**Test Type:** Send a « Non Delivery Report » from the Remote AMHS site to the Local AFTN site.  
Note:  
follows Test n°: OSC-GW-02-CT-21, or Test n°: OSC-GW-02-CT-22.

### 2.2.1.12 Conversion from AFTN Unknown Addressee Service Message to AMHS NDR (Unrecognised O/R Name)

**Test n°:** OSC-GW-12-CT-11  
**Test Type:** Send an AFTN Unknown Addressee Service Message from the Local AFTN site to the Remote AFTN site.  
Note:  
Follows the Test n°: OSC-GW-04-CT-11 or the Test n°: OSC-GW-04-CT-12.

**Test n°:** OSC-GW-12-CT-21  
**Test Type:** Send an AFTN Unknown Addressee Service Message from the Local AFTN site to the Remote AMHS site.  
Note:  
Follows the Test n°: OSC-GW-04-CT-21 or the Test n°: OSC-GW-04-CT-22.

### 2.2.1.13 Gateway Throughput

**Test n°:** OSC-GW-13-CT-11

**Test Type:** Send a large number of messages from the Local AFTN site to the Remote AFTN site.

**Test n°:** OSC-GW-13-CT-12

**Test Type:** Send a large number of messages from the Remote AFTN site to the Local AFTN site.

**Test n°:** OSC-GW-13-CT-21

**Test Type:** Send a large number of messages from the Local AFTN site to the Remote AMHS site.

**Test n°:** OSC-GW-13-CT-22

**Test Type:** Send a large number of messages from the Remote AMHS site to the Local AFTN site.



## 2.2.2 Abnormal Condition Gateway Tests

### 2.2.2.1 Network Failure and Recovery

- Test n°:** OSC-GW-14-CT-11  
**Test Type:** Send messages from the Local AFTN site to the Remote AFTN site when a transient network failure occurs between the IUT Gateway and the Auxiliary Gateway.
- Test n°:** OSC-GW-14-CT-12  
**Test Type:** Send messages from the Remote AFTN site to the Local AFTN site when a transient network failure occurs between the Auxiliary Gateway and the IUT Gateway.
- Test n°:** OSC-GW-14-CT-21  
**Test Type:** Send messages from the Local AFTN site to the Remote AMHS site when a transient network failure occurs between the IUT Gateway and the ATS Message Server.
- Test n°:** OSC-GW-14-CT-22  
**Test Type:** Send messages from the Remote AMHS site to the Local AFTN site when a transient network failure occurs between the ATS message server and the IUT Gateway.

### 2.2.2.2 Unavailability of Remote System

- Test n°:** OSC-GW-15-CT-11  
**Test Type:** Send a message from the Local AFTN site to the unavailable Remote AFTN site.
- Test n°:** OSC-GW-15-CT-21  
**Test Type:** Send a message from the Local AFTN site to the unavailable Remote AMHS site.

### 2.2.2.3 Unsuccessful Conversion of Addressee Indicator in Incoming AFTN Message

**Test n°:** OSC-GW-16-CT-11  
**Test Type:** Send an AFTN message with an unknown addressee from the AFTN Local site to the AFTN Remote site.

**Test n°:** OSC-GW-16-CT-21  
**Test Type:** Send an AFTN message with an unknown addressee from the AFTN Local site to the AMHS Remote site.

### 2.2.2.4 Unsuccessful Conversion of Originator Indicator in Incoming AFTN Message

**Test n°:** OSC-GW-17-CT-11  
**Test Type:** Send an AFTN message with an unknown Origin to the IUT Gateway (Intended to the AFTN Remote site).

**Test n°:** OSC-GW-17-CT-21  
**Test Type:** Send an AFTN message with an unknown Origin to the IUT Gateway (Intended to the AMHS Remote site).

### 2.2.2.5 Unsuccessful Conversion of Recipient O/R Name in Incoming AMHS Message

**Test n°:** OSC-GW-18-CT-11  
**Test Type:** Send an AFTN message from the Remote site containing one valid recipient address and one recipient address that cannot be translated by the IUT Gateway.

**Test n°:** OSC-GW-18-CT-21  
**Test Type:** Send an AMHS message from the Remote AMHS site containing one valid recipient address and one recipient address that cannot be translated by the IUT Gateway.

### 2.2.2.6 Unsuccessful Conversion of Originator O/R Name in Incoming AMHS Message

**Test n°:** OSC-GW-19-CT-11  
**Test Type:** Send an AFTN message from the Remote AFTN site containing an Origin address that cannot be translated by the IUT Gateway.

**Test n°:** OSC-GW-19-CT-21  
**Test Type:** Send an AMHS message from the Remote AMHS site containing an Originator address that cannot be translated by the IUT Gateway.

### 2.2.2.7 Receiving an Incoming AMHS Message with an invalid Content Type

**Test n°:** OSC-GW-20-CT-21  
**Test Type:** Send an AMHS message with a non IPM content type from the Remote AMHS to an AFTN Destination mapped onto an AMHS Recipient with the *responsability* element of the *per-recipient-indicators* containing the abstract-value « responsible ».

### 2.2.2.8 Receiving an Incoming AMHS Message with a non-AFTN compatible body part

**Test n°:** OSC-GW-21-CT-21  
**Test Type:** Send an AMHS message from the Remote AMHS site with a non-AFTN compatible Body part to an AFTN Destination.

### 2.2.2.9 Receiving an Incoming AMHS Message with multiple IPM body parts

**Test n°:** OSC-GW-22-CT-21  
**Test Type:** Send an AMHS message from the Remote AMHS site containing five IA5 text Body parts to an AFTN Destination.

### 2.2.2.10 Receiving an Incoming AMHS Message with a missing ATS Message Header

**Test n°:** OSC-GW-23-CT-21  
**Test Type:** Send an AMHS message from the AMHS Remote site without ATS-Message-Header to an AFTN destination.

2.2.2.11 Receiving an Incoming AMHS Message with an invalid ATS Message Header

**Test n°:** OSC-GW-24-CT-21

**Test Type:** Send an AMHS message with a non AFTN compatible Body part without the ATS-Message-Priority from the Remote AMHS site to an AFTN destination.

**Test n°:** OSC-GW-24-CT-22

**Test Type:** Send an AMHS message with a non AFTN compatible Body part without the ATS-Message-Filing-Time from the Remote AMHS site to an AFTN Destination.

2.2.2.12 Receiving an Incoming AMHS Message containing an invalid character

**Test n°:** OSC-GW-25-CT-21

**Test Type:** Send an AMHS message with conversion-with-loss-prohibited set to "prohibited" and containing a semicolon (;) in the message text from the Remote AMHS site to an AFTN Destination.

## 2.3 Message Server Tests

### 2.3.1 Message Transfer Tests

#### 2.3.1.1 Outgoing IPM Transfer

**Test n°:** OSC-MS-01-CT-31  
**Test Type:** Send a valid AMHS message from the Local site to a valid AFTN addressee in the Remote site.

**Test n°:** OSC-MS-01-CT-41  
**Test Type:** Send a valid AMHS message from the Local site to a valid Recipient of the AMHS Remote site.

#### 2.3.1.2 Incoming IPM Transfer

**Test n°:** OSC-MS-02-CT-31  
**Test Type:** Send a valid AFTN message from the Remote site to a valid AMHS Recipient in the Local site

**Test n°:** OSC-MS-02-CT-41  
**Test Type:** Send a valid AMHS message from the Remote site to a valid AMHS Recipient of the Local site.

#### 2.3.1.3 Outgoing Probe Transfer

**Test n°:** OSC-MS-03-CT-31  
**Test Type:** Send a probe message from the Local site with :  
- the abstract-value of the *content-type* being « interpersonal-messaging-1984 » or being « interpersonal-messaging 1988 »  
- the abstract-value of the current *encoded-information-types* neither being « ia5-text » nor extended « ia5-text »  
to a valid AFTN Recipient in the Remote site

**Test n°:** OSC-MS-03-CT-32  
**Test Type:** Send a probe message from the Local site with :  
- the abstract-value of the *content-type* being « interpersonal-messaging-1984 » or being « interpersonal-messaging 1988 »  
- the abstract-value of the current *encoded-information-types* being « ia5-text » or being extended « ia5-text »  
- the abstract-value of the *implicit-conversion-prohibited* in the *per-message-indicator* being « prohibited »  
to a valid AFTN Recipient in the Remote site

**Test n°:** OSC-MS-03-CT-33

**Test Type:** Send a probe message from the Local site with :  
- the abstract-value of the *content-type* being « interpersonal-messaging-1984 » or being « interpersonal-messaging 1988 »  
- the abstract-value of the current *encoded-information-types* being « ia5-text » or being extended « ia5-text »  
- the abstract-value of the *implicit-conversion-prohibited* in the *per-message-indicator* being « prohibited »  
the element *content-length* exceeds the conversion capability of the AMHS/AFTN Gateway  
to a valid AFTN Recipient in the Remote site

**Test n°:** OSC-MS-03-CT-34

**Test Type:** Send a probe message from the Local site with :  
the abstract-value of the *content-type* neither being « interpersonal-messaging-1984 » nor being « interpersonal-messaging 1988 »  
to a valid AFTN Recipient in the Remote site.

**Test n°:** OSC-MS-03-CT-41

**Test Type:** Send a probe message from the local site to a valid AMHS Recipient of the Remote site.

#### 2.3.1.4 Incoming Probe Transfer

**Test n°:** OSC-MS-04-CT-41

**Test Type:** Send a probe message from the Remote site to a valid AMHS Recipient of the Local site.

#### 2.3.1.5 Outgoing Delivery Report Transfer

**Test n°:** OSC-MS-05-CT-41

**Test Type:** Send an AMHS message from the Remote site requesting Delivery Reports to a valid AMHS Recipient and an unknown Recipient both of the Local site.

#### 2.3.1.6 Incoming Delivery Report Transfer

**Test n°:** OSC-MS-06-CT-31

**Test Type:** Send an AMHS message from the Local site requesting Delivery Reports to a valid AFTN addressee and an unknown AFTN Addressee both in the Remote site.

**Test n°:** OSC-MS-06-CT-41

**Test Type:** Send an AMHS message from the Local site requesting Delivery Reports to a valid AMHS Recipient and an unknown AMHS Recipient both in the Remote site.

### 2.3.1.7 Message Server Throughput

- Test n°:** OSC-MS-07-CT-31  
**Test Type:** Send a large number of messages from the Local AMHS site to the Remote AFTN site.
- Test n°:** OSC-MS-07-CT-32  
**Test Type:** Send a large number of messages from the Remote AFTN site to the Local AMHS site.
- Test n°:** OSC-MS-07-CT-41  
**Test Type:** Send a large number of messages from the Local AMHS site to the Remote AMHS site.
- Test n°:** OSC-MS-07-CT-42  
**Test Type:** Send a large number of messages from the Remote AMHS site to the Local AMHS site.

Note:

The throughput to be tested must be determined before the set up of the test. It depends on the respective capabilities of the IUT and more generally of the capability of the entire test configuration platform.

## **2.3.2 Message Server Distribution List Tests**

### 2.3.2.1 Locally Generated Message Sent to Distribution List

- Test n°:** OSC-MS-08-CT-31  
**Test Type:** Send an AMHS message from the Local site to a Local Distribution List containing one Local AMHS Recipient and an AFTN addressee in the AFTN Remote site with the AFTN Priority set to FF.
- Test n°:** OSC-MS-08-CT-41  
**Test Type:** Send an AMHS message from the Local site to a Local Distribution List containing one Local AMHS Recipient and an AMHS Remote Recipient.
- Test n°:** OSC-MS-08-CT-42  
**Test Type:** Send an AMHS message requesting Delivery Reports from the Local site to a Local Distribution List containing one Local AMHS Recipient, an AMHS Remote Recipient and an unknown AMHS Remote Recipient.

### 2.3.2.2 Remotely Generated Message Sent to Distribution List

**Test n°:** OSC-MS-09-CT-31  
**Test Type:** Send an AFTN message from the Remote site to a Distribution List on the Local site containing one Local AMHS Recipient and an AFTN addressee in the AFTN Remote site with the AFTN Priority set to FF.

**Test n°:** OSC-MS-09-CT-41  
**Test Type:** Send an AMHS message from the Remote site to a Distribution List on the Local site containing one Local AMHS Recipient and an AMHS Recipient in the AMHS Remote site.

## **2.3.3 Message Server Submission Tests**

### 2.3.3.1 Message submission

**Test n°:** OSC-MS-10-CT-51  
**Test Type:** Send an AMHS message from a User Agent through the Message Server to a valid AMHS Recipient.

### 2.3.3.2 Probe submission

**Test n°:** OSC-MS-11-CT-51  
**Test Type:** Send a probe message from a User Agent through the Message Server to a valid AMHS Recipient.

## **2.3.4 Message Server Delivery Tests**

### 2.3.4.1 Message Delivery

**Test n°:** OSC-MS-12-CT-51  
**Test Type:** An AMHS Message Delivery to a valid AMHS Remote Recipient.

### 2.3.4.2 Delivery Report Delivery

**Test n°:** OSC-MS-13-CT-51  
**Test Type:** Send an AMHS message from a the Local User Agent to a valid AMHS Recipient leading to the delivery of a Delivery Report to the Local User Agent by the Message Server.

### 2.3.4.3 Non Delivery Report Delivery

**Test n°:** OSC-MS-14-CT-51  
**Test Type:** Send an AMHS message from a Local User Agent to an invalid (unknown) AMHS Recipient leading to the delivery of a Non Delivery Report to the Local User Agent.



## 2.3.5 Message Server Message Store Access Tests

### 2.3.5.1 Indirect Submission

- Test n°:** OSC-MS-15-CT-51  
**Test Type:** User Agent Bind to the Message Store with User Password and subsequent Unbind.
- Test n°:** OSC-MS-15-CT-52  
**Test Type:** User Agent Bind to the Message Store without User Password and subsequent Unbind.
- Test n°:** OSC-MS-15-CT-53  
**Test Type:** User Agent Bind to the Message Store using an Invalid User Password and subsequent Unbind.
- Test n°:** OSC-MS-15-CT-54  
**Test Type:** User Agent issues MS-Register operation changing User Password.

### 2.3.5.2 Summary of Message Store

- Test n°:** OSC-MS-16-CT-51  
**Test Type:** Send a request by the AMHS User Agent to the Message Server Message Store to retrieve a summary of the numbers and types of entries in the user's Message Store.

### 2.3.5.3 Listing of messages

- Test n°:** OSC-MS-17-CT-51  
**Test Type:** Send a request by the AMHS User Agent to the Message Server Message Store to retrieve a list of messages in the user's Message Store by specifying selected criteria and the message attributes to be displayed.
- Test n°:** OSC-MS-17-CT-52  
**Test Type:** Send a request by the AMHS User Agent to the Message Server Message Store to retrieve a list of messages in the user's Message Store by specifying neither criteria nor message attributes to be displayed.

### 2.3.5.4 Fetching a message

**Test n°:** OSC-MS-18-CT-51  
**Test Type:** Send a request by the AMHS User Agent to the Message Server Message Store to fetch small messages (< 2K each) which have been submitted before by specifying selected criteria and message attributes to be returned.

**Test n°:** OSC-MS-18-CT-52  
**Test Type:** Send a request by the AMHS User Agent to the Message Server Message Store to fetch one large « message » (more than 1 Mo) which have been submitted before.

**Test n°:** OSC-MS-18-CT-53  
**Test Type:** Send a request by the AMHS User Agent to the Message Server Message Store to fetch one large « message » (with multiple Body parts) which have been submitted before.

### 2.3.5.5 Deleting a message

**Test n°:** OSC-MS-19-CT-51  
**Test Type:** The User Agent deletes an IPM from the Message Store before the content has been fetched.

**Test n°:** OSC-MS-19-CT-52  
**Test Type:** The User Agent deletes an IPM from the Message Store where Receipt Notification is requested before the content has been fetched.

## **2.3.6 Message Server Abnormal Condition Tests**

### 2.3.6.1 Message non delivery

**Test n°:** OSC-MS-20-CT-51  
**Test Type:** Send a message by the AMHS User Agent to a Distribution List causing a Non-Delivery Report failure due to « DL Expansion Prohibited »

**Test n°:** OSC-MS-20-CT-52  
**Test Type:** Send a message by the AMHS User Agent to a valid AMHS Recipient including an Expiring Date Indication. A Non-Delivery Report failure is generated due to the maximum time expired.

**Test n°:** OSC-MS-20-CT-53  
**Test Type:** Send a message by the AMHS User Agent to an unrecognised AMHS Recipient. A Non-Delivery Report failure is thus generated..

### 2.3.6.2 Distribution List Loop Detection

**Test n°:** OSC-MS-21-CT-51  
**Test Type:** Send a message by the AMHS User Agent to a Distribution List being itself one of the list members.

### 2.3.6.3 Prohibited Use of Distribution List

**Test n°:** OSC-MS-22-CT-51  
**Test Type:** Send a message by the AMHS User Agent to a Distribution List with DL-Expansion-Prohibited set to « prohibited ».

### 2.3.6.4 Distribution List containing a recipient which does not exist

**Test n°:** OSC-MS-23-CT-51  
**Test Type:** Send a message to a Distribution List with one of the Recipient name which does not exist.

### 2.3.6.5 Network Failure and Recovery

**Test n°:** OSC-MS-24-CT-31  
**Test Type:** Send AMHS messages from the Local site to the AFTN Remote site when a transient network failure occurs.

**Test n°:** OSC-MS-24-CT-41  
**Test Type:** Send AMHS messages from the Local site to the AMHS Remote site when a transient network failure occurs.

### 2.3.6.6 Unavailability of Remote System

**Test n°:** OSC-MS-25-CT-31  
**Test Type:** Send an AMHS message from the Local site to an AFTN addressee which is initially unavailable.

**Test n°:** OSC-MS-25-CT-41  
**Test Type:** Send an AMHS message from the Local site to the AMHS Remote Recipient which is initially unavailable.

## **3. Deliverable 2: ATSMHS Interoperability tests specification**

### **3.1 Background**

Each test specification is a sub set of an Operating Scenerio.

Each test specification is composed of 4 fields :

- Test n°:
- Test Type:
- Description:
- Expected results:

The content of the « Test n°: » field is as described above concerning the meaning of the figures and letters used.

The content of the « Test Type: » field is the same as the corresponding one in the « test list » description.

The content of the « Description: » field is a brief description of the elements (Originators, Recipients, Addressees, Origin, text, Body part) which have to be used to perform the test as well as their relationship.

The content of the « Expected results: » field describes for each element composing the configuration used; their roles, actions and the results about the messages processing during a test performance.

All the Body parts and addresses are specified in the section 3.4. of this document.

## 3.2 Gateway tests

### 3.2.1 Normal Conditions Tests

#### 3.2.1.1 Sending a priority two from a Gateway to the remote system

<b>Test n°:</b>	OSC-GW-01-CT-11
<b>Test Type:</b>	Send a message from the Local AFTN site with a DD priority to the Remote AFTN site.
<b>Description:</b>	Origin TTY1: Submit a single AFTN message containing the text of BP01 with a DD priority to the Addressee TTX2 which is mapped onto the Recipient OR02.
<b>Expected results:</b>	IUT (Gateway): a) Receive and convert the AFTN message into a single AMHS message with the Body part BP01H containing the text BP01.  b) Transfer the AMHS message to the Auxiliary Gateway.  c) Log the situation (Verify the messages logging).  Auxiliary Gateway: a) Receive and convert the AMHS message containing the Body part BP01H into an AFTN message to the Addressee TTX2 containing the text BP01 with a DD priority.  b) Convey the AFTN message to the addressee TTX2.  Addressee TTX2: Receive an AFTN message containing the text of BP01. Verify the priority is set to DD.

- Test n°:** OSC-GW-01-CT-12
- Test Type:** Send a message from the Local AFTN site with a FF priority to the Remote AFTN site.
- Description:** Origin TTY1:  
Submit a single AFTN message containing the text of BP01 with a FF priority to the recipient TTX2 which is mapped onto the Recipient OR02.
- Expected results:** IUT (Gateway):
- a) Receive and convert the AFTN message into a single AMHS message with the Body part BP01H containing the text BP01.
  - b) Transfer the AMHS message to the Auxiliary Gateway.
  - c) Log the situation (Verify the messages logging).
- Auxiliary Gateway:
- a) Receive and convert the AMHS message containing the Body part BP01H into an AFTN message to the Addressee TTX2 containing the text BP01 with a FF priority.
  - b) Convey the AFTN message to the Addressee TTX2.
- Addressee TTX2:  
Receive an AFTN message containing the text of BP01.  
Verify the priority is set to FF.

- Test n°:** OSC-GW-01-CT-21
- Test Type:** Send a message from the Local AFTN site with a DD priority to the Remote AMHS site.
- Description:** Origin TTY1:  
Submit a single AFTN message containing the text of BP01 with a DD priority to the Recipient OR02.
- Expected results:** IUT (Gateway):
- a) Receive and convert the AFTN message into a single AMHS message with the Body part BP01H containing the text BP01.
  - b) Transfer the AMHS message to the ATS Message Server.
  - c) Log the situation (Verify the messages logging, the correct generation of the IPM-identifier, the per-message-indicators, and the trace-information).
- ATS Message Server:  
Receive, route and deliver the AMHS message containing the Body part BP01H to the Recipient OR02.
- Recipient OR02:  
Receive an AMHS message containing the Body part BP01H.  
Verify that the ATS-message-priority is set to DD.  
Verify that the message-priority is set to Normal.

- Test n°:** OSC-GW-01-CT-22
- Test Type:** Send a message from the Local AFTN site with a FF priority to the Remote AMHS site.
- Description:** Origin TTY1:  
Submit a single AFTN message containing the text of BP01 with a FF priority to the Recipient OR02.
- Expected results:** IUT (Gateway):
- a) Receive and convert the AFTN message into a single AMHS message with the Body part BP01H containing the text BP01.
  - b) Transfer the AMHS message to the ATS Message Server.
  - c) Log the situation (Verify the messages logging, the correct generation of the IPM-identifier, the per-message-indicators, and the trace-information).
- ATS Message Server:  
Receive, route and deliver the AMHS message containing the Body part BP01H to the Recipient OR02.
- Recipient OR02:  
Receive an AMHS message containing the Body part BP01H.  
Verify that the ATS-message-priority is set to FF.  
Verify that the message-priority is set to normal.



### 3.2.1.2 Sending a priority three message from a gateway to the remote system

**Test n°:** OSC-GW-02-CT-11

**Test Type:** Send a message from the Local AFTN site with GG priority to several AFTN addressees with one among them unknown in the Remote Gateway (Auxiliary Gateway).

**Description:** Origin TTY1:  
Submit a single AFTN message containing the text BP01 with a GG priority to the Remote addressees TTX2 and TTX8 which are mapped onto the Recipients OR02 and OR08 respectively containing the Body part BP01H, OR08 being not configured in the Remote site.

**Expected results:** IUT (Gateway):

- a) Receive and convert the AFTN message into one AMHS message containing the Body part BP01H intended to two Recipients.
- b) Receive and convert the Non-Delivery Report into the AFTN Service Message « SVC ADS TTX8 UNKNOWN » to be delivered to the Origin TTY1.
- c) Log the situation (Verify the message and report logging).

Auxiliary Gateway:

a) Receive and convert the AMHS message into the AFTN message to be delivered to the Addressee TTX2.

b) Generate a Non-Delivery Report to be sent to the Origin TTY1 due to the unknown Addressee TTY8.

Origin TTY1:  
Receive the AFTN Addressee Unknown Service Message indicating addressee TTX8 unknown.

Addressee TTX2:

Receive a message containing the text BP01.

Verify that the ATS-message-priority is set to GG.

Verify that the message-priority is set to non-urgent.

- Test n°:** OSC-GW-02-CT-12
- Test Type:** Send a message from the Local AFTN site with KK priority to several AFTN addressees with one among them unknown in the Remote Gateway (Auxiliary Gateway).
- Description:** Origin TTY1:  
Submit a single AFTN message containing the text BP01 with a KK priority to the Remote addressees TTX2 and TTX8 which are mapped onto the Recipients OR02 and OR08 respectively containing the Body part BP01H, OR08 being not configured in the Remote site.
- Expected results:** IUT (Gateway):
- a) Receive and convert the AFTN message into an AMHS messages containing the BP01H Body part.
  - b) Receive and convert the Non-Delivery Report into the AFTN Service Message « SVC ADS TTX8 UNKNOWN » to be delivered to the Origin TTY1.
  - c) Log the situation (Verify the message and report logging).
- Auxiliary Gateway:
- a) Receive and convert the AMHS message OR02 into the Addressee TTX2.
  - b) Generate and deliver a Non-Delivery Report due to the unknown TTX8 to the Origin TTY1.
- Origin TTY1:  
Receive the AFTN Addressee Unknown Service Message indicating addressee TTX8 unknown.
- Addressee TTX2:  
Receive the AFTN message  
Verify the Body part is received with the text BP01.  
Verify the ATS-message-priority is set to KK.  
Verify the message-priority is set to normal.

- Test n°:** OSC-GW-02-CT-21
- Test Type:** Send a message from the Local AFTN site with GG priority, to several AMHS recipients with one among them unknown by the Message Server.
- Description:** Origin TTY1:  
Submit a single AFTN message containing the text BP01 with a GG priority to the Remote addressees TTX2 and TTX8 which are mapped onto the Recipients OR02 and OR08 respectively containing the Body part BP01H, OR08 being not configured in the Remote site.
- Expected Results:** IUT (Gateway):
- a) Receive and convert the AFTN message into an AMHS message intended to the Recipients OR02, OR08 containing the Body part BP01H.
  - b) Receive, convert and deliver the Non Delivery Report generated by the ATS Message Server into the AFTN Service Message « SVC ADS TTX8 UNKNOWN »
  - c) Log the situation (Verify the messages logging).
- ATS Message Server:
- a) Receive, route and deliver the AMHS message to the Recipient OR02.
  - b) Generate and transfer the Non Delivery Report concerning OR08.
- Origin TTY1:  
Receive the AFTN Addressee Unknown Service Message indicating addressee TTX8 unknown.
- Recipient OR02:  
Receive a message containing the Body part BP01H.  
Verify that the ATS-message-priority is set to GG.  
Verify that the message-priority is set to non-urgent.

- Test n°:** OSC-GW-02-CT-22
- Test Type:** Send a message from the Local AFTN site with KK priority, to several AMHS recipients with one among them unknown by the Message Server.
- Description:** Origin TTY1:  
Submit a single AFTN message containing the text BP01 with a KK priority to the Remote addressees TTX2 and TTX8 which are mapped onto the Recipients OR02 and OR08 respectively containing the Body part BP01H, OR08 being not configured in the Remote site.
- Expected Results:** IUT (Gateway):
- a) Receive and convert the AFTN message into an AMHS message intended to the Recipients OR02, OR08 containing the BP01H Body part.
  - b) Receive and convert the Non Delivery Report generated by the ATS Message Server into the AFTN Service Message « SVC ADS TTX8 UNKNOWN »
  - c) Convey to TTY1 the AFTN Service Message.
  - d) Log the situation (Verify the messages and report logging).
- ATS Message Server:
- a) Receive, route and deliver the AMHS message to the Recipient OR02.
  - b) Generate and transfer the Non-Delivery Report concerning OR08.
- Origin TTY1:  
Receive the AFTN Addressee Unknown Service Message indicating addressee TTX8 unknown.
- Recipient OR02:  
Receive a message containing the Body part BP01H.  
Verify the ATS-message-priority is set to KK.  
Verify that the priority is set to non-urgent.

### 3.2.1.3 Sending a priority message one message from a gateway to the remote system

<b>Test n°:</b>	OSC-GW-03-CT-11
<b>Test Type:</b>	Send a message from the Local AFTN site to the Remote AFTN site with SS priority.
<b>Description:</b>	Origin TTY1 Submit a single AFTN message containing the text BP01 with a SS Priority to the Addressee TTX2 mapped onto the Recipient OR02.
<b>Expected results:</b>	IUT (Gateway): a) Receive and convert the AFTN message into a single AMHS message containing the Body part BP01H.  b) Receive and convert the Receipt Notification into an AFTN Acknowledgement message to the subject message Origin TTY1.  c) Log the situation (Verify the messages logging).  Auxiliary Gateway: a) Receive and convert the single AMHS message OR02 into the AFTN message with a SS Priority containing the text BP01.  b) Receive, convert and transfer the AFTN Acknowledgement Service Message to the Subject Message Origin TTY1 received from TTX2 into a Receipt Notification.  Origin TTY1: Receive an AFTN Acknowledgement Message. Verify that the Priority is set to SS.  Addressee TTX2: Receive a message containing the text BP01. Generate the AFTN Acknowledgement Service Message.

- Test n°:** OSC-GW-03-CT-21
- Test Type:** Send a message from the Local AFTN site to the Remote AMHS site with SS priority.
- Description:**
- Origin TTY1:  
Submit a single AFTN message to the Recipient TTX2, mapping onto OR02, containing the text of BP01, with SS Priority.
- Recipient OR02:  
Read message and if necessary take the appropriate user action to cause the generation of a Receipt Notification.
- Expected results:**
- IUT (Gateway):
- a) Receive and convert the AFTN single message containing the text BP01 with a SS Priority into a single AMHS message to Recipient OR02 containing the Body part BP01H and requesting a Receipt Notification.
  - b) Convert the Receipt Notification received from the ATS Message Server into an AFTN Acknowledgement Message to subject message Origin TTY1.
  - c) Log the situation (Verify the messages logging).
- ATS Message Server:
- a) Receive, route and deliver the AMHS Message to the Recipient OR02.
  - b) Transfer the Receipt Notification to the IUT (Gateway).
- Origin TTY1:  
Receive an AFTN Acknowledgement Message.  
Verify that the Priority is set to SS.
- Recipient OR02:  
Receive a message containing the Body part BP01H.  
Verify that the message-priority is set to Urgent.  
Verify that the ATS-message-priority is set to SS.  
Verify that a Receipt Notification is requested (generate RN accordingly).

### 3.2.1.4 Receiving a priority two message from a remote system

<b>Test n°:</b>	OSC-GW-04-CT-11
<b>Test Type:</b>	Send a message from the Remote AFTN site with DD priority to several AFTN addressees with one among them unknown in the Local AFTN site.
<b>Description:</b>	<p>Origin TTX1: Send an AFTN message to Addressees TTY1, TTY2 and TTY8, which are mapped in the Auxiliary Gateway respectively onto OR11, OR12 and OR18 containing the Body part BP01H, OR18 being not configured in the IUT (Gateway).</p> <p>Use the AFTN Priority set to DD to identify the test.</p>
<b>Expected results:</b>	<p>IUT (Gateway):</p> <ol style="list-style-type: none"><li>Receive and convert the AMHS Message containing the Body part BP01H into the two AFTN messages conveyed to the Addressees TTY1 and TTY2.</li><li>Generate and transfer the Non Delivery Report with « unrecognized-OR-Name » for OR18.</li><li>Log the situation (Verify the message and report logging).</li></ol> <p>Auxiliary Gateway:</p> <ol style="list-style-type: none"><li>Convert the AFTN message containing the text BP01 into the AMHS Message.</li><li>Convert the Non Delivery Report generated by the IUT (Gateway) into an AFTN Addressee Unknown Service Message concerning the unrecognized OR18 Recipient.</li></ol> <p>Origin TTX1: Receive the AFTN Addressee Unknown Service Message concerning the Unrecognized Addressee TTY8.</p> <p>Each Recipient TTY1, TTY2: Receive a message containing the text BP01. Verify that the Message Priority is set to DD.</p>
<b>Test n°:</b>	OSC-GW-04-CT-12
<b>Test Type:</b>	Send a message from the Remote AFTN site with FF priority to several AFTN addressees with one among them unknown in the Local AFTN site.

**Description:**

Origin TTX1:

Submit an AFTN message to Addressees TTY1, TTY2 and TTY8, which are mapped in the Auxiliary Gateway respectively onto OR11, OR12 and OR18 containing the Body part BP01H, OR18 being not configured in the IUT (Gateway).

Use the AFTN Priority set to FF to identify the test.

**Expected results:**

IUT (Gateway):

a) Receive and convert the AMHS Message containing the Body part BP01H into the two AFTN messages conveyed to the Addressees TTY1 and TTY2.

b) Generate and transfer the Non Delivery Report with « unrecognized-OR-Name » for OR18.

c) Log the situation (Verify the message and report logging).

Auxiliary Gateway:

a) Convert the AFTN message containing the text BP01 into the AMHS Message.

b) Convert the Non Delivery Report generated by the IUT (Gateway) into an AFTN Addressee Unknown Service Message concerning the unrecognized OR18 Recipient.

Origin TTX1:

Receive the AFTN Addressee Unknown Service Message concerning the Unrecognized Addressee TTY8.

Each Recipient TTY1, TTY2:

Receive a message containing the text BP01.

Verify that the Message Priority is set to FF.



- Test n°:** OSC-GW-04-CT-21
- Test Type:** Send a message from the Remote AMHS site with DD priority to several AFTN addressees with one among them unknown in the Local AFTN site.
- Description:** Originator OR01:  
Submit a single AMHS message to recipients OR11, OR12 and OR18, which are mapped respectively onto TTY1, TTY2 and to nothing, containing the Body part BP01H.
- Set the ATS-message-priority to DD.
- Expected results:** IUT (Gateway):
- a) Receive and convert the AMHS message into a single AFTN message to be delivered to the Recipients TTY1 and TTY2, containing the text BP01 of Body part BP01H.
  - b) Generate and transfer a Non Delivery Report with « Unrecognized- OR-Name » concerning the Recipient OR18.
  - c) Log the situation (Verify the message and report logging).
- ATS Message Server:
- a) Receive, route and transfer the AMHS message to the IUT (Gateway).
  - b) Receive, route and deliver the Non Delivery Notification to the Originating Recipient indicating that the Recipient OR18 has an unrecognized OR Name.
- Originator OR01:  
Receive a Non Delivery Notification indicating OR18 has an « unrecognized-OR-Name ».
- Each Addressee TTY1 and TTY2:  
Receive a message containing the text BP01 of the Body part BP01H.  
Verify the AFTN-Priority is set to DD.

- Test n°:** OSC-GW-04-CT-22
- Test Type:** Send a message from the Remote AMHS site with FF priority to several AFTN addressees with one among them unknown in the Local AFTN site.
- Description:** Originator OR01:  
Submit a single AMHS message to recipients OR11, OR12 and OR18, which are mapped respectively onto TTY1, TTY2 and to nothing, containing the Body part BP01H.
- Set the ATS-message-priority to DD.
- Expected results:** IUT (Gateway):
- a) Receive and convert the AMHS message into a single AFTN message to be delivered to the Recipients TTY1 and TTY2, containing the text BP01 of Body part BP01H.
  - b) Generate and transfer a Non Delivery Report with « Unrecognized- OR-Name » concerning the Recipient OR18.
  - c) Log the situation (Verify the message and report logging).
- ATS Message Server:
- a) Receive, route and transfer the AMHS message to the IUT (Gateway).
  - b) Receive, route and deliver the Non Delivery Notification to the Originating Recipient indicating that the Recipient OR18 has an unrecognized OR Name.
- Originator OR01:  
Receive a Non Delivery Notification indicating OR18 has an « unrecognized-OR-Name ».
- Each Addressee TTY1 and TTY2:  
Receive a message containing the text BP01 of the Body part BP01H.  
Verify the AFTN-Priority is set to DD.

### 3.2.1.5 Receiving a priority one message from a remote system

**Test n°:** OSC-GW-05-CT-11

**Test Type:** Send a message from the Remote AFTN site with SS priority to an AFTN destination in the Local AFTN site.

**Description:** Origin TTX1  
Send a single AFTN message to the Addressee TTY1 (Text: BP01, Priority: SS), which is mapped onto the Recipient OR11.

**Expected results:** IUT (Gateway):  
a) Receive and convert the AMHS message sent to the Recipient OR11 into a single AFTN message (Text : BP01, Priority SS) sent to the Addressee TTY1.

b) Convert the AFTN Acknowledgement Service Message received from the Addressee TTY1 into a Receipt Notification.

c) Log the situation (Verify the messages logging).

Auxiliary Gateway:

a) Convert the AFTN message into an AMHS Recipient containing the Body part BP01H with the ATS-message-priority set to SS and the AMHS-priority set to « Urgent ».

b) Convert the AMHS Receipt Notification into an AFTN Acknowledgement Service Message.

Origin TTX1:

Receive the AFTN Acknowledgement Service Message.

Addressee TTY1:

Receive the AFTN Message with the text BP01.

Generate the AFTN Acknowledgement Service Message.

Verify that the Priority is set to SS.

- Test n°:** OSC-GW-05-CT-21
- Test Type:** Send a message from the Remote AMHS site with SS priority to an AFTN destination in the Local AFTN site.
- Description:** Originator OR01:  
Submit a single AMHS message to the Recipient OR11, mapping onto TTY1, containing BP01H, with the ATS-message-priority set to SS the message priority set to « Urgent » and requesting Receipt Notification.
- Expected results:** IUT (Gateway):
- a) Receive and convert the AMHS message sent to the Recipient OR11 into an AFTN message (Addressee: TTY1, Priority: SS, text: BP01)
  - b) Receive and convert the AFTN Acknowledgement Service Message into a Receipt Notification to the Subject Message Originator OR01.
  - c) Log the situation (Verify the messages logging).
- ATS Message Server:
- a) Receive route and transfer the AMHS message to the Recipient OR11.
  - b) Deliver the Receipt Notification to the Originator OR01.
- Originator OR01:  
Receive the Receipt Notification.
- Recipient TTY1:  
Receive the AFTN message.  
Verify the AFTN priority is set to SS.  
Generate the AFTN Acknowledgement Service Message.

### 3.2.1.6 Receiving a long message from a remote system

**Test n°:** OSC-GW-06-CT-21

**Test Type:** Send a message from the Remote AMHS site with 4500 characters in the ATS-Message-Text to an AFTN destination.

**Description:** Originator OR01:  
Submit a single AMHS message with the Body part **BP08H**.  
Send the message to the Recipient OR11 which maps onto TTY1.

Use AFTN priority to GG to identify the test.

**Expected results:** IUT (Gateway):  
a) Receive convert and split the AMHS message containing the Body part BP08H in three AFTN messages and send them to the Addressee TTY1.

ATS Message Server:  
Receive, route and transfer the AMHS message with the Body part BP08H to the IUT Gateway.

Originator OR01:  
Receive a Delivery Report indicating the successful delivery.

Addressee TTY1:  
Receive three AFTN messages containing the text of Body part BP08H splited in three parts, and ending with //END PART 01// and //END PART 02// and //END PART 03//, respectively.  
Verify the Priority is set to GG.  
Verify the the Filling time.

### 3.2.1.7 Receiving a message with more than 21 recipients from a remote system

**Test n°:** OSC-GW-07-CT-21

**Test Type:** Send a message from the Remote AMHS site containing 50 recipients to the Local AFTN site.

**Description:** Originator OR01:  
Submit a single AMHS message with the Body part BP01H to the Recipients ranging from OR100 to OR149 and mapped respectively onto the AFTN Addressees ranging from TTY100 to TTY149.

Use the ATS-message-priority set to FF to identify the test.

**Expected results:** IUT (Gateway):  
a) Receive and convert the AMHS message sent to the Recipients OR100 to OR149 into 3 AFTN messages to be delivered to the Addressees ranging from TTY100 to TTY120, TTY121 to TTY141 and TTY142 to TTY149.

b) Log the situation (Verify the messages logging).

ATS Message Server:

a) Receive, route and transfer the AMHS message to IUT Gateway.

Local AFTN Terminal:

Receive the 3 AFTN messages with the priority set to FF.

### 3.2.1.8 Receiving a large message with more than 21 recipients from a remote system

**Test n°:** OSC-GW-08-CT-21

**Test Type:** Send an AMHS message of 100 K characters containing 50 recipients from the Remote AMHS site to the Local AFTN site.

**Description:** Originator OR01:  
Submit a single AMHS message with the Body part BP02 to the Recipients ranging from OR100 to OR149 and mapped respectively onto the Addressees ranging from TTY100 to TTY149.

Use the ATS-message-priority set to FF to identify the test.

**Expected results:** IUT (Gateway):  
a) Receive and convert the AMHS message into a sufficient number of AFTN messages for each of the 50 Addressees (TTY100 to TTY149) meeting the AFTN procedure particularly in term of message length (less than 1800 characters).

b) Log the situation (Verify the messages logging).

ATS Message Server:  
Receive route and transfer the AMHS message to the IUT (Gateway).

Local AFTN Terminal:  
Receive the AFTN messages with the priority set to FF.  
Verify the initial message has been correctly splitted.  
Use the administration searching capabilities to perform that.

**Note:**

Before performing this test the throughput between the AFTN Terminal and the IUT (Gateway) has to be taken into account.

### 3.2.1.9 Conversion from AMHS IP RN to AFTN Acknowledgement Message

**Test n°:** OSC-GW-09-CT-11

**Test Type:** Send an AFTN Acknowledgement Service Message from the Remote AFTN site to the Local AFTN site.

Note:

Follows the test: OSC-GW-03-CT-11

**Description:** Origin TTX2:  
In reception of an AFTN Priority one message, TTX2 sends an Acknowledgement Service Message to the Subject Message Originator OR11 mapped onto the Recipient TTY1.

**Expected results:** IUT (Gateway):  
a) Receive and convert the Receipt Notification into an AFTN Acknowledgement Service Message to the Subject Message Originator TTY1. (SARPs § 3.1.2.3.5.3 *AMHS RN Conversion met*).

b) Log the situation (Verify the messages logging).

Auxiliary Gateway:

Receive and convert the AFTN Acknowledgement Service Message received from TTX2 and intended for the Subject Message Originator TTY1 into a Receipt Notification.

Addressee TTY1:

Receive an AFTN Acknowledgement Service Message.  
Verify that the Priority is set to SS (SARPs 3.1.2.3.5.3.2.4.).



- Test n°:** OSC-GW-09-CT-21
- Test Type:** Send an AMHS Receipt Notification from the Remote AMHS site to the Local AFTN site.  
Note:  
Follows the test: OSC-GW-03-CT-21
- Description:** Originator OR02:  
Following the reception of an AFTN message Priority one, OR02 submits a Receipt Notification to the subject message Originator TTY1 mapped onto the Recipient OR11.
- Expected results:** IUT (Gateway):  
a) Receive and convert the Receipt Notification into an AFTN Acknowledgement Service Message to the Subject Message Originator TTY1. (SARPs § 3.1.2.3.5.3 AMHS RN Conversion met).  
b) Log the situation (Verify the messages logging).
- ATS Message Server:  
Receive, route and transfer the Receipt Notification to the IUT (Gateway).
- Addressee TTY1:  
Receive an AFTN Acknowledgement Service Message.  
Verify that the Priority is set to SS (SARPs 3.1.2.3.5.3.2.4.).

### 3.2.1.10 Conversion from AFTN Acknowledgement Message to AMHS IP RN

**Test n°:** OSC-GW-10-CT-11

**Test Type:** Send an AFTN Acknowledgement Service Message from the AFTN Local site to the Remote AFTN site.

Note:

Follows the Test n°: OSC-GW-05-CT-11.

**Description:** Origin TTY1:  
Send an AFTN Acknowledgement Service Message to the Subject Message Originator TTX2.

**Expected results:** IUT (Gateway):  
a) Receive and convert the AFTN Acknowledgement message received from the Addressee TTY1 into an AMHS Receipt Notification. (SARPs §3.1.2.3.4.3 *Conversion of AFTN Acknowledgement message met*).

b) Log the situation (Verify the messages logging).

Auxiliary Gateway:

a) Receive and convert the AMHS Receipt Notification received from the IUT (Gateway) into an AFTN Acknowledgement Message sent to the subject message Originator TTX2.

Addressee TTX2:

Receive the AFTN Acknowledgement message.

Verify that the Priority is set to SS (SARPs 3.1.2.3.4.2.1.3.).

<b>Test n°:</b>	OSC-GW-10-CT-21
<b>Test Type:</b>	Send an AFTN Acknowledgement Message from the AFTN Local site to the Remote AMHS site. Note: Follows the Test n°: OSC-GW-05-CT-21.
<b>Description:</b>	Origin TTY1: Send an AFTN Acknowledgement message to the subject message Originator TTX2 which maps onto OR02.
<b>Expected results:</b>	IUT (Gateway): a) Receive and convert the AFTN Acknowledgement Message received from TTY1 into an AMHS Receipt Notification. (SARPs §3.1.2.3.4.3 <i>Conversion of AFTN Acknowledgement message met</i> ).  b) Log the situation (Verify the messages logging).  ATS Message Server: Receive route and deliver the AMHS Receipt Notification to the subject message Originator OR02.  Originator OR02: Receive the AMHS Receipt Notification. Verify the receipt-time. (SARPs §3.1.2.3.4.3.2.4. ). Verify the message-priority is set to « Urgent ».

### 3.2.1.11 Conversion from AMHS NDR (unrecognised O/R name) to AFTN Unknown Addressee Service Message

- Test n°:** OSC-GW-11-CT-11
- Test Type:** Send a “Non-Delivery Report” (AFTN Unknown Addressee Service Message converted into a NDR) from the Remote AFTN site to the Local AFTN Site.  
Note:  
follows Test n°: OSC-GW-02-CT-11, or Test n°: OSC-GW-02-CT-12.
- Description:** The Auxiliary Gateway transfers via the IUT (Gateway) a NDR to be converted into an AFTN Unknown Addressee Service Message to the Origin TTY1 due to the Addressee TTX8 unknown.
- Expected results:**
- IUT (Gateway):
- a) Receive and convert the AMHS Non Delivery Report into the AFTN Unknown Addressee Service Message « SVC ADS TTX8 UNKNOWN » addressed to the subject AFTN Message Originator TTY1. (SARPs §3.1.2.3.5.4.2. *Generation of unknown address AFTN service message met*).
  - b) Log the situation (Verify the messages logging).
- Auxiliary Gateway:
- a) Generate the AMHS Non Delivery Report due to the Recipient OR08 unknown.
  - b) Route to the IUT (Gateway).
- Origin TTY1:  
Receive the AFTN Unknown Addressee Service Message indicating addressee TTX8 unknown.

- Test n°:** OSC-GW-11-CT-21
- Test Type:** Send a “Non-Delivery Report” from the Remote AMHS site to the Local AFTN site.  
Note:  
follows Test n°: OSC-GW-02-CT-21, or Test n°: OSC-GW-02-CT-22.
- Description:** The ATS Message Server generates and send to the Subject Message Originator OR11 (mapped with the Addressee TTY1) an AMHS Non-Delivery Report due to the Recipient OR08 (mapped onto the Addressee TTX8) unknown.
- Expected results:**
- IUT (Gateway):
- a) Receive and convert the AMHS Non-Delivery Report to the AFTN Addressee Unknown Service Message « SVC ADS TTX8 UNKNOWN » addressed to the subject AFTN message Addressee TTY1. (SARPs §3.1.2.3.5.4.2. *Generation of unknown address AFTN service message met*).
  - b) Log the situation (Verify the messages logging).
- ATS Message Server:
- a) Generate the AMHS Non Delivery Report due to the Recipient OR08 unknown.
  - b) Route to the IUT (Gateway).
- Addressee TTY1:  
Receive the AFTN Service Message : « SVC ADS TTX8 UNKNOWN ».

### 3.2.1.12 Conversion from AFTN Unknown Addressee Service Message to AMHS NDR (Unrecognised O/R Name)

**Test n°:** OSC-GW-12-CT-11

**Test Type:** Send an AFTN Unknown Addressee Service Message from the Local AFTN site to the Remote AFTN site.

**Description:** Origin TTX2:  
Send an AFTN Subject Message to TTY3 which maps onto OR13 in both Gateways.

Auxiliary Gateway:  
Convert the AFTN message into an AMHS message and route to the IUT (Gateway).

IUT (Gateway):  
Convert the AMHS Subject Message into an AFTN Subject Message.

AFTN Terminal:  
Generate the AFTN Service Message « SVC ADS TTY3 UNKNOWN ».

**Expected results:** IUT (Gateway):  
Convert the AFTN Service Message into an NDR (Unrecognized-OR-Name).

c) Log the situation (Verify the message and report logging).

Auxiliary Gateway:  
Convert the Non-Delivery Report (Unrecognized-OR-Name) generated by the IUT (Gateway) into an AFTN Service Message.

Origin TTX2:  
Receive the AFTN Service Message.

**Test n°:** OSC-GW-12-CT-21

**Test Type:** Send an AFTN Unknown Addressee Service Message from the Local AFTN site to the Remote AMHS site.

**Description:** Originator OR02:  
Send an AFTN Subject Message to TTY3 which maps onto OR03 in both Gateways.

Auxiliary Gateway:  
Route the AMHS message to the IUT (Gateway).

IUT (Gateway):  
Convert the AMHS Subject Message into an AFTN Subject Message.

AFTN Terminal:  
Generate the AFTN Service Message « SVC ADS TTY3 UNKNOWN ».

**Expected results:** IUT (Gateway):  
Convert the AFTN Service Message into an NDR (Unrecognized-OR-Name).

c) Log the situation (Verify the message and report logging).

Auxiliary Gateway:  
Receive and route the Non-Delivery Report (Unrecognized-OR-Name) generated by the IUT (Gateway).

Originator OR02:  
Receive the NDR.

### 3.2.1.13 Gateway Throughput

The following tests depend on the capacity claimed by the IUT (Gateway) provider. Thus the description precises the test principles without any figure given.

The type of test which is performed concerns the instantaneous performances.

Notes:

The capacity of the Auxiliary Gateway have to be higher than the IUT (Gateway)'s in configuration one as well as the capacity of the ATS Message Server in configuration two.

The instantaneous capacity have to be measured during one hour: « the peak hour ».

The terminal intended to send messages may be able to generate messages in an automatic way in order that messages be sent regularly and figures to be tested be performed.

The terminal intended to receive messages is able to accept them automatically.

**Test n°:** OSC-GW-13-CT-11

**Test Type:** Send a large number of messages from the Local AFTN site to the Remote AFTN site.

**Description:** Lets suppose the number of messages performed during one second is N\_1Sec.

Origin TTY1:

send 3600\*N\_1Sec AFTN messages during one hour with the text BP01 and the AFTN priority set to FF to the Adressee TTX1.

Notes:

1- No AFTN Service Message is sent.

2- The Variable N\_1Sec range from a minimum number (which may be 0.5 messages per seconde) to a maximum number (which may be 20 messages per seconde).

These figures depend widely on the IUT (Gateway) capacity as well as the Terminals and communication links capacities.

**Expected Results**

IUT (Gateway):

a) Convert in less than one hour the 3600\*N\_1Sec AFTN messages received during one hour into 3600\*N\_1Sec single AMHS messages to be sent to the Adressee TTX1 without any message lost or Gateway misworking.

b) Log the situation (Verify the messages logging).

Auxiliary Gateway:

Receive and convert the 3600\*N\_1Sec single AMHS messages with the Body part BP01H and the AFTN Priority set to FF into 3600\*N\_1Sec AFTN messages.

Addressee TTX1:

Receive the 3600\*N\_Sec AFTN messages.  
Verify the priority is set to FF.





<b>Test n°:</b>	OSC-GW-13-CT-12
<b>Test Type:</b>	Send a large number of messages from the Remote AFTN site to the Local AFTN site.
<b>Description:</b>	<p>Lets suppose the number of messages performed during one second is N_1Sec.</p> <p>Origin TTX1: send 3600*N_1Sec AFTN messages during one hour with the text BP01 and the AFTN priority set to FF to the Addressee TTY1</p> <p>Notes: 1- No AFTN Service Message is sent. 2- The Variable N_1Sec range from a minimum number (which may be 0.5 messages per seconde) to a maximum number (which may be 20 messages per seconde). These figures depend widely on the IUT (Gateway) capacity as well as the Terminals and communication links capacities.</p>
<b>Expected Results</b>	<p>IUT (Gateway):</p> <p>a) Receive and convert in less than one hour the 3600*N_1Sec single AMHS messages received during one hour into 3600*N_1Sec AFTN messages to be sent to the Addressee TTY1 without any message lost or Gateway misworking.</p> <p>b) Log the situation (Verify the messages logging).</p> <p>Auxiliary Gateway: Receive and convert the 3600*N_1Sec AFTN messages with the text BP01 and the AFTN Priority set to FF into 3600*N_1Sec single AMHS messages.</p> <p>Addressee TTY1: Receive the 3600*N_Sec AFTN messages. Verify the priority is set to FF.</p>

- Test n°:** OSC-GW-13-CT-21
- Test Type:** Send a large number of messages from the Local AFTN site to the Remote AMHS site.
- Description:** Lets suppose the number of messages performed during one second is  $N_{1Sec}$ .
- Origin TTY1:  
send  $3600 * N_{1Sec}$  AFTN messages during one hour with the text BP01 and the AFTN priority set to FF to the Recipient OR01
- Notes:  
1- No AFTN Service Message is sent.  
2- The Variable  $N_{1Sec}$  range from a minimum number (which may be 0.5 messages per seconde) to a maximum number (which may be 20 messages per seconde). These figures depend widely on the IUT (Gateway) capacity as well as the Terminals and communication links capacities.
- Expected Results:** IUT (Gateway):
- Receive and convert in less than one hour the  $3600 * N_{1Sec}$  AFTN messages received during one hour into  $3600 * N_{1Sec}$  single AMHS messages to be sent to the Recipient OR01 without any message lost or Gateway misworking.
  - Log the situation (Verify the messages logging).
- ATS message server:  
Receive, route and deliver the  $3600 * N_{1Sec}$  single AMHS messages with the Body part BP01H to the Recipient OR01.
- Recipient OR01:  
Receive the  $3600 * N_{1Sec}$  single AMHS messages.

- Test n°:** OSC-GW-13-CT-22
- Test Type:** Send a large number of messages from the Remote AMHS site to the Local AFTN site.
- Description:** Lets suppose the number of messages performed during one second is  $N_{1Sec}$ .
- Originator OR01:  
send  $3600 * N_{1Sec}$  AMHS messages during one hour with the Body part BP01H and the ATS-message-priority set to FF to the Addressee TTY1.
- Notes:  
1- No AFTN Service Message is sent.  
2- The Variable  $N_{1Sec}$  range from a minimum number (which can be 0.5 messages per seconde) to a maximum number (which could be 20 messages per seconde). These figures depend widely on the IUT capacity as well as the Terminals and communication links capacities
- Expected results:**
- IUT (Gateway):
- Receive and convert in less than one hour the  $3600 * N_{1Sec}$  single AMHS messages received during one hour into  $3600 * N_{1Sec}$  AFTN messages to be sent to the Addressee TTY1 without any message lost or Gateway misworking.
  - Log the situation (Verify the messages logging).
- ATS message server:  
Receive route and transfer the  $3600 * N_{1Sec}$  single AMHS messages with the Body part BP01H to the IUT (Gateway).
- Addressee TTY1:  
Receive the  $3600 * N_{1Sec}$  AFTN messages.  
Verify the priority is set to FF.

## 3.2.2 Abnormal Condition Gateway Tests

### 3.2.2.1 Network Failure and Recovery

**Test n°:** OSC-GW-14-CT-11

**Test Type:** Send messages from the Local AFTN site to the Remote AFTN site when a transient network failure occurs between the IUT Gateway and the Auxiliary Gateway.

**Description:** Origin TTY1:  
Send continuously AFTN messages containing the text BP01 to the Addressee TTX1 mapped onto the Recipient OR01.  
Set the AFTN Priority to FF to identify the test.

Cause a temporary communication link failure between the IUT (Gateway) and the Auxiliary Gateway which allows recovery when the communication link is re-established.

The failure must be longer than the interval between the transfer of two messages.

**Expected results:** IUT (Gateway):  
a) Receive, convert the continuous stream of AFTN messages into AMHS messages while the temporary failure occurs.  
b) Recover successfully the message transmission (All messages are correctly transferred).  
c) Log the situation (network failure, storage and recovery of the messages).

Auxiliary Gateway:  
Receive correctly all the AMHS messages. Convert all the AMHS messages into AFTN messages.

Addressee TTX1:  
Receive correctly all the AFTN messages.  
Verify the AFTN Priority is set to FF.

<b>Test n°:</b>	OSC-GW-14-CT-12
<b>Test Type:</b>	send messages from the Remote AFTN site to the local AFTN site when a transient network failure occurs between the Auxiliary Gateway and the IUT Gateway.
<b>Description:</b>	<p>Origin TTX1: Send continuously AFTN messages containing the text BP01 to the Addressee TTY1 mapped onto the Recipient OR11. Set the AFTN Priority to FF to identify the test.</p> <p>Cause a temporary communication link failure between the IUT (Gateway) and the Auxiliary Gateway which allows recovery when the communication link is re-established.</p> <p>The failure must be longer than the interval between the transfer of two messages.</p>
<b>Expected results:</b>	<p>IUT (Gateway):</p> <ol style="list-style-type: none"><li>Receive, convert the continuous stream of AMHS messages into AFTN messages while the temporary failure occurs.</li><li>Recover successfully the message transmission (All the messages are received correctly).</li><li>Log the situation (network failure, storage and recovery of the messages).</li></ol> <p>Auxiliary Gateway:</p> <ol style="list-style-type: none"><li>Receive correctly all the AFTN messages. Convert all the AFTN messages into AMHS messages.</li><li>Recover successfully the message transmission (All the messages are correctly transferred).</li></ol> <p>Addressee TTY1: Receive correctly all the AFTN messages. Verify the AFTN Priority is set to FF.</p>

<b>Test n°:</b>	OSC-GW-14-CT-21
<b>Test Type:</b>	Send messages from the Local AFTN site to the Remote AMHS site when a transient network failure occurs between the IUT Gateway and the ATS Message Server.
<b>Description:</b>	<p>Origin TTY1: Send continuously AFTN messages containing the text BP01 to the Recipient OR01 mapped onto the Addressee TTX1. Set the AFTN Priority to FF to identify the test.</p> <p>Cause a temporary communication link failure between the IUT (Gateway) and the ATS message server which allows recovery when the communication link is re-established.</p> <p>The failure must be longer than the interval between the transfer of two messages.</p>
<b>Expected results:</b>	<p>IUT (Gateway):</p> <ol style="list-style-type: none"><li>Receive, convert the continuous stream of AFTN messages into AMHS messages while the temporary failure occurs.</li><li>Recover successfully the message transmission (All messages are correctly transferred).</li><li>Log the situation (network failure, storage and recovery of the messages).</li></ol> <p>ATS message server: Receive, route and deliver correctly all the AMHS messages to the intended Recipient OR01.</p> <p>Recipient OR01: Receive correctly all the AMHS messages. Verify the ATS-message-priority is set to FF.</p>

<b>Test n°:</b>	OSC-GW-14-CT-22
<b>Test Type:</b>	Send messages from the Remote AMHS site to the Local AFTN site when a transient network failure occurs between the ATS message server and the IUT Gateway.
<b>Description:</b>	<p>Originator OR01: Submit continuously AMHS messages containing the Body part BP01H to the Addressee TTY1 mapped onto the Recipient OR11. Set the AFTN Priority to FF to identify the test.</p> <p>Cause a temporary communication link failure between the IUT (Gateway) and the Auxiliary Gateway which allows recovery when the communication link is re-established.</p> <p>The failure must be longer than the interval between the transfer of two messages.</p>
<b>Expected results:</b>	<p>IUT (Gateway):</p> <ol style="list-style-type: none"><li>Receive, convert the continuous stream of AMHS messages into AFTN messages while the temporary failure occurs.</li><li>Recover successfully the message transmission (All the messages are correctly received).</li><li>Log the situation (network failure, storage and recovery of the messages).</li></ol> <p>ATS message server:</p> <ol style="list-style-type: none"><li>Receive, route and transfer correctly all the AMHS messages.</li><li>Recover successfully the message transmission (All the messages are correctly transferred).</li></ol> <p>Addressee TTY1: Receive correctly all the AFTN messages. Verify the AFTN Priority is set to FF.</p>



### 3.2.2.2 Unavailability of Remote System

**Test n°:** OSC-GW-15-CT-11

**Test Type:** Send a message from the Local AFTN site to the unavailable Remote AFTN site.

**Description:** Origin TTY1:  
Send a single AFTN message containing the text BP01 to the Addressee TTX1 mapped onto the Recipient OR01.  
Set the AFTN Priority to FF to identify the test.

Auxiliary Gateway:  
Disconnected to make it unavailable.

**Expected results:** IUT (Gateway):  
a) Receive and convert the single AFTN message containing the text BP01 into an AMHS message containing the Body part BP01H with the ATS-message-priority set to FF and the message-priority set to Normal.  
  
b) Log the situation (Verify the errors are logged correctly).

<b>Test n°:</b>	OSC-GW-15-CT-21
<b>Test Type:</b>	Send a message from the Local AFTN site to the unavailable Remote AMHS site.
<b>Description:</b>	<p>Origin TTY1: Send a single AFTN message containing the text BP01 to the Addressee TTX1 which is mapped onto the Recipient OR01. Set the AFTN Priority to FF to identify the test.</p> <p>Recipient OR01: Disconnected to make it unavailable.</p>
<b>Expected results:</b>	<p>IUT (Gateway):</p> <ol style="list-style-type: none"><li>Convert the single AFTN message containing the text BP01 into an AMHS message containing the Body part BP01H with the ATS-message-priority set to FF and the message-priority set to Normal.</li><li>Receive a Non-Delivery Report from the ATS message server.</li><li>Log the situation. (Verify the message and report logging).</li></ol> <p>ATS message server:</p> <ol style="list-style-type: none"><li>Receive the AMHS message containing the Body part BP01H.</li><li>Generate and Transfer a Non-Delivery Report to the IUT (Gateway) due to the OR01 Recipient Unavailable.</li></ol>

### 3.2.2.3 Unsuccessful Conversion of Addressee Indicator in Incoming AFTN Message

- Test n°:** OSC-GW-16-CT-11
- Test Type:** Send an AFTN message with an unknown addressee Indicator from the AFTN Local site to the AFTN Remote site.
- Description:** Origin TTY1:  
Send a single AFTN message to the Addressee TTX7 with no matching OR-Name configured in the IUT (Gateway).  
  
The AFTN message must not leave the IUT (Gateway).
- Expected results:** IUT (Gateway):  
a) Deliver to the Origin TTY1 the AFTN Service Message « SVC ADS TTX7 UNKNOWN »  
  
b) Log the situation. (Verify the messages logging).  
  
Origin TTY1:  
Receive the AFTN Service Message « SVC ADS TTX7 UNKNOWN ».
- Test n°:** OSC-GW-16-CT-21
- Test Type:** Send an AFTN message with an unknown addressee from the AFTN Local site to the AMHS Remote site.
- Description:** Origin TTY1:  
Send a single AFTN message to the Addressee TTX7 with no matching OR-Name configured in the IUT (Gateway).  
  
The AFTN message must not leave the IUT (Gateway).
- Expected results:** IUT (Gateway):  
a) Deliver to the Origin TTY1 the AFTN Service Message « SVC ADS TTX7 UNKNOWN »  
  
b) Log the situation. (Verify the messages logging).  
  
Origin TTY1:  
Receive the AFTN Service Message « SVC ADS TTX7 UNKNOWN ».

### 3.2.2.4 Unsuccessful Conversion of Originator Indicator in Incoming AFTN Message

**Test n°:** OSC-GW-17-CT-11

**Test Type:** Send an AFTN message with an unknown Origin to the IUT Gateway (Intended to the AFTN Remote site).

**Description:** Origin TTY9:  
Send a single AFTN message containing the text BP01 to the Addressee TTX1 with origin TTY9 which cannot be mapped in the IUT (Gateway).

**Expected results:** IUT (Gateway):  
a) deliver to the Origin TTY9 an AFTN Service Message « SVC QTA OGN TTY9 CORRUPT ».

b) log the situation. (Verify the messages logging).

Origin TTY9:  
Receive the AFTN Service Message.

**Test n°:** OSC-GW-17-CT-21

**Test Type:** Send an AFTN message with an unknown Origin to the IUT Gateway (Intended to the AMHS Remote site).

**Description:** Origin TTY9:  
Send a single AFTN message containing the text BP01 to the Addressee TTX1 with origin TTY9 which cannot be mapped in the IUT (Gateway).

**Expected results:** IUT (Gateway):  
a) deliver to the Origin TTY9 an AFTN Service Message « SVC QTA OGN TTY9 CORRUPT ».

b) log the situation. (Verify the messages logging).

Origin TTY9:  
Receive the AFTN Service Message.

### 3.2.2.5 Unsuccessful Conversion of Recipient O/R Name in Incoming AMHS Message

**Test n°:** OSC-GW-18-CT-11

**Test Type:** Send an AFTN message from the Remote site containing one valid recipient address and one recipient address that cannot be translated the IUT Gateway.

**Description:** Origin TTX1:  
Submit a single AFTN message containing the text BP01 to the Addressee TTY1 which is mapped onto the Recipient OR11 and to the Addressee TTY8 which can be mapped by the Auxiliary Gateway to the Recipient OR18.

The Recipient OR18 cannot be mapped by the IUT (Gateway) to the Addressee TTY8.

Set the AFTN Priority to FF to verify the test.

**Expected results:** IUT (Gateway):  
a) Receive and convert the AMHS message containing the Body part BP01H, sent to the Originator OR11 into an AFTN message sent to the Addressee TTY1.

b) Generate and transfer a Non-Delivery Report to the Auxiliary Gateway concerning the Recipient OR17 which cannot be translated successfully.

c) Log the situation. (Verify the messages logging).

Auxiliary Gateway:

a) Receive and convert the AFTN message into an AMHS message intended to the Recipients OR11 and OR18 mapped from the Addressee TTY1 and TTY8 respectively.

b) Receive and convert the Non-Delivery Report concerning the Recipient OR18 into an AFTN Unknown Addressee Service Message to be delivered to the Origin TTX1.

Origin TTX1:

Receive the AFTN Addressee Unknown Service Message concerning the Addressee TTY8.

- Test n°:** OSC-GW-18-CT-21
- Test Type:** Send an AMHS message from the Remote AMHS site containing one valid recipient address and one recipient address that cannot be translated by the IUT Gateway.
- Description:** Originator OR01:  
Submit a single AMHS message containing the text BP01H to the Recipients OR11 which is mapped onto the addressee TTY1 in the IUT (Gateway) and onto the Recipient OR18 the address of which cannot be successfully converted to a valid Addressee in the IUT (Gateway).
- Expected results:** IUT (Gateway):
- a) Receive and convert the AMHS message containing the Body part BP01H, sent to the Originator OR11 into an AFTN message sent to the Addressee TTY1.
  - b) Generate and transfer a Non-Delivery Report to the ATS Message Server concerning the Recipient OR18 which cannot be translated successfully.
  - c) Log the situation (Verify the messages logging).
- ATS Message Server:
- a) Receive, route and transfer the AMHS message to the IUT (Gateway).
  - b) Route and deliver the Non-Delivery Report concerning the Recipient OR18 to the subject message Originator OR01.
- Originator OR01:  
Receive the Non-Delivery Report concerning the Recipient OR18 the address of which cannot be translated successfully into an AFTN message addressee by the IUT (Gateway).

### 3.2.2.6 Unsuccessful Conversion of Originator O/R Name in Incoming AMHS Message

**Test n°:** OSC-GW-19-CT-11

**Test Type:** Send an AFTN message from the Remote AFTN site containing an Origin address that cannot be translated by the IUT Gateway.

**Descriptions:** Origin TTX8:  
Send an AFTN message with the text BP01 mapped onto the Originator OR08 in the Auxiliary Gateway and to nothing in the IUT (Gateway), to the Addressee TTY1 mapped in both Gateways.

**Expected results:** IUT (Gateway):  
a) Receive the AMHS message, Generate and Transfer a Non-Delivery Report to the Auxiliary Gateway concerning the Originator OR08 with :  
« unable-to-transfer » for the *non-delivery-reason-code*  
« invalid-arguments » for the *non-delivery-diagnostic-code*  
« unable to convert to AFTN due to unrecognized originator O/R address » for the *supplementary-information*.

b) Log the situation (Verify the message and report logging).

Auxiliary Gateway:

a) Receive and Convert the AFTN message into an AMHS message to be transferred to the IUT (Gateway).

b) Receive and discard the Non Delivery Report.

<b>Test n°:</b>	OSC-GW-19-CT-21
<b>Test Type:</b>	Send an AMHS message from the remote AMHS site containing an Originator address that cannot be translated by the IUT Gateway.
<b>Descriptions:</b>	Originator OR08: Send an AFTN message with the Body part BP01H configured in the Auxiliary Gateway and not configured in the IUT (Gateway), to the Addressee TTY1 mapped in both Gateways.
<b>Expected results:</b>	IUT (Gateway): a) Receive the AMHS message, Generate and Transfer a Non-Delivery Report to the Auxiliary Gateway concerning the Originator OR08 with : « unable-to-transfer » for the <i>non-delivery-reason-code</i> « invalid-arguments » for the <i>non-delivery-diagnostic-code</i> « unable to convert to AFTN due to unrecognized originator O/R address » for the <i>supplementary-information</i> .  b) Log the situation (Verify the message and report logging).  Auxiliary Gateway: a) Receive and Transfer the AMHS message to the IUT (Gateway).  b) Receive and Deliver the Non-Delivery Report to the Originator OR08.  Originator OR08: Receive the Non-Delivery Report. Verify the values of the non-delivery-reason-code, the non-delivery-diagnostic-reason-code and the supplementary-information.



### 3.2.2.7 Receiving an Incoming AMHS Message with an invalid Content Type

<b>Test n°:</b>	OSC-GW-20-CT-21
<b>Test Type:</b>	Send an AMHS message with a non IPM content type from the Remote AMHS to an AFTN Destination mapped onto an AMHS Recipient with the <i>responsability</i> element of the <i>per-recipient-indicators</i> containing the abstract-value « responsible ».
<b>Description:</b>	Originator OR01: Generate and submit a single Pedi message or any kind of non IPM message to the Recipient OR11 mapped onto the AFTN Addressee TTY1. Verify that the <i>responsability</i> element of the <i>per-recipient-indicators</i> has the abstract-value « responsible ».
<b>Expected results:</b>	IUT (Gateway): a) Receive the non IPM message from the ATS message server.  b) Rejection of the message.  c) Generate and Transfer to the ATS message server a non-delivery report with the following elements taking the abstract-values: - « unable-to-transfer » for the <i>non-delivery-reason-code</i> ; and - « content-type-not-supported » for the <i>non-delivery-diagnostic-code</i> .  d) Log the situation (Verify the message and report logging).  ATS message server: a) Receive and route the non IPM message to the IUT (Gateway),  b) Receive and Deliver the Non-Delivery Report generated by the IUT (Gateway) to the Originator OR01.  Originator OR01: Receive the Non-Delivery Report concerning the Non IPM message.

### 3.2.2.8 Receiving an Incoming AMHS Message with a non-AFTN compatible body part

**Test n°:** OSC-GW-21-CT-21

**Test Type:** Send an AMHS message from the Remote AMHS site with a non-AFTN compatible Body part to an AFTN Destination.

**Description:** Originator OR01:  
Submit an AMHS message containing the Body part BP03 (File transfer) to the Recipient OR11 mapped onto the AFTN Addressee TTY1.

**Expected results:** IUT (Gateway):

- a) Receive the AMHS message containing the non IA5 text Body part BP03 addressed to the AFTN Addressee TTY1.
- b) Generate and transfer the AMHS Non-Delivery Report to the Originator OR01.
- b) Log the situation (Verify the message and report logging).

ATS message server:

- a) Receive, route and transfer the AMHS message with the Body part BP03.
- b) Receive, route and deliver the AMHS Non Delivery Report to the Subject Message Originator OR01.

Originator OR01:  
Receive the AMHS Non Delivery Report.  
Verify the values of the non-delivery-reason-code and the non-delivery-diagnostic-reason-code.

### 3.2.2.9 Receiving an Incoming AMHS Message with multiple IPM body parts

<b>Test n°:</b>	OSC-GW-22-CT-21
<b>Test Type:</b>	Send an AMHS message from the Remote AMHS site containing five IA5 text Body parts to an AFTN destination.
<b>Description:</b>	Originator OR01: Submit an AMHS message containing the five IA5 text Body part ranging from BP31 to BP35 to the Recipient OR11 mapped onto the AFTN Addressee TTY1.
<b>Expected Result</b>	IUT (Gateway): a) Receive the AMHS message message containing the five IA5 text Body part ranging from BP31 to BP35 addressed to the AFTN Addressee TTY1.  b) Generate and transfer the AMHS Non Delivery Report to the Originator OR01.  b) Log the situation (Verify the message and report logging).  ATS message server: a) Receive, route and transfer the AMHS message with the Body parts BP31 to BP35.  b) Route and deliver the AMHS Non Delivery Report to the Subject Message Originator.  Originator OR01: Receive the AMHS Non Delivery Report. Verify the values of the non-delivery-reason-code and the non-delivery-diagnostic-reason-code.

### 3.2.2.10 Receiving an Incoming AMHS Message with a missing ATS Message Header

<b>Test n°:</b>	OSC-GW-23-CT-21
<b>Test Type:</b>	Send an AMHS message with a Body part without the ATS-message-header from the remote AMHS site to an AFTN Destination.
<b>Description:</b>	Originator OR01: Submit a single AMHS message containing the Body part BP04 without the ATS-Message-Header.
<b>Expected results:</b>	IUT (Gateway): a) Receive the AMHS message containing the Body part BP04 without the ATS-message-header.  b) Generate and Transfer an AMHS Non-Delivery Report to the ATS message server.  c) Log the situation (Verify the message and report logging).  ATS message server: a) Receive, route and transfer the AMHS message with the Body part BP04.  b) Receive, route and deliver the AMHS Non-Delivery Report generated by the IUT (Gateway) to the Originator OR01.  Originator OR01: Receive the Non-Delivery-Report. Verify the values of the non-delivery-reason-code and the non-delivery-diagnostic-reason-code.

### 3.2.2.11 Receiving an Incoming AMHS Message with an invalid ATS Message Header

**Test n°:** OSC-GW-24-CT-21

**Test Type:** Send an AMHS message with a Body part without the ATS-Message-Priority from the Remote AMHS site to an AFTN Destination.

**Description:** Originator OR01:  
Submit a single AMHS message containing the Body part BP05H without the ATS-Message-Priority.

**Expected results:** IUT (Gateway):

- a) Receive the AMHS message containing the Body part BP05H.
- b) Generate and Transfer an AMHS Non-Delivery Report to the ATS message server.
- c) Log the situation (Verify the message and report logging).

ATS message server:

- a) Receive, route and transfer the AMHS message with the Body part BP05H.
- b) Route and deliver the AMHS Non Delivery Report generated by the IUT (Gateway) to the Originator OR01.

Originator OR01:  
Receive the Non-Delivery Report.  
Verify the values of the non-delivery-reason-code and the non-delivery-diagnostic-reason-code.

<b>Test n°:</b>	OSC-GW-24-CT-22
<b>Test Type:</b>	Send an AMHS message with a Body part without the ATS-Message-Filing-Time from the Remote AMHS site to an AFTN Destination.
<b>Description:</b>	Originator OR01: Submit a single AMHS message containing the Body part BP06H without the ATS-Message-Filing-Time.
<b>Expected results:</b>	IUT (Gateway): a) Receive the AMHS message containing the Body part BP06H.  b) Generate and Transfer an AMHS Non-Delivery Report to the ATS message server.  c) Log the situation (Verify the message and report logging).  ATS message server: a) Receive, route and transfer the AMHS message with the Body part BP06H.  b) Route and Deliver the AMHS Non Delivery Report generated by the IUT (Gateway) to the Originator OR01.  Originator OR01: Receive the Non-Delivery Report. Verify the abstract-values of the non-delivery-reason-code and the non-delivery-diagnostic-reason-code.

### 3.2.2.12 Receiving an Incoming AMHS Message containing an invalid character

<b>Test n°:</b>	OSC-GW-25-CT-21
<b>Test Type:</b>	Send an AMHS message with <i>conversion-with-loss-prohibited</i> set to "prohibited" and containing a semicolon (;) (Annex 10 Volume II, 4.1.2) in the message text from the remote AMHS site to an AFTN destination. Use the AFTN Priority set to FF to Identify the test.
<b>Description:</b>	Originator OR01: Submit a single AMHS message with the Body part BP07H, setting the option to « prohibit conversion ». Send the message to the Recipient OR11, which maps onto TTY1. Set the ATS-message-priority to FF.
<b>Expected results:</b>	IUT (Gateway): a) Receive the AMHS message containing the Body part BP07H.  b) Generate and transfer to the ATS message server for delivery to the Originator OR01 the Non-delivery Report.  c) Log the situation (Verify the message report logging).  ATS message server: a) Receive, route and transfer the AMHS message with the Body part BP07H.  b) Route and deliver the Non-delivery Report to the originator OR01.  Originator OR01: Receive the Non-Delivery Report with the : <i>non-delivery-reason-code</i> containing the value « conversion-not-performed » and <i>non-delivery-diagnostic-code</i> containing the value « punctuation-symbol-loss » according to the ATSMHS SARPs (3.1.2.3.5.2.1.6. c) Verify the AFTN Priority is set to FF.

## 3.3 Message Server Tests

### 3.3.1 Introduction

### 3.3.2 Message Transfer Tests

#### 3.3.2.1 Outgoing IPM Transfer

**Test n°:** OSC-MS-01-CT-31

**Test Type:** Send a valid AMHS message from the Local site to a valid AFTN addressee in the Remote site.

**Description:** Originator OR11:  
Submit a single AMHS message containing the Body part BP01H to the IUT ATS message server to send to the Recipient OR01 which is mapped onto the AFTN Addressee TTX1.

Set the AFTN Priority in the ATS-message-priority to FF and the transfer message-priority to Normal.

**Expected results:** IUT ATS message server  
a) Receive route and transfer the single AMHS message containing the Body part BP01H to the Recipient OR01.

b) Log the situation (Verify the messages logging).

AMHS/AFTN Gateway:

a) Receive the single AMHS message from the IUT ATS message server.

b) Convert the single AMHS message into a single AFTN message and send it to the Addressee TTX1.

Addressee TTX1:

Receive the single AFTN message.

Verify the AFTN priority is set to FF.



<b>Test n°:</b>	OSC-MS-01-CT-41
<b>Test Type:</b>	Send a valid AMHS message from the Local site to a valid Recipient of the AMHS Remote site.
<b>Description:</b>	Originator OR11: Submit a single AMHS message containing the Body part BP01H to the IUT ATS message server to send to the Recipient OR01.
<b>Expected results:</b>	IUT ATS message server a) Receive route and transfer the single AMHS message containing the Body part BP01H to the Recipient OR01.  b) Log the situation (Verify the messages logging).  Auxiliary ATS message server: a) Receive the single AMHS message from the IUT ATS message server,  b) route and deliver the single AMHS message to the Recipient OR01.  Recipient OR01: Receive the single AMHS message.

### 3.3.2.2 Incoming IPM Transfer

**Test n°:** OSC-MS-02-CT-31  
**Test Type:** Send a valid AFTN message from the Remote site to a valid AMHS Recipient in the Local site.

**Description:** Origin TTX1:  
Send a single AFTN message containing the text BP01 to the Addressee TTY1 which is mapped onto the Recipient OR11 by the Gateway.  
Set the AFTN Priority to FF to identify the test.

**Expected results:** IUT ATS message server:  
a) Receive, route and transfer the AMHS message received from the AFTN/AMHS Gateway.  
b) Log the situation (Verify the messages logging).  
  
AFTN/AMHS Gateway:  
a) Receive the single AFTN message submitted by the Addressee TTX1.  
b) Convert the single AFTN message into a single AMHS message (map the Addressee TTY1 onto the Recipient OR11).  
  
Recipient OR11:  
Receive the AMHS message.  
Verify the ATS-message-priority is set to FF.

**Test n°:** OSC-MS-02-CT-41

**Test Type:** Send a valid AMHS message from the Remote site to a valid AMHS Recipient of the Local site.

**Description:** Originator OR01:  
Submit a single AMHS message containing the Body part BP01H to the Auxiliary ATS message server to be sent to the Recipient OR11.

**Expected results:** IUT ATS message server  
a) Receive, route and deliver to the Recipient OR11 the single AMHS message containing the Body part BP01H.  
b) Log the situation (Verify the messages logging).  
  
Auxiliary ATS message server:  
a) Receive, route and transfer the single AMHS message to the IUT ATS message server.  
  
Recipient OR11:  
Receive the single AMHS message containing the Body part BP01H.

### 3.3.2.3 Outgoing Probe Transfer

<b>Test n°:</b>	OSC-MS-03-CT-31
<b>Test Type:</b>	Send a probe message from the Local site with : <ul style="list-style-type: none"><li>- the abstract-value of the <i>content-type</i> being « interpersonal-messaging-1984 » or being « interpersonal-messaging 1988 »</li><li>- the abstract-value of the current <i>encoded-information-types</i> neither being « ia5-text » nor extended « ia5-text »</li></ul> to a valid AFTN Recipient in the Remote site
<b>Description:</b>	Originator OR11: Submit a single AMHS probe to the IUT ATS message server to be sent to the AFTN Addressee TTX1 which is mapped onto the Recipient OR01 been configured as above.
<b>Expected results:</b>	IUT ATS message server: <ul style="list-style-type: none"><li>a) Receive and route the AMHS probe to the intended Recipient OR01.</li><li>b) Log the situation (Verify the probe logging).</li></ul> AMHS/AFTN Gateway: <ul style="list-style-type: none"><li>a) Receive the AMHS probe message.</li><li>b) Generate a Non-Delivery-Report as specified in SARPs (3.1.2.3.5.5.1).</li></ul> Originator OR11: Receive the Non-Delivery-Report. Verify that: <ul style="list-style-type: none"><li>- the <i>non-delivery-reason-code</i> is set to « unable-to-transfer »</li><li>- the <i>non-delivery-diagnostic-code</i> is set to « encoded-information-types-unsupported ».</li></ul>

- Test n°:** OSC-MS-03-CT-32
- Test Type:** Send a probe message from the Local site with :  
- the abstract-value of the *content-type* being « interpersonal-messaging-1984 » or being « interpersonal-messaging 1988 »  
- the abstract-value of the current *encoded-information-types* being « ia5-text » or being extended « ia5-text »  
- the abstract-value of the *implicit-conversion-prohibited* in the *per-message-indicator* being « prohibited »  
to a valid AFTN Recipient in the Remote site
- Description:** Originator OR11:  
Submit a single AMHS probe to the IUT ATS message server to be sent to the AFTN Addressee TTX1 which is mapped onto the Recipient OR01 been configured as above.
- Expected results:** IUT ATS message:  
a) Receive and route the AMHS probe to the intended Recipient OR01.  
  
b) Log the situation (Verify the probe logging).  
  
AMHS/AFTN Gateway:  
a) Receive the AMHS probe message.  
  
b) Generate of a Non-Delivery-Report as specified in SARPs (3.1.2.3.5.5.2).  
  
Originator OR11:  
Receive the Non-Delivery-Report. Verify that :  
- the *non-delivery-reason-code* is set to « conversion-not-performed »  
- the *non-delivery-diagnostic-code* is set to « implicit-conversion-prohibited»  
- the *supplementary-information* set to « unable to convert to AFTN »
- Test n°:** OSC-MS-03-CT-33
- Test Type:** Send a probe message from the local site with:  
- the abstract-value of the *content-type* being « interpersonal-messaging-1984 » or being « interpersonal-messaging 1988 »  
- the abstract-value of the current *encoded-information-types* being « ia5-text » or being extended « ia5-text »  
- the abstract-value of the *implicit-conversion-prohibited* in the *per-message-indicator* differs from « prohibited »  
the element *content-length* exceeds the conversion capability of the AMHS/AFTN Gateway \*  
to a valid AFTN Recipient in the Remote site

- Description:** Originator OR11:  
Submit a single AMHS probe to the IUT ATS message server to be sent to the AFTN Addressee TTX1 which is mapped onto the Recipient OR01 been configured as above.
- Expected results:** IUT ATS message:
- a) Receive and route the AMHS probe to the intended Recipient OR01.
  - b) Log the situation (Verify the probe logging).
- AMHS/AFTN Gateway:
- a) Receive the AMHS probe message.
  - b) Generate a Non-Delivery-Report as specified in SARPs (3.1.2.3.5.5.3).
- Originator OR11:  
Receive the Non-Delivery-Report. Verify that:
- the *non-delivery-reason-code* is set to « enable-to-transfer »
  - the *non-delivery-diagnostic-code* is set to « content-too-long ».

\* Note:

This figure will be appreciated by the test performer.

- Test n°:** OSC-MS-03-CT-34
- Test Type:** Send a probe message from the Local site with :  
the abstract-value of the *content-type* neither being  
« interpersonal-messaging-1984 » nor being « interpersonal-  
messaging 1988 »  
to a valid AFTN Recipient in the Remote site.
- Description:** Originator OR11:  
Submit a single AMHS probe to the IUT ATS message server to be  
sent to the AFTN Addressee TTX1 which is mapped onto the  
Recipient OR01 been configured as above.
- Expected results:** IUT ATS message:  
a) Receive and route the AMHS probe to the intended Recipient  
OR01.  
  
b) Log the situation (Verify the probe logging).
- AMHS/AFTN Gateway:  
a) Receive the AMHS probe message.  
  
b) Generate of a Non-Delivery-Report as specified in SARPs  
(3.1.2.3.5.1.4).
- Originator OR11:  
Receive the Non-Delivery-Report. Verify that :  
- the *non-delivery-reason-code* is set to « unable-to-transfer »  
- the *non-delivery-diagnostic-code* is set to « content-type-  
unsupported ».

<b>Test n°:</b>	OSC-MS-03-CT-41
<b>Test Type:</b>	Send a probe message from the Local site to a valid AMHS Recipient of the Remote site.
<b>Description:</b>	Originator OR11: Submit an AMHS probe to the IUT ATS message server to be sent to the Recipient OR01.
<b>Expected results:</b>	IUT ATS message server a) Receive the AMHS probe.  b) Route and send it to the intended recipient OR01.  c) Route and deliver the Report to the originator OR11.  d) Log the situation (Verify the probe logging).  Auxiliary ATS message server a) Receive and deliver to the recipient OR01.  b) Generate and send the AMHS Report to the originator OR11.  Originator OR01: Receive the Report.

### 3.3.2.4 Incoming Probe Transfer

<b>Test n°:</b>	OSC-MS-04-CT-41
<b>Test Type:</b>	Send a probe message from the Remote site to a valid AMHS Recipient of the Local site.
<b>Description:</b>	Originator OR01: Submit an AMHS probe to the Auxiliary ATS message server to be sent to the Recipient OR11.
<b>Expected results:</b>	IUT ATS message server: a) Receive the AMHS probe, generate the Report and send it to the Originator OR01.  b) Log the situation (Verify the probe and report logging).  Auxiliary ATS message server: a) Receive, route and send the AMHS probe from the Originator OR01 to the Recipient OR11.  b) Receive and Deliver the Report to the Originator OR01.  Originator OR01: Receive the Report.



### 3.3.2.5 Outgoing Delivery Report Transfer

**Test n°:** OSC-MS-05-CT-41

**Test Type:** Send an AMHS message from the Remote site requesting Delivery Reports to a valid AMHS Recipient and an unknown Recipient both of the Local site.

**Description:** Originator OR01:  
Submit a single AMHS message requesting Delivery Reports containing the Body part BP01H to the valid Recipient OR11 and to the unknown Recipient OR18.

**Expected results:** IUT ATS message server:

- a) Receive the single AMHS message containing the Body part BP01H.
- b) Deliver the single AMHS message to the Recipient OR11.
- c) Generate and send :
  - a Non-Delivery Report concerning the unknown Recipient OR18.
  - a Delivery-Report concerning the Recipient OR11 to the Originator OR01.
- d) Log the situation (AMHS message and associated reports).

Auxiliary ATS-message-server:

a) Receive, route and transfer the AMHS message containing the Body part BP01H submitted by the Originator OR01.

b) Receive, route and deliver the Reports received from the IUT ATS message server to the Originator OR01.

c) Log the situation (Verify the messages and reports logging).

Originator OR01:

Receive the Delivery-Report concerning the Recipient OR11 and the Non-Delivery-Report concerning the Recipient OR18.

### 3.3.2.6 Incoming Delivery Report Transfer

**Test n°:** OSC-MS-06-CT-31

**Test Type:** Send an AMHS message from the Local site requesting Delivery Reports to a valid AFTN addressee and an unknown AFTN Addressee both in the Remote site.

**Description:** Originator OR11:  
Submit a single AMHS message requesting Delivery-Reports containing the Body part BP01H mapped onto the text BP01 to a valid Recipient OR01 which is mapped onto the Addressee TTX1 and the unknown Recipient OR08.

**Expected results:** IUT ATS message server:

- a) Receive route and transfer the single AMHS message containing the Body part BP01H submitted by the Originator OR11.
- b) Receive and submit to the Originator OR11 the Delivery Report concerning the Recipient OR01 and the Non Delivery Report concerning the unknown Recipient OR08.
- c) Log the situation (Verify the message and reports logging).

AMHS/AFTN Gateway:

- a) Receive and convert the AMHS message intended to the Recipient OR01 to the AFTN message containing the text BP01 submitted to the Addressee TTX1.
- b) Generate and transfer to the IUT message server:
  - the Delivery-Report concerning the AMHS message intended to the Recipient OR01,
  - the Non-Delivery Report concerning the AMHS message intended to the unknown Recipient OR08.

Addressee TTX1:

Receive the AFTN message containing the text BP01.

Originator OR11:

Receive the Delivery-Report concerning the Recipient OR01 and the Non-Delivery Report concerning the Recipient OR08.

<b>Test n°:</b>	OSC-MS-06-CT-41
<b>Test Type:</b>	Send an AMHS message from the Local site requesting Delivery Reports to a valid AMHS Recipient and an unknown AMHS Recipient both in the Remote site.
<b>Description:</b>	Originator OR11: Submit a single AMHS message containing the Body part BP01H to a valid Recipient OR01 and the unknown Recipient OR08.
<b>Expected results:</b>	IUT ATS message server: a) Receive route and transfer the single AMHS message containing the Body part BP01H submitted by the Originator OR11.  b) Receive and submit to the Originator OR11 the Delivery Report concerning the Recipient OR01 and the Non Delivery Report concerning the unknown Recipient OR02.  c) Log the situation (Verify message and reports logging).  Auxiliary ATS message server: a) Receive route and deliver the AMHS message to the Recipient OR01 containing the Body part BP01H.  b) Generate and transfer to the IUT message server: - the Delivery Report concerning the AMHS message intended to the Recipient OR01, - the Non-Delivery Report concerning the AMHS message intended to the unknown Recipient OR08.  Recipient OR01: Receive the AMHS message containing the Body part BP01H.  Originator OR11: Receive the Delivery Report and the Non-Delivery Report.

### 3.3.2.7 Message Server Throughput

The following tests depend on the capacity claimed by the IUT ATS message server provider. Thus the description precises the test principles without any figure given.

The type of test which is performed concerns the instantaneous performances.

**Notes:**

The capacity of the AMHS/AFTN Gateway have to be higher than the IUT ATS message server's in configuration 3 as well as the capacity of the Auxiliary ATS message server in configuration 4.

The instantaneous capacity have to be measured during one hour: « the peak hour ».

The terminal intended to send messages may be able to generate messages in an automatic way in order that messages be sent regularly and figures to be tested be performed.

The terminal intended to receive messages is able to accept them automatically.

**Test n°:** OSC-MS-07-CT-31

**Test Type:** Send a large number of messages from the Local AMHS site to the Remote AFTN site.

**Description:** Lets suppose the number of messages performed during one second is  $N_{1Sec}$ .

**Originator OR11:**

Send  $3600 * N_{1Sec}$  AMHS messages during one hour with the Body part BP01H with the ATS-message-priority set to FF to the Adressee TTX1.

**Note:**

The Variable  $N_{1Sec}$  range from a minimum number (which may be 0.5 messages per seconde) to a maximum number (which may be 20 messages per seconde).

These figures depend widely on the IUT ATS message server capacity as well as the Terminals and communication links capacities.

**Expected Results**

IUT ATS message server:

a) Route and send in less than one hour the 3600\*N\_1Sec AMHS messages received during one hour to the Addressee TTX1 without any message lost or message server misworking.

b) Log the situation (Verify the messages logging).

AMHS/AFTN Gateway:

Receive and convert the 3600\*N\_1Sec single AMHS messages with the Body part BP01H and the AFTN Priority set to FF into 3600\*N\_1Sec AFTN messages.

Addressee TTX1:

Receive the 3600\*N\_Sec AFTN messages.

Verify the AFTN Priority is set to FF.

<b>Test n°:</b>	OSC-MS-07-CT-32
<b>Test Type:</b>	Send a large number of messages from the Remote AFTN site to the Local AMHS site.
<b>Description:</b>	<p>Lets suppose the number of messages performed during one second is N_1Sec.</p> <p>Origin TTX1: send 3600*N_1Sec AFTN messages during one hour with the text BP01 and the AFTN Priority set to FF to the Addressee TTY1 mapped onto the Recipient OR11.</p> <p>Note: The Variable N_1Sec range from a minimum number (which may be 0.5 messages per seconde) to a maximum number (which may be 20 messages per seconde).</p> <p>These figures depend widely on the IUT ATS message server capacity as well as the Terminals and communication links capacities.</p>
<b>Expected Results</b>	<p>IUT ATS message server:</p> <ol style="list-style-type: none"><li>Route and send in less than one hour the 3600*N_1Sec single AMHS messages received during one hour to the Recipient OR11 without any message lost or message server misworking.</li><li>Log the situation (Verify the messages logging).</li></ol> <p>AMHS/AFTN Gateway: Receive and convert the 3600*N_1Sec AFTN messages with the text BP01 and the AFTN Priority set to FF into 3600*N_1Sec single AMHS messages.</p> <p>Recipient OR11: Receive the 3600*N_Sec AMHS messages. Verify the message-priority is set to Normal.</p>

- Test n°:** OSC-MS-07-CT-41
- Test Type:** Send a large number of messages from the Local AMHS site to the Remote AMHS site.
- Description:** Lets suppose the number of messages performed during one second is  $N_{1Sec}$ .
- Originator OR11:  
send  $3600 * N_{1Sec}$  AFTN messages during one hour with the Body part BP01H to the Recipient OR01
- Note:  
The Variable  $N_{1Sec}$  range from a minimum number (which may be 0.5 messages per seconde) to a maximum number (which may be 20 messages per seconde).
- These figures depend widely on the IUT ATS message server capacity as well as the Terminals and communication links capacities.
- Expected Results:** IUT ATS message server:
- Route and send in less than one hour the  $3600 * N_{1Sec}$  AMHS messages received during one hour to the Recipient OR01 without any message lost or message server misworking.
  - Log the situation (Verify the messages logging).
- Auxiliary ATS message server:  
Receive, route and deliver the  $3600 * N_{1Sec}$  single AMHS messages with the Body part BP01H to the Recipient OR01.
- Recipient OR01:  
Receive the  $3600 * N_{1Sec}$  single AMHS messages.

- Test n°:** OSC-MS-07-CT-42
- Test Type:** Send a large number of messages from the Remote AMHS site to the Local AMHS site.
- Description:** Lets suppose the number of messages performed during one second is  $N_{1Sec}$ .
- Originator OR01:  
send  $3600 * N_{1Sec}$  AMHS messages during one hour with the Body part BP01H to the Recipient OR11.
- Note:  
The Variable  $N_{1Sec}$  range from a minimum number (which may be 0.5 messages per seconde) to a maximum number (which may be 20 messages per seconde).
- These figures depend widely on the IUT ATS message server capacity as well as the Terminals and communication links capacities.
- Expected results:** IUT ATS message server:
- a) Route and send in less than one hour the  $3600 * N_{1Sec}$  single AMHS messages received during one hour to the Recipient OR11 without any message lost or message server misworking.
  - b) Log the situation (Verify the messages logging).
- Auxiliary ATS message server:  
Receive route and transfer the  $3600 * N_{1Sec}$  single AMHS messages with the Body part BP01H to the IUT ATS message server.
- Recipient OR11:  
Receive the  $3600 * N_{1Sec}$  AMHS messages.



### 3.3.3 Message Server Distribution List Tests

#### 3.3.3.1 Locally Generated Message Sent to Distribution List

**Test n°:** OSC-MS-08-CT-31

**Test Type:** Send an AMHS message from the Local site to a Local Distribution List containing one Local AMHS Recipient and an AFTN addressee in the AFTN Remote site with the AFTN Priority is set to FF.

**Description:** Originator OR11:  
Submit a single AMHS message containing the Body part BP01H to the « Local Distribution List » DL01 containing the Local AMHS Recipient OR12 and the Remote Recipient OR01 mapped onto the AFTN addressee TTX1. (The AFTN message priority is set to FF).

**Expected results:** IUT ATS message server:

- a) Receive and route the AMHS message to the « Local Distribution List » DL01.
- b) Expand the Recipients of the DL01, deliver the AMHS message to the Local Recipient OR12 and transfer to the Remote Gateway for delivery to the Recipient OR01.
- c) Log the situation (Verify the messages logging).

AMHS/AFTN Gateway:

- a) Convert the AMHS message intended to the Recipient OR01 containing the Body part BP01H into an AFTN message containing the text BP01.

- b) Route and deliver the AFTN message to the Addressee TTY1.

Addressee TTX1:

Receive the AFTN message and verify the AFTN Priority is set to FF.

Recipient OR12:

Receive the AMHS message.

<b>Test n°:</b>	OSC-MS-08-CT-41
<b>Test Type:</b>	Send an AMHS message from the Local site to a Local Distribution List containing one Local AMHS Recipient and an AMHS Remote Recipient.
<b>Description:</b>	Originator OR11: Submit a single AMHS message containing the Body part BP01H to the « Local Distribution List » DL01. DL01 contains the Local AMHS Recipient OR12 and the Remote Recipient OR01.
<b>Expected results:</b>	IUT ATS message server: a) Receive and route the AMHS message to the « Local Distribution List » DL01.  b) Expand the Recipients of the DL01, send, route the AMHS message to the Local Recipient OR12 transfer to the Remote ATS message server for delivery to the Remote Recipient OR01.  c) Log the situation (Verify the messages logging).  Auxiliary ATS message server: a) Receive, route and deliver the AMHS message containing the Body part BP01H to the Recipient OR01.  Recipient OR01: Receive the AMHS message.  Recipient OR12: Receive the AMHS message.

<b>Test n°:</b>	OSC-MS-08-CT-42
<b>Test Type:</b>	Send an AMHS message requesting Delivery Reports from the Local site to a Local Distribution List containing one Local AMHS Recipient, an AMHS Remote Recipient and an unknown AMHS Remote Recipient.
<b>Description:</b>	<p>Originator OR11: Submit a single AMHS message requesting Delivery Reports containing the Body part BP01H to the « Local Distribution List » DL02. DL02 contains the Local AMHS Recipient OR12, the Remote Recipient OR01 and the unknown Remote Recipient OR08.</p>
<b>Expected results:</b>	<p>IUT ATS message server:</p> <ol style="list-style-type: none"><li>Receive and route the AMHS message to the « Local Distribution List » DL02.</li><li>Expand the Recipients of the DL02. Route and Deliver the AMHS message to the Local Recipient OR12. Transfer to the Remote message server to be delivered to the Remote Recipients OR01.</li><li>Receive, route and deliver to the Originating Recipient OR11 the Delivery Reports concerning the Recipients OR12, OR01 as well as the Non-Delivery Report concerning the unknown Recipient OR08.</li><li>Log the situation.(Verify the messages and Delivery Reports logging).</li></ol> <p>Auxiliary ATS message server:</p> <ol style="list-style-type: none"><li>Receive, route and deliver the AMHS message containing the Body part BP01H to the Recipient OR01.</li><li>Generate and transfer the Delivery Report concerning the Recipient OR01.</li><li>Generate and transfer the Non-Delivery Report concerning the unknown Recipient OR08.</li></ol> <p>Recipient OR01: Receive the AMHS message.</p> <p>Recipient OR12: Receive the AMHS message.</p> <p>Originator OR11: Receive the Delivery-Reports and the Non-Delivery Report.</p>

### 3.3.3.2 Remotely Generated Message Sent to Distribution List

**Test n°:** OSC-MS-09-CT-31

**Test Type:** Send an AFTN message from the Remote site to a Distribution List on the Local site containing one Local AMHS Recipient and an AFTN addressee in the AFTN Remote site with the AFTN Priority set to FF.

**Description:** Origin TTX1:  
Submit an AFTN message containing the text BP01 mapped onto the Body part BP01H, from the Remote site to the AFTN Addressee DLTT mapped onto the « Local Distribution List » DL01. DL01 contains the Local AMHS Recipient OR12, and the AFTN Addressee in the Remote site TTX1 mapped onto the AMHS Recipient OR01.

Set the AFTN Priority to FF to verify the test.

**Expected results:** IUT ATS message server:  
a) Receive the AMHS message intended to the « Local Distribution List » DL01.

b) Expand the « Local Distribution List » DL01.  
Deliver the AMHS message to the Local AMHS Recipient OR12  
Transfer the AMHS message to the Remote Gateway for delivery to the Recipient OR01.

c) Log the situation (Verify the messages logging).

AFTN/AMHS Gateway:

a) Receive and convert the AFTN message intended to the AFTN Addressee DLTT mapped onto the « Local Distribution List » DL01 into an AMHS message.

b) Receive and convert the AMHS message intended to the Recipient OR01 mapped onto the AFTN Addressee TTX1 into an AFTN message.

c) Convey the AFTN message to the Addressee TTX1.

Addressee TTX1:

Receive the AFTN message.  
Verify the AFTN Priority is set to FF.

Recipient OR12:

Receive the AMHS message.  
Verify the ATS-message-priority is set to FF.

<b>Test n°:</b>	OSC-MS-09-CT-41
<b>Test Type:</b>	Send an AMHS message from the Remote site to a Distribution List on the Local site containing one Local AMHS Recipient and an AMHS Recipient in the AMHS Remote site.
<b>Description:</b>	Originator OR02: Submit an AMHS message with the Body part BP01H to the « Local Distribution List » DL01 containing the Local AMHS Recipient OR12 and the Remote AMHS Recipient OR01.
<b>Expected results:</b>	IUT ATS message server: a) Receive and route the AMHS message to the « Local Distribution List » DL01.  b) Expand the « Local Distribution List » DL01 into the Recipient OR12 and the Recipient OR01.  c) Deliver the AMHS message to OR12.  d) Log the situation (Verify the messages logging).  Auxiliary ATS message server: a) Receive, route and transfer the AMHS message submitted by the Originator OR02, to the IUT message server to be routed to DL01.  a) Receive, route and deliver the AMHS message to the Recipient OR01.  Recipient OR12: Receive the AMHS message.  Recipient OR01: Receive the AMHS message.

### 3.3.4 Message Server Submission Tests

#### 3.3.4.1 Message submission

<b>Test n°:</b>	OSC-MS-10-CT-51
<b>Test Type:</b>	Send an AMHS message from a User Agent to a valid AMHS Recipient.
<b>Description:</b>	Originator OR11: Submit a single AMHS message containing the Body part BP01H to the Recipient OR01.
<b>Expected results:</b>	IUT ATS message server: a) Receive the AMHS message from the Originator OR11.  b) Route and deliver the AMHS message to the Recipient OR01.  c) Log the situation (Verify the message logging).  Recipient OR01: Receive the AMHS message containing the Body part BP01H.

#### 3.3.4.2 Probe submission

<b>Test n°:</b>	OSC-MS-11-CT-51
<b>Test Type:</b>	Send a probe message from a User Agent through the Message Server to a valid AMHS Recipient.
<b>Description:</b>	Originator OR11: Submit an AMHS probe message to the Recipient OR01.

**Expected results:**

IUT ATS message server:

- a) Receive route and deliver the AMHS probe message to the Recipient OR01.
- b) Receive, route and deliver the Report to the Originator OR11
- c) Log the situation (Verify the message and report logging).

Recipient OR01:

- a) Receive the AMHS probe message.
- b) Submit the Report to the IUT ATS message server to be delivered to the Originator OR11.

Originator OR11:

Receive the Report.

### 3.3.5 Message Server Delivery Tests

#### 3.3.5.1 Message Delivery

**Test n°:** OSC-MS-12-CT-51

**Test Type:** An AMHS Message Delivery to a valid AMHS Remote Recipient.

**Description:** Originator OR11:  
Submit an AMHS message to the Recipient OR01 containing the Body part BP01H, requesting Delivery Notification.

**Expected results:** IUT ATS message server:

- a) Receive, route and deliver the AMHS message to the Recipient OR01.
- b) Receive, route and deliver the Delivery Notification to the Originator OR11.
- c) Log the situation (Verify the message logging).

Recipient OR01:  
Receive the AMHS message containing the Body part BP01H.  
Generate and send the Delivery Notification to the Originator OR11.

Originator OR11:  
Receive a Delivery Notification indicating successful delivery.



### 3.3.5.2 Delivery Report Delivery

<b>Test n°:</b>	OSC-MS-13-CT-51
<b>Test Type:</b>	Send an AMHS message from a the Local User Agent to a valid AMHS Recipient leading to the delivery of a Delivery Report to the Local User Agent by the Message Server.
<b>Description:</b>	Originator OR11: Submit an AMHS message to the Recipient OR01 containing the Body part BP01H, requesting Delivery Report.
<b>Expected results:</b>	IUT message server: a) Receive, route and deliver the AMHS message to the Recipient OR01.  b) Generate, route and deliver the Delivery Report to the Originator OR11.  c) Log the situation (Verify the message and report logging).  Recipient OR01: Receive the AMHS message containing the Body part BP01H.  Originator OR11: Receive a Delivery Report.

### 3.3.5.3 Non Delivery Report Delivery

<b>Test n°:</b>	OSC-MS-14-CT-51
<b>Test Type:</b>	Send an AMHS message from a Local User Agent to an invalid (unknown) AMHS Recipient leading to the delivery of a Non Delivery Report to the Local User Agent.
<b>Description:</b>	Originator OR11: Submit an AMHS message containing the Body part BP01H to the unknown Remote Recipient OR08.
<b>Expected results:</b>	IUT message server: a) Receive the AMHS message from the Originator OR11.  b) Generate and Deliver the Non-Delivery Report to the Originator OR11.  c) Log the situation (Verify the message and report logging).  Originator OR11: Receive the Non-Delivery Report due to the unrecognized O/R name.

### 3.3.6 Message Server Message Store Access Tests

#### 3.3.6.1 Indirect Submission

<b>Test n°:</b>	OSC-MS-15-CT-51
<b>Test Type:</b>	User Agent Bind to the Message Store with User Password and subsequent Unbind.
<b>Description:</b>	User Agent: Attempt to bind to the Message Store specifying a valid User Password.
<b>Expected results:</b>	User Agent: The Bind to the Message Store should be successful.
<b>Test n°:</b>	OSC-MS-15-CT-52
<b>Test Type:</b>	User Agent Bind to the Message Store without User Password and subsequent Unbind.
<b>Description:</b>	Message Store: Defines a user on the Message Store without a User Password.  User Agent: Attempt to bind to the Messages Store without a User Password.
<b>Expected results:</b>	User Agent: The Bind to the Message Store should be successful
<b>Test n°:</b>	OSC-MS-15-CT-53
<b>Test Type:</b>	User Agent Bind to the Message Store using an Invalid User Password and subsequent Unbind.
<b>Description:</b>	User Agent: Attempt to bind to the Messages Store using an invalid User Password.
<b>Expected results:</b>	User Agent: The Bind to the Message Store should fail with an « Authentication Error ».

<b>Test n°:</b>	OSC-MS-15-CT-54
<b>Test Type:</b>	User Agent issues MS-Register operation changing User Password.
<b>Description:</b>	User Agent: - Issues an MS-Register operation to the Message Store changing the User Password details. - Unbind from the Message Store and attempt to Bind again using the new User Password.
<b>Expected results:</b>	User Agent: The bind to the message store should be successful the second time with the new User-Password.

### 3.3.6.2 Summary of Message Store

<b>Test n°:</b>	OSC-MS-16-CT-51
<b>Test Type:</b>	Send a request by the AMHS User Agent to the Message Server Message Store to retrieve a summary of the numbers and types of entries in the user's Message Store.
<b>Description:</b>	User Agent: Issue an MS-Summarise Operation to Message Store for all messages.  IUT Message Store: Ensure that there are at least 20 messages in the Message Store of various attributes such that the User Agent is able to identify and summarise them.
<b>Expected results:</b>	User Agent: Should correctly display the Summary Information for all messages and associated attributes in the Message Store.

### 3.3.6.3 Listing messages

**Test n°:** OSC-MS-17-CT-51

**Test Type:** Send a request by the AMHS User Agent to the Message Server Message Store to retrieve a list of messages in the user's Message Store by specifying selected criteria and the message attributes to be displayed.

**Description:** User Agent:  
Issue an MS-List Operation Message Store by specifying :  
- a selection of criteria to determine which entries is to be returned (the selection can be messages size, dates, Originators, Recipients...)  
- and attributes to indicate which information from the selected messages is to be returned in the result.

IUT Message Store:

Ensure that there are at least 20 messages in the Message Store of various attributes such that the User Agent is able to select criteria and to precise attributes to be returned.

**Expected results:** User Agent:  
Should correctly display the List of messages corresponding to the criteria selected with the set of attributes chosen to be returned.

**Test n°:** OSC-MS-17-CT-52

**Test Type:** Send a request by the AMHS User Agent to the Message Server Message Store to retrieve a list of messages in the user's Message Store by specifying neither criteria nor message attributes to be displayed.

**Description:** User Agent:  
Issue an MS-List Operation Message Store without specifying neither message selected criteria nor message attributes to be returned.

IUT Message Store:  
- Verify what are the default selected criteria and the default message attributes to be displayed.  
- Ensure that there are at least 20 messages in the Message Store of various attributes such that the default selected criteria can applied as well as the default message attributes to be displayed.

**Expected results:** User Agent:  
Should correctly display the List of messages corresponding to the default criteria with the set of default attributes.

### 3.3.6.4 Fetching a message

**Test n°:** OSC-MS-18-CT-51

**Test Type:** Send a request by the AMHS User Agent to the Message Server Message Store to fetch small messages (< 2K each) which have been submitted before by specifying selected criteria and message attributes to be returned.

**Description:** User Agent:  
- Issue an MS-Submit with 20 small messages (< 2K each) with different criteria,  
- issue an MS-Fetch by specifying selected criteria and message attributes to be returned.

**Expected results:** User Agent:  
Verify that:  
- all the messages to be fetched according to the selected criteria are displayed,  
- each message information displayed matches the message attributes specified.

**Test n°:** OSC-MS-18-CT-52

**Test Type:** Send a request by the AMHS User Agent to the Message Server Message Store to fetch one large « message » (more than 1 Mo) which have been submitted before.

**Description:** User Agent:  
- Perform an MS-Submit with a large message (more than 1 Mo),  
- Perform an MS-Fetch intended to this message following the ATS message server Delivery.

**Expected results:** User Agent:  
Verify the message has been fetched and check general message attributes are as expected.

**Test n°:** OSC-MS-18-CT-53

**Test Type:** Send a request by the AMHS User Agent to the Message Server Message Store to fetch one large « message » (with multiple Body parts) which have been submitted before.

**Description:**

User Agent:

- Submit one « large » message to the user's message store with multiple Body parts. (Specifically these should include a small IA5 Text, a large IA5 Text BP, a General Text BP and a bilaterally defined Extended Body part).
- After Delivery of the message, the User Agent should attempt to fetch the message from the Message Store.

**Expected results:**

User Agent:

Verify the message has been fetched and check general message attributes are as expected.

It should be also possible to examine all Body part submitted.

### 3.3.6.5 Deleting a message

**Test n°:** OSC-MS-19-CT-51

**Test Type:** The User Agent deletes an IPM from the Message Store before the content has been fetched.

**Description:** User Agent:  
- Submit a single AMHS message to the user Message Store with a single Body part.  
- Delete the AMHS message before it has been fetched.

**Expected results:** User Agent:  
Verify the message has been deleted from the Message Store.

**Test n°:** OSC-MS-19-CT-52

**Test Type:** The User Agent deletes an IPM from the Message Store where Receipt Notification is requested before the content has been fetched.

**Description:** User Agent:  
- Submit a single AMHS message to the user's Message Store with a single Body part and a Receipt Notification requested.  
- Delete the AMHS message from the Message Store without fetching.

**Expected results:** User Agent:  
Verify:  
- the message has been deleted from the Message Store and  
- a Non Receipt Notification has been generated indicating that the AMHS message has been discarded.

### 3.3.7 Message Server Abnormal Condition Tests

#### 3.3.7.1 Message non delivery

**Test n°:** OSC-MS-20-CT-51

**Test Type:** Send a message by the AMHS User Agent to a Distribution List causing a Report Non-Delivery failure due to « DL Expansion Prohibited ».

**Description:** Originator OR11:  
Submit a single AMHS message containing one Body part BP01H to a « Distribution List » DL01 requesting Delivery Report and « DL Expansion Prohibited ».

**Expected results:** Originator OR011:  
Receive a Delivery Report indicating message Non-Delivery due to « DL Expansion Prohibited ».

**Test n°:** OSC-MS-20-CT-52

**Description:** Send a message by the AMHS User Agent to a valid AMHS Recipient including an Expiring Date Indication. A Non-Delivery Report failure is generated due to the maximum time expired.

**Expected results:** Originator OR11:  
Submit an AMHS message at the time T to the valid Recipient OR01 containing the Body part BP01H.  
Set the Expiring date indication with the time T+ « some » secondes in order that the IUT ATS message server cannot process it on time.

**Test Type:** IUT ATS message server:

- a) Receive the message from the Originator OR11.
- b) Generate and Deliver a Non-Deliver Report to the Originator OR11.
- c) Log the situation (Verify the message and report logging).

Originator OR11:  
Receive the Non-Delivery Report due to the maximum time expired.



<b>Test n°:</b>	OSC-MS-20-CT-53
<b>Test Type:</b>	Send a message by the AMHS User Agent to an unrecognised AMHS Recipient. A Non-Delivery Report failure is thus generated.
<b>Description:</b>	Originator OR11: Submit an AMHS message containing the Body part BP01H to the unrecognized Recipient OR08. (Unknowwn in the IUT ATS message server).
<b>Expected results:</b>	IUT ATS message server: a) Receive the AMHS message from the Originator OR11.  b) Generate and Deliver to the Originator OR11 a Non Delivery Report due to the Recipient OR08 unknowwn.  c) Log the situation (Verify the message and report logging).  Originator OR11: Receive the Non Delivery Report due to the unrecognised Recipient OR08.

### 3.3.7.2 Distribution List Loop Detection

<b>Test n°:</b>	OSC-MS-21-CT-51
<b>Test Type:</b>	Send a message by the AMHS User Agent to a Distribution List being itself one of the list members.
<b>Description:</b>	Originator OR11: Submit an AMHS message with the Body part BP01H to the « Distribution List » DL03 containing the Recipient OR01 and DL03.
<b>Expected results:</b>	IUT ATS message server: a) Receive the AMHS message containing the Body part BP01H.  b) Generate and Deliver to the Originator OR11 the Non-Delivery Report.  c) Log the situation (Verify the message and report logging).  Originator OR11: Receive the Non-Delivery Report indicating « Loop Detected ».

### 3.3.7.3 Prohibited Use of Distribution List

<b>Test n°:</b>	OSC-MS-22-CT-51
<b>Test Type:</b>	Send a message by the AMHS User Agent to a Distribution List with DL-Expansion-Prohibited set to « prohibited ».
<b>Description:</b>	Originator OR11: Submit a single AMHS message containing the Body part BP01H to the Distribution List » DL01 configured with the element DL-Expansion-Prohibited set to « prohibited ».
<b>Expected results:</b>	IUT ATS message server: a) Receive the single AMHS message intended to the « distribution List » DL01.  b) Generate and Deliver a Non-Delivery Report due to the element DL-Expansion-Prohibited set to « prohibited ».  c) Log the situation (Verify the message and report logging).  Originator OR11: Receive the Non-Delivery Report due to the element DL-Expansion-Prohibited set to « prohibited ».

### 3.3.7.4 Distribution List containing a recipient which does not exist

**Test n°:** OSC-MS-23-CT-51

**Test Type:** Send a message to a Distribution List with one of the Recipient name which does not exist.

**Description:** Originator OR11:  
Submit a single AMHS message with Delivery Report request containing the Body part BP01H to the « Distribution List » DL04 with the valid Recipient OR01 and the unknown Recipient OR08.

**Expected results:** IUT ATS message server:

- a) Receive the single AMHS message containing the Body part BP01H.
- b) Expand the « Distribution List » DL04.
- c) Route and deliver the AMHS message to the Recipient OR01.
- d) Generate and deliver the Non Delivery Report concerning the unknown Recipient OR08.
- e) Log the situation (Verify the message and report logging).

Originator OR11:  
Receive the Non Delivery Report indicating delivery to OR01 and Non-Delivery to OR08.

### 3.3.7.5 Network Failure and Recovery

**Test n°:** OSC-MS-24-CT-31

**Test Type:** Send AMHS messages from the Local site to the AFTN Remote site when a transient network failure occurs.

**Description:** Originator OR11:  
Submit a single large AMHS message requesting Delivery Report containing two copies of Body part BP09 (message length : 1 Mb) to the Recipient OR01 mapped onto the Addressee TTX1.

Cause a temporary communication link failure between the IUT ATS message server and the AMHS/AFTN Gateway which allows recovery when the communication link is re-established.

**Expected results:**

IUT ATS message server:

a) Receive, route and transfer the large AMHS message while the temporary failure occurs to the Gateway.

b) Recover successfully the message transmission.

c) Receive from the AMHS/AFTN Gateway a Delivery Report and Deliver it to the Originator OR11.

d) Log the situation (network failure, recovery and store of the messages).

AMHS/AFTN Gateway:

a) Receive correctly the entirety of the large AMHS message.

b) Generate and transfer a Delivery Report to the IUT ATS message server.

c) Log the situation (temporary network failure, store of the messages).

Originator OR11:

Receive the Delivery Report.

<b>Test n°:</b>	OSC-MS-24-CT-41
<b>Test Type:</b>	Send AMHS messages from the Local site to the AMHS Remote site when a transient network failure occurs.
<b>Description:</b>	<p>Originator OR11: Submit a single large AMHS message requesting delivery report containing two copies of Body part BP09 (message length : 1 Mb) to the Recipient OR01.</p> <p>Cause a temporary communication link failure between the IUT ATS message server and the Auxiliary ATS message server which allows recovery when -the communication link is re-established.</p>
<b>Expected results:</b>	<p>IUT ATS message server:</p> <ul style="list-style-type: none"><li>a) Receive, route and transfer the large AMHS message while the temporary failure occurs to the Auxiliary ATS message server.</li><li>b) Recover successfully the message transmission.</li><li>c) Receive from the Auxiliary ATS message server a Delivery Report and Deliver it to the Originator OR11.</li><li>d) Log the situation (network failure, recovery and store messages).</li></ul> <p>Auxiliary ATS message server:</p> <ul style="list-style-type: none"><li>a) Receive correctly the entirety of the large AMHS message.</li><li>b) Generate and transfer a Delivery Report to the IUT ATS message server.</li><li>c) Log the situation (temporary network failure, store of the messages).</li></ul> <p>Originator OR11: Receive the Delivery Report.</p> <p>Recipient OR01: Receive the large AMHS message containing the two Body parts BP09.</p>

### 3.3.7.6 Unavailability of Remote System

**Test n°:** OSC-MS-25-CT-31

**Test Type:** Send an AMHS message from the Local site to an AFTN addressee which is initially unavailable.

**Description:** Originator OR11:  
Submit a single AMHS message containing the Body part BP01H to the Recipient OR01 mapped onto the Addressee TTX1 which is unavailable.

**Expected results:** IUT ATS message server:

- a) Receive the AMHS message from the Originator OR11.
- b) Receive the Non Delivery Report from the AMHS/AFTN Gateway and Deliver it to the Originator OR11.
- c) Log the situation (Verify the message and report logging).

AMHS/AFTN Gateway:

- a) Receive the single AMHS message from the IUT ATS message server.
- b) Generate a Non-Delivery Report and transfer it to the IUT ATS message server to be Delivered to the Originator OR11.

Originator OR11:  
Receive the Non-Delivery Report due to the unavailability of the Addressee TTX1.

<b>Test n°:</b>	OSC-MS-25-CT-41
<b>Test Type:</b>	Send an AMHS message from the Local site to the AMHS Remote Recipient which is initially unavailable.
<b>Description:</b>	Originator OR11: Submit a single AMHS message containing the Body part BP01H to the Recipient OR01 which is unavailable.
<b>Expected results:</b>	IUT ATS message server: a) Receive the AMHS message from the Originator OR11.  b) Receive the Non Delivery Report from the Auxiliary ATS message server and Deliver it to the Originator OR11.  c) Log the situation (Verify the message and report logging).  Auxiliary ATS message server: a) Receive the single AMHS message from the IUT ATS message server.  b) Generate a Non-Delivery Report and transfer it to the IUT ATS message server to be Delivered to the Originator OR11.  Originator OR11: Receive the Non-Delivery Report due to the unavailability of the Recipient OR01.

## 3.4 O/R Names and AFTN Addresses Definitions

### 3.4.1 O/R Name

#### 3.4.1.1 Local Site

<b>OR11</b>			
<b>ORName Attributes</b>	<b>Support</b>	<b>Value</b>	<b>Constraints/Notes</b>
Country Name	M	(System specific)	ISO 3166 Alpha-2 Printable String
Administration Domain Name	M	(SPACE or system specific)	Max. 16 Characters
Private Domain Name	M	(System specific)	Max. 16 Characters
Organization Name	M	ACCESS	Max. 64 Characters
Personal Name	M	MARTIN	Max. 64 Characters
Surname	M		Max. 40 Characters
GivenName	O	G	Max. 16 Characters
Initials	O		Max. 5 Characters
Generation	-		Max. 3 Characters
Qualifier			
Organizational Unit	O	Marketing Division	Max. 4 Occurrences Max. 32 Chars each
Domain-Defined Attributes	O		Max. 4 Occurrences
Type	M		Max. 8 Characters
Value	M		Max. 128 Characters
Common Name	O		Max. 128 Characters
<b>Maps onto AFTN Address:</b>		<b>TTY1</b>	



<b>OR12</b>			
<b>ORName Attributes</b>	<b>Support</b>	<b>Value</b>	<b>Constraints/Notes</b>
Country Name	M	(System specific)	ISO 3166 Alpha-2 Printable String
Administration Domain Name	M	(SPACE or system specific)	Max. 16 Characters
Private Domain Name	M	(System specific)	Max. 16 Characters
Organization Name	M	AFTN	Max. 64 Characters
Personal Name	M		Max. 64 Characters
Surname	M		Max. 40 Characters
GivenName	O		Max. 16 Characters
Initials	O		Max. 5 Characters
Generation	-		Max. 3 Characters
Qualifier			
Organizational Unit	O	USERAFY2	Max. 4 Occurrences Max. 32 Chars each
Domain-Defined Attributes	O		Max. 4 Occurrences
Type	M		Max. 8 Characters
Value	M		Max. 128 Characters
Common Name	O		Max. 128 Characters
<b>Maps onto AFTN Address:</b>		<b>TTY2</b>	

<b>OR18</b>			
<b>ORName Attributes</b>	<b>Support</b>	<b>Value</b>	<b>Constraints/Notes</b>
Country Name	M	(System specific)	ISO 3166 Alpha-2 Printable String
Administration Domain Name	M	(SPACE or system specific)	Max. 16 Characters
Private Domain Name	M	(System specific)	Max. 16 Characters
Organization Name	M	ACCESS	Max. 64 Characters
Personal Name	M		Max. 64 Characters
Surname	M	Smith	Max. 40 Characters
GivenName	O	Georges	Max. 16 Characters
Initials	O		Max. 5 Characters
Generation	-		Max. 3 Characters
Qualifier			
Organizational Unit	O	Sales Department	Max. 4 Occurrences Max. 32 Chars each
Domain-Defined	O		Max. 4 Occurrences
Attributes			
Type	M		Max. 8 Characters
Value	M		Max. 128 Characters
Common Name	O		Max. 128 Characters
<b>May map onto AFTN (depending on the site and the type of test)</b>			
<b>Address:</b>		<b>TTY8</b>	

## 3.4.1.2 Remote Site

<b>OR01</b>			
<b>ORName Attributes</b>	<b>Support</b>	<b>Value</b>	<b>Constraints/Notes</b>
Country Name	M	(System specific)	ISO 3166 Alpha-2 Printable String
Administration Domain Name	M	(SPACE or system specific)	Max. 16 Characters
Private Domain Name	M	(System specific)	Max. 16 Characters
Organization Name	M	ACCESS	Max. 64 Characters
Personal Name	M		Max. 64 Characters
Surname	M	SCHMITT	Max. 40 Characters
GivenName	O		Max. 16 Characters
Initials	O		Max. 5 Characters
Generation	-		Max. 3 Characters
Qualifier			
Organizational Unit	O	Management Department	Max. 4 Occurrences Max. 32 Chars each
Domain-Defined	O		Max. 4 Occurrences
Attributes			
Type	M		Max. 8 Characters
Value	M		Max. 128 Characters
Common Name	O		Max. 128 Characters
<b>Maps onto AFTN Address:</b>		<b>TTX1</b>	

<b>OR02</b>			
<b>ORName Attributes</b>	<b>Support</b>	<b>Value</b>	<b>Constraints/Notes</b>
Country Name	M	(System specific)	ISO 3166 Alpha-2 Printable String
Administration Domain Name	M	(SPACE or system specific)	Max. 16 Characters
Private Domain Name	M	(System specific)	Max. 16 Characters
Organization Name	M	AFTN	Max. 64 Characters
Personal Name	M		Max. 64 Characters
Surname	M		Max. 40 Characters
GivenName	O		Max. 16 Characters
Initials	O		Max. 5 Characters
Generation	-		Max. 3 Characters
Qualifier			
Organizational Unit	O	USERAFX2	Max. 4 Occurrences Max. 32 Chars each
Domain-Defined Attributes	O		Max. 4 Occurrences
Type	M		Max. 8 Characters
Value	M		Max. 128 Characters
Common Name	O		Max. 128 Characters
<b>Maps onto AFTN Address:</b>		<b>TTX2</b>	

<b>OR08</b>			
<b>ORName Attributes</b>	<b>Support</b>	<b>Value</b>	<b>Constraints/Notes</b>
Country Name	M	(System specific)	ISO 3166 Alpha-2 Printable String
Administration Domain Name	M	(SPACE or system specific)	Max. 16 Characters
Private Domain Name	M	(System specific)	Max. 16 Characters
Organization Name	M	ACCESS	Max. 64 Characters
Personal Name	M		Max. 64 Characters
Surname	M	Durand	Max. 40 Characters
GivenName	O		Max. 16 Characters
Initials	O		Max. 5 Characters
Generation	-		Max. 3 Characters
Qualifier			
Organizational Unit	O	Sales Department	Max. 4 Occurrences Max. 32 Chars each
Domain-Defined Attributes	O		Max. 4 Occurrences
Type	M		Max. 8 Characters
Value	M		Max. 128 Characters
Common Name	O		Max. 128 Characters
<b>May map onto AFTN (depending on the site and the type of test)</b>			
<b>Address:</b>		<b>TTX8</b>	

### 3.4.2 AFTN Addresses

AFTN Address ref.	8-Character AFTN Address
TTY1	USERAFY1
TTY2	USERAFY2
TTY7	USERAFY7
TTY8	USERAFY8
TTY9	USERAFY9
TTY100 to TTY149	USERA100 to USERA149
TTX1	USERAFX1
TTX2	USERAFX2
TTX8	USERAFX8
DLTT	USERDL01

### 3.4.3 Distribution Lists

<b>DL01</b>			
ORName Attributes	Support	Value	Constraints/Notes
Country Name	M	(System specific)	ISO 3166 Alpha-2 Printable String
Administration Domain Name	M	(SPACE or system specific)	Max. 16 Characters
Private Domain Name	M	(System specific)	Max. 16 Characters
Organization Name	M	ACCESS	Max. 64 Characters
Personal Name	M		Max. 64 Characters
Surname	M	Valid_1	Max. 40 Characters
GivenName	O		Max. 16 Characters
Initials	O		Max. 5 Characters
Generation	-		Max. 3 Characters
Qualifier			
Organizational Unit	O	Sales Department	Max. 4 Occurrences Max. 32 Chars each
Domain-Defined Attributes	O		Max. 4 Occurrences
Type	M		Max. 8 Characters
Value	M		Max. 128 Characters
Common Name	O		Max. 128 Characters
<b>DL Members:</b>		OR12 (Local site)	
		OR01 (Remote site)	
<b>Maps onto AFTN Address:</b>		DLTT	

<b>DL02</b>			
<b>ORName Attributes</b>	<b>Support</b>	<b>Value</b>	<b>Constraints/Notes</b>
Country Name	M	(System specific)	ISO 3166 Alpha-2 Printable String
Administration Domain Name	M	(SPACE or system specific)	Max. 16 Characters
Private Domain Name	M	(System specific)	Max. 16 Characters
Organization Name	M	ACCESS	Max. 64 Characters
Personal Name	M		Max. 64 Characters
Surname	M	Unknown_1	Max. 40 Characters
GivenName	O		Max. 16 Characters
Initials	O		Max. 5 Characters
Generation	-		Max. 3 Characters
Qualifier			
Organizational Unit	O	Sales Department	Max. 4 Occurrences Max. 32 Chars each
Domain-Defined Attributes	O		Max. 4 Occurrences
Type	M		Max. 8 Characters
Value	M		Max. 128 Characters
Common Name	O		Max. 128 Characters
<b>DL Members:</b>		<b>OR12 (Local site)</b>  <b>OR01 (Remote site)</b>  <b>OR08 (Remote site)</b>	

<b>DL03</b>			
<b>ORName Attributes</b>	<b>Support</b>	<b>Value</b>	<b>Constraints/Notes</b>
Country Name	M	(System specific)	ISO 3166 Alpha-2 Printable String
Administration Domain Name	M	(SPACE or system specific)	Max. 16 Characters
Private Domain Name	M	(System specific)	Max. 16 Characters
Organization Name	M	ACCESS	Max. 64 Characters
Personal Name	M		Max. 64 Characters
Surname	M	Loop	Max. 40 Characters
GivenName	O		Max. 16 Characters
Initials	O		Max. 5 Characters
Generation	-		Max. 3 Characters
Qualifier			

Organizational Unit	O	<b>Sales Department</b>	Max. 4 Occurrences Max. 32 Chars each
Domain-Defined	O		Max. 4 Occurrences
Attributes			
Type	M		Max. 8 Characters
Value	M		Max. 128 Characters
Common Name	O		Max. 128 Characters
<b>DL Members:</b>		<b>OR01 (Remote site)</b> <b>DL03</b>	



<b>DL04</b>			
<b>ORName Attributes</b>	<b>Support</b>	<b>Value</b>	<b>Constraints/Notes</b>
Country Name	M	(System specific)	ISO 3166 Alpha-2 Printable String
Administration Domain Name	M	(SPACE or system specific)	Max. 16 Characters
Private Domain Name	M	(System specific)	Max. 16 Characters
Organization Name	M	ACCESS	Max. 64 Characters
Personal Name	M		Max. 64 Characters
Surname	M	Unknown_2	Max. 40 Characters
GivenName	O		Max. 16 Characters
Initials	O		Max. 5 Characters
Generation	-		Max. 3 Characters
Qualifier			
Organizational Unit	O	Sales Department	Max. 4 Occurrences Max. 32 Chars each
Domain-Defined	O		Max. 4 Occurrences
Attributes			
Type	M		Max. 8 Characters
Value	M		Max. 128 Characters
Common Name	O		Max. 128 Characters
<b>DL Members:</b>		<b>OR01 (Remote site)</b>	
		<b>OR08 (Remote site)</b>	

### 3.4.4 Body part Definition

<b>Body Part:</b>	<b>BP01</b>
<b>Type:</b>	IA5
<b>Content:</b>	Five lines of the characters A to Z

<b>Body Part:</b>	<b>BP01H</b>
<b>Type:</b>	IA5
<b>Content:</b>	<p>Five lines of the characters A to Z preceded by an ATS-Message-Header:</p> <p style="padding-left: 40px;">(SOH) [may be typed in, if required, using the Alt-1 keys in an MS-DOS or Windows environment]</p> <p style="padding-left: 40px;">PRI:[space][priority as specified in test description]</p> <p style="padding-left: 40px;">FT:[space][valid date-time-group on six characters DDHHMM]</p> <p style="padding-left: 40px;">OHI:[space][IA-5 character string with 54 char. max. (optional)]</p> <p style="padding-left: 40px;">(blank line)</p> <p style="padding-left: 40px;">(STX) [may be typed in, if required, using the Alt-2 keys in an MS-DOS or Windows environment]</p>

<b>Body Part:</b>	<b>BP02 *</b>
<b>Type:</b>	IA5
<b>Content:</b>	Lines of characters A to Z and 0 to 9 (Max. 80 per line), producing a 100Kbyte file.

Used in the test: OSC-GW-08-CT-21

<b>Body Part:</b>	<b>BP03 *</b>
<b>Type:</b>	Binary
<b>Content:</b>	Binary File

Used in the test: OSC-GW-21-CT-21

<b>Body Part:</b>	<b>BP04 *</b>
<b>Type:</b>	IA5
<b>Content:</b>	Five lines of the characters A to Z without the ATS-Message-Header

Used in the test: OSC-GW-23-CT-21

<b>Body Part:</b>	<b>BP31 to BP35 *</b>
<b>Type:</b>	IA5
<b>Content:</b>	Five lines of IA5 characters.

\* Used in the test: OSC-GW-22-CT-21

<b>Body Part:</b>	<b>BP05H *</b>
<b>Type:</b>	IA5
<b>Content:</b>	<p>Five lines of the characters A to Z, preceded by an ATS-Message-Header:</p> <p style="padding-left: 40px;">(SOH) [may be typed in, if required, using the Alt-1 keys in an MS-DOS or Windows environment]</p> <p style="padding-left: 40px;">FT:[space][valid date-time-group on six characters DDHHMM]</p> <p style="padding-left: 40px;">OHI:[space][IA-5 character string with 54 char. max. (optional)]</p> <p style="padding-left: 40px;">(blank line)</p> <p style="padding-left: 40px;">(STX) [may be typed in, if required, using the Alt-2 keys in an MS-DOS or Windows environment]</p>

\* Used in the test: OSC-GW-24-CT-21

<b>Body Part:</b>	<b>BP06H *</b>
<b>Type:</b>	IA5
<b>Content:</b>	<p>Five lines of the characters A to Z, preceded by an ATS-Message-Header:</p> <p style="padding-left: 40px;">(SOH) [may be typed in, if required, using the Alt-1 keys in an MS-DOS or Windows environment]</p> <p style="padding-left: 40px;">PRI:[space][priority as specified in test description]</p> <p style="padding-left: 40px;">OHI:[space][IA-5 character string with 54 char. max. (optional)]</p> <p style="padding-left: 40px;">(blank line)</p> <p style="padding-left: 40px;">(STX) [may be typed in, if required, using the Alt-2 keys in an MS-DOS or Windows environment]</p>

\* Used in the test: OSC-GW-24-CT-22

<b>Body Part:</b>	<b>BP07H *</b>
<b>Type:</b>	IA5
<b>Content:</b>	<p>Five lines of the characters A to Z and the character « ; », preceded by an ATS-Message-Header:</p> <p>(SOH) [may be typed in, if required, using the Alt-1 keys in an MS-DOS or Windows environment]</p> <p>PRI:[space][priority as specified in test description]</p> <p>FT:[space][valid date-time-group on six characters DDHHMM]</p> <p>OHI:[space][IA-5 character string with 54 char. max. (optional)]</p> <p>(blank line)</p> <p>(STX) [may be typed in, if required, using the Alt-2 keys in an MS-DOS or Windows environment]</p>

\* Used in the test: OSC-GW-25-CT-21

<b>Body Part:</b>	<b>BP08H *</b>
<b>Type:</b>	IA5
<b>Content:</b>	<p>Sixty five lines of 69 characters: A to Z, each line ending with (CR) (LF), preceded by an ATS-Message-Header:</p> <p>(SOH) [may be typed in, if required, using the Alt-1 keys in an MS-DOS or Windows environment]</p> <p>PRI:[space][priority as specified in test description]</p> <p>FT:[space][valid date-time-group on six characters DDHHMM]</p> <p>OHI:[space][IA-5 character string with 54 char. max. (optional)]</p> <p>(blank line)</p> <p>(STX) [may be typed in, if required, using the Alt-2 keys in an MS-DOS or Windows environment]</p>

\* Used in the test: OSC-GW-06-CT-21

<b>Body Part:</b>	<b>BP09 *</b>
<b>Type:</b>	IA5
<b>Content:</b>	Lines of characters A to Z and 0 to 9 (Max. 80 per line), producing a 500Kbyte file.

\* Used in the test: OSC-MS-24-CT-31