



# **Enabler Test Specification (Interoperability) for MMS 1.3**

## **Candidate Version – 25 Apr 2006**

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Open Mobile Alliance  
OMA-ETS-MMS-INT-V1\_3-20060425-C

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# 1 Scope

This document describes in detail available interoperability test cases for MMS Enabler 1.3

<http://www.openmobilealliance.org/>.

The MMS test cases are split in two categories, conformance and interoperability test cases.

The conformance test cases are aimed to verify the adherence to normative requirements described in the technical specifications and are defined in [MMSETSCON].

The interoperability test cases are aimed to verify that implementations of the specifications work satisfactory.

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<http://www.openmobilealliance.org/>

## 3 Terminology and Conventions

### 3.1 Conventions

The key words “MUST”, “MUST NOT”, “REQUIRED”, “SHALL”, “SHALL NOT”, “SHOULD”, “SHOULD NOT”, “RECOMMENDED”, “MAY”, and “OPTIONAL” in this document are to be interpreted as described in [RFC2119].

All sections and appendixes, except “Scope” and “Introduction”, are normative, unless they are explicitly indicated to be informative.

The following numbering scheme is used:

xxx-y.z-con-number where:

xxx	Name of enabler, e.g. MMS or Browsing
y.z	Version of enabler release, e.g. 1.2 or 1.2.1
con	Indicating this test is a conformance test case
number	Leap number for the test case

Or

xxx-y.z-int-number where:

xxx	Name of enabler, e.g. MMS or Browsing
y.z	Version of enabler release, e.g. 1.2 or 1.2.1
int	Indicating this test is a interoperability test case
number	Leap number for the test case

### 3.2 Definitions

#### Client A

The MMS client, which sends a multimedia message (Mobile Originating)

#### Client B

The MMS client, which receives a multimedia message (Mobile Terminating)

#### Client X

The MMS client representative of a unique implementation. In testing, can take a role of either client A or client B

#### Client Y

The MMS client representative of a unique implementation. In testing, can take a role of either client A or client B

#### Multimedia Messaging Service (MMS)

A system application by which a client is able to provide a messaging operation with a variety of media types.

#### MMS Client

The MMS service endpoint located on the client device.

**MMS Proxy-Relay**

A server, which provides access to various messaging systems.

**MMS Server**

A server that provides storage and operational support for the MMS service.

**MMS SMIL**

A SMIL subset defined for MMS purposes.

**Reasonably Presented**

“Something intelligible, which is not necessarily a close reflection of the author’s original intentions.” From the World Wide Web Consortium, W3C

**Reference Content**

Specified text, audio and images used in test cases. Reference content shall be available with the Enabler Test Specification (ETS).

**Textually Correct**

The property of a text, being word for word and letter by letter, presented in the same manner as originally written. There are no specific demands on identical font, color or size of presented text.

**Transaction**

One or more PDU exchanges that collectively are considered logically separate from other PDU exchanges.

## 3.3 Abbreviations

AMR	Adaptive Multi Rate
Email	Electronic mail
GIF	Graphics Interchange Format
HTTP	Hyper text Transfer Protocol
EICS	Enabler Implementation Conformance Statement
JPG	Joint Photographic (Experts') Group
MIME	Multipurpose Internet Mail Extensions
MM	Multimedia Message
MMS	Multimedia Messaging Service
MMSC	MMS Proxy/Server
MS	Mobile Station
MSISDN	Mobile Station ISDN Number
NAS	Network Access Point
OMA	Open Mobile Alliance
OTA	Over The Air
PDU	Protocol Data Unit
PIM	Personal Information Management
SMIL	Synchronised Multimedia Integration Language
SMS	Short Message Service
US-ASCII	American Standard Code for Information Interchange, 7-bit encoding form.
UTF-8	Unicode Transformation Format, 8-bit encoding form.
UTF-16	Unicode Transformation Format, 16-bit encoding form.

WAP	Wireless Application Protocol
WBMP	Wireless Bit Map
13k	13k speech codec
H.263	ITU video coding standard
MPEG4	Moving Picture Experts Group 4 standard
QCIF	Quarter Common Intermediate Format

## 4 Introduction

The purpose of this document is to provide interoperability test cases for MMS Enabler Release 1.3.

The intention of this test specification is to test interoperability between MMS implementations on MMS protocol and MMS content level and hence the test cases do not address the specific transport protocols (e.g. WAP 1.2.1 or HTTP).

### 4.1 Test Objects

Test objects can be the following:

- Client A, which originates messages
- Client B, which receives messages. Client B is a role, not a physical client. There may be several clients taking on the role of Client B in some test cases. Client B may also be an email client.
- MMSC Server, which is forwarding messages from Client A to Client B(s) and/or to Email recipient(s) and Email sender to Client B. During client-to-client testing, the MMSC is not a test object.
- Email recipient, which is a combination of an email server and an email program. These are used to receive messages. Email recipient is a role, not a physical client. There may be several clients taking on the role of email recipient in some test cases.
- Email sender, which is a combination of an email server and an email program. These are used to originate messages.

Each separate test case specifies the test objects for that test case.

### 4.2 Test case selection

The tests associated with mandatory and optional features are selected based on the appropriate EICS (Enabler Implementation Conformance Statement). If a feature is marked as supported, the corresponding test cases **MUST** be included. Selection of test cases is performed as follows:

Client-to-Client testing (between Client X and Client Y)

1. Select the test cases for Client X in a role of test object Client A (Originating messages)
2. Select the test cases for Client Y in a role of test object Client B (Terminating messages)
3. Compare the results of above selections and select the test cases applicable for both. Mark these test cases as applicable in the test report for this scenario.
4. Select the test cases for Client Y in a role of test object Client A (Originating messages)
5. Select the test cases for Client X in a role of test object Client B (Terminating messages)
6. Compare the results of above selections and select the test cases applicable for both. Mark these test cases as applicable in the test report for this scenario.
7. The total test scope between Client X and Client Y is defined as a sum of above steps 3 and 6.

Client-to-Server testing (between Client X and MMSC Z)

1. Select the test cases for Client X in a role of test object Client A (Originating messages)
2. Select the test cases for Client X in a role of test object Client B (Terminating messages)

3. Select the test cases for the test object MMSC Z
4. Compare the results of above three selections and select the test cases applicable for all three. Mark these test cases as applicable in the test report for this scenario.

## 4.3 Test procedures

Tests are always performed pair-wise between test objects (i.e. a client of implementation X is tested against a client of implementation Y or clients of implementation X are tested against a MMSC of implementation Z).

### 4.3.1 Test case execution

Test cases marked as applicable are executed in the order of the test report. Testing of the test object is deemed completed when all applicable test cases in the test report have been executed and the result of each test case has been recorded.

### 4.3.2 Addressing

- MSISDN numbers are used to identify clients. The international format for these numbers is always used, i.e. +1 234 567890
- Email addressing [RFC 2822] is used to identify email recipients. The address is on the format: Id@domain.

### 4.3.3 Reference Content

Reference content is specified text, video, audio and images and other content used in test cases. Reference content shall be made available with the Enabler Test Specification. Many test cases have specified the content file to be used.

When a client supports loading of such content and subsequent use of it in MMS, this content SHALL be used.

In case client does not support loading of content and subsequent use of it in MMS, alternative means of populating the test case MAY be used. If such content is used, it should be retained and made available with the test report.

Content should be pre-loaded into clients and email recipients beforehand. Optionally, the reference content can be provided by an external media, e.g. CD or a server.

## 5 MMS INTEROPERABILITY TEST CASES

### 5.1 CLIENT TO CLIENT

The tests in this section are performed in order to test interoperability between two clients of different brands. The following figure shows the set-up and principle for the tests

Client A → Test Environment (inc. MMSC) → Client B

- Messages are always sent from Client A
- Test environment will deliver a notification to Client B
- The Client B will retrieve the message

Tests are performed between two clients. In testing, one client acts first as a Client A and another client as a Client B. When all applicable test cases have been performed in this scenario, the roles will be interchange and the applicable test cases for this scenario will be executed.

The test environment in use (inc. MMSC) is considered be transparent to message content, i.e. content adaptation SHOULD not take place.

## 5.1.1 Message

### 5.1.1.1 General

#### 5.1.1.1.1 MMS-1.3-int-102 - SMIL layout portrait with text above the image

##### 5.1.1.1.2

Test Case Id	MMS-1.3-int-102
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that messages with SMIL layouts, here portrait with text above the image, is correctly sent from Client A to Client B and that the received message is reasonably presented.
Specification Reference	[MMSCONF] Chapter 8
SCR Reference	MMSCONF-MED-C-025
Tool	
Test Code	
Preconditions	-Client A Capability: Ability to create portrait layout  -Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: In the message body, use portrait layout, enter text as in file Generic_Text.txt object on top and add image file/object JPG80x60.jpg below.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message. A layout is used where text is above the image and both image and text objects are reasonably presented.

**5.1.1.1.3 MMS-1.3-int-103 - SMIL layout portrait with text below the image**

Test Case Id	MMS-1.3-int-103
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that messages with SMIL layouts, here portrait with text below the image, is correctly sent from Client A to Client B and that the received message is reasonably presented.
Specification Reference	[MMSCONF] Chapter 8
SCR Reference	MMSCONF-MED-C-025
Tool	
Test Code	
Preconditions	-Client A Capability: Ability to create portrait layout  -Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: In the message body, use portrait layout, add image file/object JPG80x60.jpg on top and enter text as in file Generic_Text.txt below.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message. A layout is used where text is below the image and both image and text objects are reasonably presented.

**5.1.1.1.4 MMS-1.3-int-104 - SMIL layout landscape with text to the left of the image**

Test Case Id	MMS-1.3-int-104
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that messages with SMIL layouts, here landscape with text to the left of the image, is correctly sent from Client A to Client B and that the received message is reasonably presented.
Specification Reference	[MMSCONF] Chapter 8
SCR Reference	MMSCONF-MED-C-025
Tool	
Test Code	
Preconditions	-Client A Capability: Ability to create landscape layout  -Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: In the message body, use landscape layout, enter text as in file Generic_Text.txt object to the left and add image file/object JPG80x60.jpg to the right.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message. A layout is used where text is to the left of the image and both image and text objects are reasonably presented.

**5.1.1.1.5 MMS-1.3-int-105 - SMIL layout landscape with text to the right of the image**

Test Case Id	MMS-1.3-int-105
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that messages with SMIL layouts, here landscape with text to the right of the image, is correctly sent from Client A to Client B and that the received message is reasonably presented.
Specification Reference	[MMSCONF] Chapter 8
SCR Reference	MMSCONF-MED-C-025
Tool	
Test Code	
Preconditions	-Client A Capability: Ability to create landscape layout  -Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: In the message body, use landscape layout, add image file/object JPG80x60.jpg to the left enter text as in file Generic_Text.txt object to the right.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message. A layout is used where text is to the right of the image and both image and text objects are reasonably presented.

**5.1.1.1.6 MMS-1.3-int-106 - Multiple objects in same page**

Test Case Id	MMS-1.3-int-106
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that multiple objects (one image, one text and one audio file) are correctly sent from Client A to Client B and that all contents of the received message are reasonably presented.
Specification Reference	[MMSCONF] Chapter 7.1.7
SCR Reference	MMSCONF-MED-C-023
Tool	
Test Code	
Preconditions	-Client A Capability: Subject with UTF-8 character set  -Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: In the message body, create one page and enter the text "Hello World", add the image JPG80x60.jpg file/object and add the file/object (either audio1NB.amr or audio1.qcp).</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and all contents of the received message are reasonably presented in one page.

**5.1.1.1.7 MMS-1.3-int-107 - Multiple pages**

Test Case Id	MMS-1.3-int-107
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that multiple pages are correctly sent from Client A to Client B and that all pages are reasonably presented in the correct order.
Specification Reference	[MMSCONF] Chapter 7.1.7
SCR Reference	MMSCONF-MED-C-023
Tool	
Test Code	
Preconditions	-Client A Capability: Ability to create multiple pages  -Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: In the message body, create 10 pages (or as many as the client allows, if less than 10), adding the files/objects images GIF1.gif through GIF10.gif to these pages as applicable, with one image per page.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and all pages are reasonably presented in the correct order.

**5.1.1.1.8 MMS-1.3-int-108 - Multiple pages with page timing and time dependent content**

Test Case Id	MMS-1.3-int-108
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that multiple pages and objects with page timing are correctly sent from Client A to Client B and that all pages and objects are reasonably presented in the correct order. The timing of the pages follows the specified values or client default values.
Specification Reference	[MMSCONF] Chapter 7.1.7
SCR Reference	MMSCONF-MED-C-023
Tool	
Test Code	
Preconditions	-Client A Capability: Ability to create multiple pages  -Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: In the message body, create the following three pages:<ul style="list-style-type: none"><li>- Page 1, enter text as in file Generic_Text.txt, add the file/object JPG80x60.jpg, add the file/object (either audio1NB.amr or audio1.qcp) and specify page timing to 3 seconds if applicable.</li><li>- Page 2, enter the text as in file TEXT_US-ASCII.txt, add the file/object GIF80x60.gif, add the file/object (either audio2NB.amr or audio2.qcp) and specify page timing to 5 seconds if applicable.</li><li>- Page 3, enter the text Generic_Text.txt, add the file/object WBMP_80x60.wbmp, add the file/object (either audio3NB.amr or audio3.qcp) and specify page timing to 5 seconds if applicable.</li></ul></li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and all pages and objects are reasonably presented in the correct order. The timing of the pages follows the specified values or Client A default values.

**5.1.1.1.9 MMS-1.3-int-109 - Multiple pages with page timing**

Test Case Id	MMS-1.3-int-109
Test Object	Client A and Client B
Test Case Description	<p>The purpose is to verify that messages with different SMIL page timing can be sent, received and reasonably presented. This message contains 4 different pages and page times:</p> <ul style="list-style-type: none"> <li>- Page 1 with page timing 100 ms or client minimum</li> <li>- Page 2 with 5 seconds page timing</li> <li>- Page 3 with page time 20 seconds or client maximum</li> <li>- Page 4 with no page timing</li> </ul> <p>Note: Since the last page of a SMIL presentation can be shown indefinitely on a client until further actions, this fourth page is only used for delimitating the period of time that page 3 is displayed. It is then possible to verify that the timing of page 3 received by Client B is the same that was set by Client A.</p>
Specification Reference	[MMSCONF] Chapter 7.1.7
SCR Reference	MMSCONF-MED-C-023
Tool	
Test Code	
Preconditions	<p>-Client A Capability: Ability to specify different SMIL page timings and support multiple pages with images</p> <p>-Client B</p>
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM header: To-field is set to Client B.</li> <li>3. In MM content: In the message body, create the following four pages: <ul style="list-style-type: none"> <li>- Page 1, enter the text "Page 1" and specify timing to 100 ms or client minimum.</li> <li>- Page 2, add the file/object JPG80x60.jpg and specify timing to 5 seconds.</li> <li>- Page 3, enter the text "Page 3" and specify timing to 20 seconds or client maximum.</li> <li>- Page 4, add the file/object JPG80x60.jpg.</li> </ul> </li> <li>4. In Client A, send MM to Client B.</li> <li>5. In Client B, receive and open the MM.</li> <li>6. Verify the pass criteria below.</li> </ol>
Pass Criteria	Client B has received the message and the received message is reasonably presented. The timing of the pages follows the specified values.

**5.1.1.1.10 MMS-1.3-int-111 - Subject field with UTF8 encoding**

Test Case Id	MMS-1.3-int-111
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that a subject field encoded in UTF-8 correctly sent from Client A to Client B and that the message subject is textually correct.
Specification Reference	MMSENC Table 1, Table 3, Table 5
SCR Reference	MMSE-C-025, MMSE-C-046, MMSE-C-067
Tool	
Test Code	
Preconditions	-Client A Capability: UTF-8 charset  -Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: Subject-field is set to the character string given in the reference content file "Short_Text_UTF-8.txt" and the encoding is set to UTF-8. (Alternative characters may be substituted where necessary as described in the reference content document).</li><li>3. In MM content: In the message text part, enter the text "Hello World".</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the message subject is textually correct.

**5.1.1.1.11 MMS-1.3-int-147 - Content Rich - Message with multiple slides and content**

Test Case Id	MMS-1.3-int-147
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message in Content Rich Content Class with multiple content and a size under 600k can be sent from Client A to Client B and that the received message is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7.1.9.2
SCR Reference	MMSCONF-RTX-C-002
Tool	
Test Code	
Preconditions	-Client A Content Class: Content Rich  -Client B  -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: In the message body, create the following three pages:<ul style="list-style-type: none"><li>- Page 1, enter text as in file Generic_Text.txt, add the file/object JPG1600x1200.jpg, add the file/object EnhancedAACplusAudio.aac and specify page.</li><li>- Page 2, enter the text as in file USASCII.txt, add the file/object ContentRich.svg, add the file/object EnhancedAACplusAudio2.aac.</li><li>- Page 3, enter the text Generic_Text.txt, add the file/object VideoRich300k.3gp.</li></ul></li><li>4. In client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the received message with its content is reasonable presented.

## 5.1.2 Content

### 5.1.2.1 Text

#### 5.1.2.1.1 MMS-1.3-int-112 - Text with US-ASCII encoding

Test Case Id	MMS-1.3-int-112
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that a text object with US-ASCII encoding is correctly sent from Client A to Client B and that the received message is textually correct.
Specification Reference	[MMSCONF] Chapter 7.1.8
SCR Reference	MMSCONF-MED-C-002
Tool	
Test Code	
Preconditions	-Client A Supports ASCII encoding when creating messages -Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: In the message body, enter text as in file Text_us-ascii.txt.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the received message is textually correct.

**5.1.2.1.2 MMS-1.3-int-113 - Text with UTF-8 encoding**

Test Case Id	MMS-1.3-int-113
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that a text object with UTF-8 encoding is correctly sent from Client A to Client B and that the received message is textually correct.
Specification Reference	[MMSCONF] Chapter 7.1.8
SCR Reference	MMSCONF-MED-C-003
Tool	
Test Code	
Preconditions	-Client A  Supports utf-8 encoding when creating messages  -Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: In the message body, enter text as in file Text_UTF-8.txt. (Alternative characters may be substituted where necessary as described in the reference content document)</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the received message is textually correct.

## 5.1.2.2 Image

### 5.1.2.2.1 MMS-1.3-int-116 - JPG Image size 160x120

Test Case Id	MMS-1.3-int-116
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that a JPG image of the size 160x120 is correctly sent from Client A to Client B and that the received message is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-007
Tool	
Test Code	
Preconditions	-Client A -Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add image file/object JPG160x120.jpg to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the received message is reasonably presented.

**5.1.2.2.2 MMS-1.3-int-118 - JPG Image size 640x480**

Test Case Id	MMS-1.3-int-118
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that a JPG image of the size 640x480 is correctly sent from Client A to Client B and that the received message is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-007
Tool	
Test Code	
Preconditions	-Client A Capability: Content class greater than Image Basic class  -Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add image file/object JPG640x480.jpg to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the received message is reasonably presented.

**5.1.2.2.3 MMS-1.3-int-120 - GIF Image size 160x120**

Test Case Id	MMS-1.3-int-120
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that a GIF87a image of the size 160x120 is correctly sent from Client A to Client B and that the received message is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-009
Tool	
Test Code	
Preconditions	-Client A -Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add image file/object GIF87a160x120.gif to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the received message is reasonably presented.

**5.1.2.2.4 MMS-1.3-int-122 - GIF Image size 640x480**

Test Case Id	MMS-1.3-int-122
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that a GIF87a image of the size 640x480 is correctly sent from Client A to Client B and that the received message is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-009
Tool	
Test Code	
Preconditions	-Client A Capability: Content class greater than Image Basic class  -Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add image file/object GIF87a640x480.gif to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the received message is reasonably presented.

**5.1.2.2.5 MMS-1.3-int-124 - Animated GIF Image size 160x120**

Test Case Id	MMS-1.3-int-124
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that an animated GIF89a image of the size 160x120 is correctly sent from Client A to Client B and that the received message is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-010
Tool	
Test Code	
Preconditions	-Client A -Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add image file/object AnimatedGIF89a_160x120.gif to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the received message is reasonably presented.

**5.1.2.2.6 MMS-1.3-int-126 - Animated GIF Image size 640x480**

Test Case Id	MMS-1.3-int-126
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that an animated GIF89a image of the size 640x480 is correctly sent from Client A to Client B and that the received message is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-010
Tool	
Test Code	
Preconditions	-Client A Capability: Content class greater than Image Basic class  -Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add image file/object AnimatedGIF89a_640x480.gif to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the received message is reasonably presented.

**5.1.2.2.7 MMS-1.3-int-128 - WBMP Image size 160x120**

Test Case Id	MMS-1.3-int-128
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that a WBMP images of the size 160x120 is correctly sent from Client A to Client B and that the received message is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-011
Tool	
Test Code	
Preconditions	-Client A -Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add image file/object WBMP_160x120.wbmp to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the received message is reasonably presented.

**5.1.2.2.8 MMS-1.3-int-130 - WBMP Image size 640x480**

Test Case Id	MMS-1.3-int-130
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that a WBMP images of the size 640x480 is correctly sent from Client A to Client B and that the received message is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-011
Tool	
Test Code	
Preconditions	-Client A Capability: Content class greater than Image Basic class  -Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add image file/object WBMP_640x480.wbmp to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the received message is reasonably presented.

### 5.1.2.3 Audio

#### 5.1.2.3.1 MMS-1.3-int-131 - AMR audio NB

Test Case Id	MMS-1.3-int-131
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that an AMR audio NB object/content is correctly sent from Client A to Client B and that the AMR audio NB file/object is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-013
Tool	
Test Code	
Preconditions	-Client A -Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add audio file/object Audio1NB.amr to the message and set page timing to allow for the audio1NB.amr file to be played.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the AMR audio NB file/object is reasonably presented and AMR audioNB is played in its entirety.

### 5.1.2.3.2 MMS-1.3-int-132 – 3GPP2 13k speech

Test Case Id	MMS-1.3-int-132
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that an 13k speech object/content is correctly sent from Client A to Client B and that the 13k speech file/object is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-014
Tool	
Test Code	
Preconditions	-Client A -Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add speech file/object audio1.qcp to the message and set page timing to allow for the audio1.qcp file to be played.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the 13k speech file/object is reasonably presented and 13k speech is played in its entirety.

## 5.1.2.4 Video

### 5.1.2.4.1 MMS-1.3-int-133 - 3GPP Video QCIF

Test Case Id	MMS-1.3-int-133
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that a QCIF video file/object is correctly sent from Client A to Client B and that the QCIF video file/object is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-020
Tool	
Test Code	
Preconditions	-Client A -Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add video file/object qcif_video.3gp to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the QCIF video file/object is reasonably presented and QCIF video file/object is played in its entirety.

**5.1.2.4.2 MMS-1.3-int-134 - 3GPP Video sub-QCIF**

Test Case Id	MMS-1.3-int-134
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that a sub-QCIF video file/object is correctly sent from Client A to Client B and that the sub-QCIF video file/object is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-020
Tool	
Test Code	
Preconditions	-Client A -Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add video file/object sub-qcif_video.3gp to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the sub-QCIF video file/object is reasonably presented and sub-QCIF video file/object is played in its entirety.

**5.1.2.4.3 MMS-1.3-int-135 - 3GPP2 Video QCIF (MPEG4+13k)**

Test Case Id	MMS-1.3-int-135
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that a QCIF video file/object is correctly sent from Client A to Client B and that the QCIF video file/object is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-020
Tool	
Test Code	
Preconditions	-Client A Capability supports MPEG4 and 13k  -Client B Capability supports MPEG4 and 13k
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add video file/object (mp4_13k_qcif.3g2) to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the QCIF video file/object is reasonably presented and QCIF video file/object is played in its entirety.

**5.1.2.4.4 MMS-1.3-int-136 - 3GPP2 Video QCIF (MPEG4+AMR)**

Test Case Id	MMS-1.3-int-136
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that a QCIF video file/object is correctly sent from Client A to Client B and that the QCIF video file/object is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-020
Tool	
Test Code	
Preconditions	-Client A Capability supports MPEG4 and AMR  -Client B Capability supports MPEG4 and AMR
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add video file/object (mp4_amr_qcif.3g2) to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the QCIF video file/object is reasonably presented and QCIF video file/object is played in its entirety.

**5.1.2.4.5 MMS-1.3-int-137 - 3GPP2 Video QCIF (H.263+13k)**

Test Case Id	MMS-1.3-int-137
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that a QCIF video file/object is correctly sent from Client A to Client B and that the QCIF video file/object is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-020
Tool	
Test Code	
Preconditions	-Client A Capability supports H.263 and 13k  -Client B Capability supports H.263 and 13k
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add video file/object (h263_13k_qcif.3g2) to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the QCIF video file/object is reasonably presented and QCIF video file/object is played in its entirety.

**5.1.2.4.6 MMS-1.3-int-138 - 3GPP2 Video QCIF (H.263+AMR)**

Test Case Id	MMS-1.3-int-138
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that a QCIF video file/object is correctly sent from Client A to Client B and that the QCIF video file/object is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-020
Tool	
Test Code	
Preconditions	-Client A Capability supports H.263 and AMR  -Client B Capability supports H.263 and AMR
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add video file/object (h263_amr_qcif.3g2) to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the QCIF video file/object is reasonably presented and QCIF video file/object is played in its entirety.

**5.1.2.4.7 MMS-1.3-int-139 - 3GPP2 Video sub-QCIF (MPEG4 +13k)**

Test Case Id	MMS-1.3-int-139
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that a sub-QCIF video file/object is correctly sent from Client A to Client B and that the sub-QCIF video file/object is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-020
Tool	
Test Code	
Preconditions	-Client A Capability supports MPEG4 and 13k  -Client B Capability supports MPEG4 and 13k
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add video file/object (mp4_13k_sqcif.3g2) to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the sub-QCIF video file/object is reasonably presented and sub-QCIF video file/object is played in its entirety.

**5.1.2.4.8 MMS-1.3-int-140 - 3GPP2 Video sub-QCIF (MPEG4 +AMR)**

Test Case Id	MMS-1.3-int-140
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that a sub-QCIF video file/object is correctly sent from Client A to Client B and that the sub-QCIF video file/object is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-020
Tool	
Test Code	
Preconditions	-Client A Capability supports MPEG4 and AMR  -Client B Capability supports MPEG4 and AMR
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add video file/object (mp4_amr_sqcif.3g2) to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the sub-QCIF video file/object is reasonably presented and sub-QCIF video file/object is played in its entirety.

**5.1.2.4.9 MMS-1.3-int-141 - 3GPP2 Video sub-QCIF (H.263 +13k)**

Test Case Id	MMS-1.3-int-141
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that a sub-QCIF video file/object is correctly sent from Client A to Client B and that the sub-QCIF video file/object is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-020
Tool	
Test Code	
Preconditions	-Client A Capability supports H.263 and 13k  -Client B Capability supports H.263 and 13k
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add video file/object (h263_13k_sqcif.3g2) to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the sub-QCIF video file/object is reasonably presented and sub-QCIF video file/object is played in its entirety.

**5.1.2.4.10 MMS-1.3-int-142 - 3GPP2 Video sub-QCIF (H.263 +AMR)**

Test Case Id	MMS-1.3-int-142
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that a sub-QCIF video file/object is correctly sent from Client A to Client B and that the sub-QCIF video file/object is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-020
Tool	
Test Code	
Preconditions	-Client A Capability supports H.263 and AMR  -Client B Capability supports H.263 and AMR
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add video file/object (h263_amr_sqcif.3g2) to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the sub-QCIF video file/object is reasonably presented and sub-QCIF video file/object is played in its entirety.

## 5.1.2.5 Attachment

### 5.1.2.5.1 MMS-1.3-int-143 - vCard

Test Case Id	MMS-1.3-int-143
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that a vCard2.1 MIP object correctly sent from Client A to Client B and that the received vCard is textually correct.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-016
Tool	
Test Code	
Preconditions	-Client A Capability: vCard2.1 MIP  -Client B Capability: vCard2.1 MIP
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new Address Book entry containing all possible fields of the reference content "John Doe.vcf" as supported by the MMI of Client A</li><li>2. In Client A, create a new MM with the vCard object from the above mentioned address book entry</li><li>3. In MM header: To-field is set to Client B..</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message. All mandatory properties of the vCard2.1 MIP object are present and are textually correct.

### 5.1.2.5.2 MMS-1.3-int-144 - vCalendar

Test Case Id	MMS-1.3-int-144
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that a vCalendar1.0_MIP object correctly sent from Client A to Client B and that the received vCalendar1.0_MIP is textually correct.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-027
Tool	
Test Code	
Preconditions	-Client A Capability: vCalendar1.0_MIP  -Client B Capability: vCalendar1.0_MIP
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new Calendar entry containing all possible fields of the reference content "Christmas.vcs" as supported by the MMI of Client A</li><li>2. In Client A, create a new MM with the above defined vCalendar object.</li><li>3. In MM header: To-field is set to Client B.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message. All mandatory properties of the vCalendar1.0_MIP object are present and are textually correct.

**5.1.2.5.3 MMS-1.3-int-145 - Hyperlinks**

Test Case Id	MMS-1.3-int-145
Test Object	Client A and B
Test Case Description	Verify that the MMS client can add hyperlinks in an MM and that the recipient MMS client recognizes the hyperlinks and allows the user to follow it on demand.
Specification Reference	[MMSCONF] 8.2
SCR Reference	MMSCONF-MED-C-039, MMSCONF-MED-C-040, MMSCONF-MED-C-041, MMSCONF-MED-C-042 and MMSCONF-MED-C-043
Tool	N/a
Test Code	N/a
Preconditions	Client A and B support Hyperlinks embedded in MMs Client B supports browser
Test Procedure	<ol style="list-style-type: none"> <li>1) In client A, compose an MM including a hyperlink at any point in the MM</li> <li>2) In client A, send the MM to client B</li> <li>3) In client B, retrieve the message</li> <li>4) In client B, display the message</li> <li>5) In client B, select the hyperlink and request to follow it</li> </ol>
Pass-Criteria	<p>In client A, a hyperlink can be inserted in the MM</p> <p>In client B, the message is displayed correctly. Client B recognizes the hyperlink and gives the user the option to follow it on demand. The hyperlink is not followed unless the user requests it explicitly. If the user requests to follow the hyperlink, the browser is opened and the URL of the hyperlink is displayed</p>

**5.1.2.5.4 MMS-1.3-int-146 - Valid MTD for MMS templates**

Test Case Id	MMS-1.3-int-146
Test Object	Client A and Client B
Test Case Description	The purpose is to verify that MMS Message Template is correctly sent from Client A to Client B via MMS, and validates MTD in XML schema of MMS Message Template before using MTD for creating MM, and pass if MTD is valid.
Specification Reference	[MMSTEMP] Chapter 5.2.2.1, Chapter 5.3.1
SCR Reference	MMSTEMP-MMSTC-C-001
Tool	
Test Code	
Preconditions	-Client A Capability: Support to send MMS Message Template -Client B Capability: Support to receive MMS Message Template Support to create MM with MMS Message Template
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM header: To-field is set to Client B</li> <li>3. In MM content: attach MMS Message Template with the MM.</li> <li>4. In Client A, send MM to Client B.</li> <li>5. In Client B, receive the MM notification and retrieve the MM that contains a MMS Message Template.</li> <li>6. In Client B, select the received MMS Message Template for creating MM.</li> <li>7. Verify the pass criteria below.</li> </ol>
Pass Criteria	Client B has received the MMS Message Template as a message. MMS Message Template is used for creating MM.

MM Content specific to this Test Case:

MM Content for Step 3:

MM Content:	MMS	Content-Type	
Headers:			application/vnd.wap.multipart.mixed

MMS Message Template:      Multipart structure with the following section:  
- Message Template Definition:      Headers.mtd  
  
(a multimedia object with MIME type “application/vnd.omammsg-mtd+xml” which is valid in respect of the XML schema described in Appendix B of [MMSTEMP])

## 5.2 CLIENT TO SERVER

The tests in this section are performed in order to test interoperability between clients of one brand and a MMSC of a different brand. In testing, client acts as a Client A and another identical client as a Client B. In this model, there is no need to interchange Client roles. The applicable test cases will be executed only once

The following scenarios show the set-up and principle for the tests:

### 1. Messages addressed to client.

Client A → Test Environment → MMSC → Test Environment → Client B

- Messages are always sent from Client A
- MMSC will process the message
- Test environment will deliver a notification to Client B.
- The Client B will retrieve the message from MMSC via test

### 2. Messages addressed to e-mail recipient

Client A → Test Environment → MMSC → Email recipient

- Messages are always sent from Client A
- MMSC will process the message and route it to email
- Email recipient will receive the message

### 3. Messages received from e-mail sender

Email sender → MMSC → Test Environment → Client B

- Email sender will send the message
- MMSC will receive email and process it
- Test environment will deliver a notification to Client B.
- Messages will be retrieved by Client B

The used test environment (excluding MMSC) is considered be transparent

## 5.2.1 Message

### 5.2.1.1 General

#### 5.2.1.1.1 MMS-1.3-int-202 - Image Basic - Message Size 30k

Test Case Id	MMS-1.3-int-202
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message in Image Basic Content Class with size under 30k can be sent from Client A to Client B and that the received message is reasonably presented.
Specification Reference	[MMSCONF] Chapter 12
SCR Reference	MMSCONF-IBC-C-001 MMSCONF-IBC-C-002 MMSCONF-IBC-C-003 MMSCONF-IBC-C-004
Tool	
Test Code	
Preconditions	-Client A  -Client B  -MMSC
Test Procedure	<ol style="list-style-type: none"> <li>1. In client A, create a new MM.</li> <li>2. In MM header: To-field is set to Client B.</li> <li>3. In MM content: Add audio file/object 30k_basic_AMR.amr to the message.</li> <li>4. In client A, send MM to Client B.</li> <li>5. In Client B, receive and open the MM.</li> <li>6. Verify the pass criteria below.</li> </ol>
Pass Criteria	Client B has received the message and the received message is correctly presented.

**5.2.1.1.2 MMS-1.3-int-203 - Image Rich - Message Size 100k**

Test Case Id	MMS-1.3-int-203
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message in Image Rich Content Class with size under 100k can be sent from Client A to Client B and that the received message is reasonably presented.
Specification Reference	MMSCONF 12
SCR Reference	MMSCONF-IRC-C-001 MMSCONF-IRC-C-002 MMSCONF-IRC-C-003 MMSCONF-IRC-C-004
Tool	
Test Code	
Preconditions	-Client A -Client B -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add audio file/object 100k_rich_AMR.amr to the message.</li><li>4. In client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the received message is correctly presented.

**5.2.1.1.3 MMS-1.3-int-257 - Image Rich - Message with multiple slides and content**

Test Case Id	MMS-1.3-int-257
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message in Image Rich Content Class with multiple slides and multiple content and a size under 100k can be sent from Client A to Client B and that the received message is reasonably presented.
Specification Reference	MMSCONF 12
SCR Reference	MMSCONF-CMO-C-002
Tool	
Test Code	
Preconditions	-Client A Setting: Content Class set to Image Rich  -Client B  -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: In the message body, create the following three pages:<ul style="list-style-type: none"><li>- Page 1, enter text as in file Generic_Text.txt, add the file/object JPG320x240-40k.jpg, add the file/object audio10k.amr and specify page.</li><li>- Page 2, enter the text as in file TEXT_US-ASCII.txt, add the file/object GIF320x240-30.gif, add the file/object sp-midi-10.mid</li><li>- Page 3, enter the text Generic_Text.txt, add the file/object WBMP_80x60.wbmp.</li></ul></li><li>4. In client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the received message with its content is reasonable presented.

**5.2.1.1.4 MMS-1.3-int-204 - Video Rich - Message Size 300k**

Test Case Id	MMS-1.3-int-204
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message in Video Rich Content Class with size under 300k can be sent from Client A to Client B and that the received message is reasonably presented.
Specification Reference	MMSCONF 12
SCR Reference	MMSCONF-VRC-C-001 MMSCONF-VRC-C-002 MMSCONF-VRC-C-003 MMSCONF-VRC-C-004
Tool	
Test Code	
Preconditions	-Client A  -Client B  -MMSC
Test Procedure	7. In client A, create a new MM. 8. In MM header: To-field is set to Client B. 9. In MM content: Add audio file/object 300k_rich_AMR.amr to the message. 10. In client A, send MM to Client B. 11. In Client B, receive and open the MM. 12. Verify the pass criteria below.
Pass Criteria	Client B has received the message and the received message is correctly presented.

**5.2.1.1.5 MMS-1.3-int-258 - Video Rich - Message with multiple slides and content**

Test Case Id	MMS-1.3-int-258
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message in Video Rich Content Class with multiple slides and multiple content and a size under 300k can be sent from Client A to Client B and that the received message is reasonably presented.
Specification Reference	MMSCONF 12
SCR Reference	MMSCONF-CMO-C-002
Tool	
Test Code	
Preconditions	-Client A Setting: Content Class set to Video Rich  -Client B  -MMSC
Test Procedure	13. In client A, create a new MM.  14. In MM header: To-field is set to Client B.  15. In MM content: In the message body, create the following three pages: - Page 1, enter text as in file Generic_Text.txt, add the file/object JPG640x480-100k.jpg, add the file/object audio70k.amr and specify page. - Page 2, enter the text as in file TEXT_US-ASCII.txt, add the file/object GIF640x480.gif, add the file/object audio2NB.amr. - Page 3, enter the text Generic_Text.txt, add the file/object video-50k.3gp.  16. In client A, send MM to Client B.  17. In Client B, receive and open the MM.  18. Verify the pass criteria below.
Pass Criteria	Client B has received the message and the received message with its content is reasonable presented.

**5.2.1.1.6 MMS-1.3-int-259 – Mega pixel - Message size 600k and multiple objects**

Test Case Id	MMS-1.3-int-259
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message in Mega Pixel Content Class with a size under 600k can be sent from Client A to Client B and that the received message is reasonably presented.
Specification Reference	MMSCONF 12
SCR Reference	MMSCONF-MPC-C-009
Tool	
Test Code	
Preconditions	-Client A Setting: Content Class set to Mega Pixel and the capability to send a max MM size of 600 kB  -Client B  -MMSC
Test Procedure	<ol style="list-style-type: none"> <li>1. In client A, create a new MM.</li> <li>2. In MM header: To-field is set to Client B.</li> <li>3. In MM content: In the message body, create the following two pages: <ul style="list-style-type: none"> <li>- Page 1, enter text as in file Generic_Text.txt, add the file/object JPG1600x1200-300k.jpg,</li> <li>- Page 2, enter the text as in file TEXT_US-ASCII.txt, add the file/object video_300k.3gp.</li> </ul> </li> <li>4. In client A, send MM to Client B.</li> <li>5. In Client B, receive and open the MM.</li> <li>6. Verify the pass criteria below.</li> </ol>
Pass Criteria	Client B has received the message and the received message with its content is reasonable presented.

**5.2.1.1.7 MMS-1.3-int-260 – Mega pixel - Message size 600k and single objects**

Test Case Id	MMS-1.3-int-260
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message in Mega Pixel Content Class with a size under 600k can be sent from Client A to Client B and that the received message is reasonably presented.
Specification Reference	MMSCONF 12
SCR Reference	MMSCONF-MPC-C-009
Tool	
Test Code	
Preconditions	-Client A Setting: Content Class set to Mega Pixel and the capability to send a max MM size of 600 kB  -Client B  -MMSC
Test Procedure	7. In client A, create a new MM. 8. In MM header: To-field is set to Client B. 9. In MM content: Add the file/object video-600k.3gp to the message. 10. In client A, send MM to Client B. 11. In Client B, receive and open the MM. 12. Verify the pass criteria below.
Pass Criteria	Client B has received the message and the received message with its content is reasonable presented.

**5.2.1.1.8 MMS-1.3-int-205 - Multiple pages with page timing and time dependent content**

Test Case Id	MMS-1.3-int-205
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that multiple pages and objects with page timing are correctly sent from Client A to Client B via the MMSC and that all pages and objects are reasonably presented in the correct order. The timing of the pages follows the specified values or client default values.
Specification Reference	
SCR Reference	[MMSCONF] Chapter 7.1.7
Tool	MMSCONF-MED-C-023
Test Code	
Preconditions	-Client A Capability: Ability to create multiple pages  -Client B  -MMSC
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM header: To-field is set to Client B.</li> <li>3. In MM content: In the message body, create the following three pages: <ul style="list-style-type: none"> <li>- Page 1, enter text as in file Generic_Text.txt, add the file/object JPG80x60.jpg, add the file/object (either audio1NB.amr or audio1.qcp) and specify page timing to 3 seconds if applicable.</li> <li>- Page 2, enter the text as in file TEXT_US-ASCII.txt, add the file/object GIF80x60.gif, add the file/object (either audio2NB.amr or audio2.qcp) and specify page timing to 5 seconds if applicable.</li> <li>- Page 3, enter the text Generic_Text.txt, add the file/object WBMP_80x60.wbmp, add the file/object (either audio3NB.amr or audio3.qcp) and specify page timing to 5 seconds if applicable.</li> </ul> </li> <li>4. In Client A, send MM to Client B.</li> <li>5. In Client B, receive and open the MM.</li> <li>6. Verify the pass criteria below.</li> </ol>
Pass Criteria	Client B has received the message and all pages and objects are reasonably presented in the correct order. The timing of the pages follows the specified values or Client A default values.

### 5.2.1.1.9 MMS-1.3-int-206 - Subject field with UTF8 encoding

Test Case Id	MMS-1.3-int-206
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message with UTF-8 characters in the Subject-field is correctly sent from Client A to Client B via MMSC and that the message is successfully received and the subject is textually correct.
Specification Reference	[MMSCONF] Chapter 10.2
SCR Reference	MMSCONF- GEN-S-004
Tool	
Test Code	
Preconditions	-Client A Capability: UTF-8 charset  -Client B  -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: Subject-field is set to the character string given in the reference content file "Short_Text_UTF-8.txt" and the encoding is set to UTF-8. (Alternative characters may be substituted where necessary as described in the reference content document).</li><li>3. In MM content: In the message text part, enter the text "Hello World".</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the message is successfully received and the subject is textually correct.

**5.2.1.1.10 MMS-1.3-int-207 - Subject field with 40 Characters**

Test Case Id	MMS-1.3-int-207
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message with 40 chars in the Subject-field is correctly sent from Client A to Client B via MMSC and that the message is successfully received and the subject is textually correct.
Specification Reference	[MMSCONF] Chapter 10.2.5
SCR Reference	MMSCONF- GEN-C-003
Tool	
Test Code	
Preconditions	-Client A Capability: Subject with 40 characters length  -Client B Capability: Subject with 40 characters length  -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: Add following 40 chars to subject field: “abcdefghijklmnopqrstuvwxyz0123456789/-+@”.</li><li>3. In MM content: In the message text part, enter the text “Hello World”.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the message is successfully received and the subject is textually correct.

**5.2.1.1.11 MMS-1.3-int-208 - Subject field with US-ASCII encoding**

Test Case Id	MMS-1.3-int-208
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a messages with US-ASCII characters in the Subject-field is correctly sent from Client A to Client B via MMSC and that the message is successfully received and the subject is textually correct.
Specification Reference	[MMSCONF] Chapter 10.2
SCR Reference	MMSCONF- GEN-C-002
Tool	
Test Code	
Preconditions	-Client A Capability: Subject US-ASCII  -Client B Capability: Subject US-ASCII  -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: Subject-field is set to “Hello World” in US-ASCII characters.</li><li>3. In MM content: In the message text part, enter the text “Hello World”.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the message is successfully received and the subject is textually correct.

**5.2.1.1.12 MMS-1.3-int-261 - Postcard vCard attachment to multiple recipients**

Test Case Id	MMS-1.3-int-261
Test Object	Client A
Test Case Description	The purpose is to verify that a MM is correctly sent to multiple recipients using the MMS Postcard service when each recipient is identified by its own vCard attachments
Specification Reference	[MMSCONF] 17.1
SCR Reference	MMSCONF-PST-C-002
Tool	
Test Code	
Preconditions	-Client A Support of Postcard Service
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create two new Address Book entries containing only N, Version and ADR fields as in the reference contents "Postcard_John_Doe.vcf and Postcard_Jane_Doe.vcf"</li><li>2. In Client A, create a new postcard MM.</li><li>3. In MM header: To-field is set to Postcard service address</li><li>4. In MM content: add image file/object JPG640X480PC.jpg</li><li>5. Add vCard objects from the above mentioned address book entries</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client A has sent a message and MMSC verifies that the MM was received by MMSC.

## 5.2.1.2 Address Field Testing

### 5.2.1.2.1 MMS-1.3-int-209 - To-field

Test Case Id	MMS-1.3-int-209
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message with US-ASCII characters in the To-field is correctly sent from Client A to Client B via MMSC and that the message is successfully received.
Specification Reference	[MMSCONF] Chapter 10.2
SCR Reference	MMSCONF- GEN-C-002
Tool	
Test Code	
Preconditions	-Client A -Client B -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to an MSISDN/MDN address in US-ASCII characters.</li><li>3. In MM content: In the message text part, enter the text “Hello World”.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the message is successfully received.

**5.2.1.2.2 MMS-1.3-int-210 - Cc-field**

Test Case Id	MMS-1.3-int-210
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message with US-ASCII characters in the Cc-field is correctly sent from Client A to Client B via MMSC and that the message is successfully received.
Specification Reference	[MMSCONF] Chapter 10.2
SCR Reference	MMSCONF- GEN-C-002
Tool	
Test Code	
Preconditions	-Client A -Client B -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: Cc-field is set to an MSISDN/MDN address in US-ASCII characters.</li><li>3. In MM content: In the message text part, enter the text "Hello World".</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the message is successfully received.

**5.2.1.2.3 MMS-1.3-int-211 - Bcc-field**

Test Case Id	MMS-1.3-int-211
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message with US-ASCII characters in the Bcc-field is correctly sent from Client A to Client B via MMSC and that the message is successfully received.
Specification Reference	[MMSCONF] Chapter 10.2
SCR Reference	MMSCONF- GEN-C-002
Tool	
Test Code	
Preconditions	-Client A -Client B -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: Bcc-field is set to an MSISDN/MDN address in US-ASCII characters.</li><li>3. In MM content: In the message text part, enter the text "Hello World".</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the message is successfully received.



#### 5.2.1.2.4 MMS-1.3-int-213 - Cc-field with UTF-8 encoding

Test Case Id	MMS-1.3-int-213
Test Object	Client A, MMSC server and email recipient
Test Case Description	The purpose is to verify that a message with UTF-8 characters in the CC-field is correctly sent from Client A to Client B via MMSC and that the message is successfully received.
Specification Reference	[MMSCONF] Chapter 10.2
SCR Reference	MMSCONF- GEN-C-002
Tool	
Test Code	
Preconditions	-Client A -Client B -MMSC -Special  An email address with a name: “êü”<nn@xxx>, where nn@xxx is a valid email address specified for the test event.
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: Cc-field is set to the email address “êü”&lt;nn@xxx&gt;. Note. The nn@xxx in the email address should be replaced by the relevant address to the email client used for the test. The name part of the email address (i.e. “êü”) MUST be entered as defined.</li><li>3. In MM content: In the message text part, enter the text “Hello World”.</li><li>4. In Client A, send MM to email recipient.</li><li>5. In email recipient, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Email recipient has received the message successfully.

### 5.2.1.2.5 MMS-1.3-int-214 - Bcc-field with UTF-8 encoding

Test Case Id	MMS-1.3-int-214
Test Object	Client A, MMSC server and email recipient
Test Case Description	The purpose is to verify that a message with UTF-8 characters in the BCC-field is correctly sent from Client A to Client B via MMSC and that the message is successfully received.
Specification Reference	[MMSCONF] Chapter 10.2
SCR Reference	MMSCONF- GEN-C-002
Tool	
Test Code	
Preconditions	-Client A -Client B -MMSC -Special  An email address with a name: “êü”<nn@xxx>, where nn@xxx is a valid email address specified for the test event.
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: Bcc-field is set to the email address “êü”&lt;nn@xxx&gt;. Note. The nn@xxx in the email address should be replaced by the relevant address to the email client used for the test. The name part of the email address (i.e. “êü”) MUST be entered as defined.</li><li>3. In MM content: In the message text part, enter the text “Hello World”.</li><li>4. In Client A, send MM to email recipient.</li><li>5. In email recipient, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Email recipient has received the message successfully.

### 5.2.1.3 Message Priority

#### 5.2.1.3.1 MMS-1.3-int-215 - Priority – Normal

Test Case Id	MMS-1.3-int-215
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message is correctly sent from Client A to Client B via MMSC and that the message is successfully received and message priority is set to Normal.
Specification Reference	[MMSENC] Chapter 6.1.1 Table 1 [MMSENC] Chapter 6.3 Table 5
SCR Reference	MMSE-C-029, MMSE-C-069
Tool	
Test Code	
Preconditions	-Client A Capability: Capable of setting the priority to normal. - MMSC -Client B Capability Capable of showing priority of received MM.
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM header: Priority-Field is set to Normal.</li> <li>3. In MM content: In the message text part, enter the text “Hello World”.</li> <li>4. In Client A, send MM to Client B.</li> <li>5. In Client B, receive and open the MM.</li> <li>6. Verify the pass criteria below.</li> </ol>
Pass Criteria	Client B has received the message successfully and the message priority is set to Normal.

**5.2.1.3.2 MMS-1.3-int-216 - Priority – Low**

Test Case Id	MMS-1.3-int-216
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message is correctly sent from Client A to Client B via MMSC and that the message is successfully received and message priority is set to Low.
Specification Reference	[MMS-ENC] Chapter 6.1.1 Table 1 [MMS-ENC] Chapter 6.3 Table 5
SCR Reference	MMSE-C-029, MMSE-C-069
Tool	
Test Code	
Preconditions	-Client A Capability: Capable of setting the priority to Low.  - MMSC  -Client B Capability Capable of showing priority of received MM.
Test Procedure	1. In Client A, create a new MM. 2. In MM header: Priority-Field is set to Low. 3. In MM content: In the message text part, enter the text “Hello World”. 4. In Client A, send MM to Client B. 5. In Client B, receive and open the MM. 6. Verify the pass criteria below.
Pass Criteria	Client B has received the message successfully and the message priority is set to Low.

### 5.2.1.3.3 MMS-1.3-int-217 - Priority – High

Test Case Id	MMS-1.3-int-217
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message is correctly sent from Client A to Client B via MMSC and that the message is successfully received and message priority is set to High.
Specification Reference	[MMS-ENC] Chapter 6.1.1 Table 1 [MMS-ENC] Chapter 6.3 Table 5
SCR Reference	MMSE-C-029, MMSE-C-069
Tool	
Test Code	
Preconditions	-Client A Capability: Capable of setting the priority to High. - MMSC -Client B Capability Capable of showing priority of received MM
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: Priority-Field is set to High.</li><li>3. In MM content: In the message text part, enter the text “Hello World”.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message successfully and the message priority is set to High.

## 5.2.1.4 Message Classification

### 5.2.1.4.1 MMS-1.3-int-218 - Message Class – Personal

Test Case Id	MMS-1.3-int-218
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message with Message Class Personal is correctly sent from Client A to Client B via MMSC and that the message is successfully received with a Message Class of Personal.
Specification Reference	[MMSENC] Chapter 6.1.1
SCR Reference	MMSE-C-026
Tool	
Test Code	
Preconditions	-Client A -Client B -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: In the message text part, enter the text “Hello World”.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message successfully with a Message Class of Personal.

## 5.2.2 Content

### 5.2.2.1 Text

**5.2.2.1.1 MMS-1.3-int-220 - Text**

Test Case Id	MMS-1.3-int-220
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a text object with UTF-8 encoding is correctly sent from Client A to Client B via the MMSC and that the received message is textually correct.
Specification Reference	[MMSCONF] Chapter 7.1.8
SCR Reference	MMSCONF-MED-C-003
Tool	
Test Code	
Preconditions	-Client A -Client B -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: In the message body, enter text as in file Text_UTF-8.txt. (Alternative characters may be substituted where necessary as described in the reference content document).</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the received message is textually correct.

## 5.2.2.2 Image

### 5.2.2.2.1 MMS-1.3-int-223 - JPG Image size 160x120

Test Case Id	MMS-1.3-int-223
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a JPG image of the size 160x120 is correctly sent from Client A to Client B via the MMSC and that the received message is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-007
Tool	
Test Code	
Preconditions	-Client A -Client B -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add image file/object JPG160x120.jpg to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the received message is reasonably presented.

**5.2.2.2.2 MMS-1.3-int-225 - JPG Image size 640x480**

Test Case Id	MMS-1.3-int-225
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a JPG image of the size 640x480 is correctly sent from Client A to Client B and that the received message is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-007
Tool	
Test Code	
Preconditions	-Client A Capability: Content class greater than Image Basic class  -Client B  -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add image file/object JPG640x480.jpg to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the received message is reasonably presented.

**5.2.2.2.3 MMS-1.3-int-227 - GIF Image size 160x120**

Test Case Id	MMS-1.3-int-227
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a GIF87a image of the size 160x120 is correctly sent from Client A to Client B via the MMSC and that the received message is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-009
Tool	
Test Code	
Preconditions	-Client A -Client B -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add image file/object GIF87a160x120.gif to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the received message is reasonably presented.

**5.2.2.2.4 MMS-1.3-int-229 - GIF Image size 640x480**

Test Case Id	MMS-1.3-int-229
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a GIF87a image of the size 640x480 is correctly sent from Client A to Client B and that the received message is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-009
Tool	
Test Code	
Preconditions	-Client A Capability: Content class greater than Image Basic class  -Client B  -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add image file/object GIF87a640x480.gif to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the received message is reasonably presented.

**5.2.2.2.5 MMS-1.3-int-231 - Animated GIF Image size 160x120**

Test Case Id	MMS-1.3-int-231
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that an animated GIF89a image of the size 160x120 is correctly sent from Client A to Client B via the MMSC and that the received message is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-010
Tool	
Test Code	
Preconditions	-Client A -Client B -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add image file/object AnimatedGIF89a_160x120.gif to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the received message is reasonably presented.

**5.2.2.2.6 MMS-1.3-int-233 - Animated GIF Image size 640x480**

Test Case Id	MMS-1.3-int-233
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that an animated GIF89a image of the size 640x480 is correctly sent from Client A to Client B and that the received message is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-010
Tool	
Test Code	
Preconditions	-Client A Capability: Content class greater than Image Basic class  -Client B  -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add image file/object AnimatedGIF89a_640x480.gif to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the received message is reasonably presented.

**5.2.2.2.7 MMS-1.3-int-235 - WBMP Image size 160x120**

Test Case Id	MMS-1.3-int-235
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a WBMP images of the size 160x120 is correctly sent from Client A to Client B via the MMSC and that the received message is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-011
Tool	
Test Code	
Preconditions	-Client A -Client B -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add image file/object WBMP_160x120.wbmp to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the received message is reasonably presented.

**5.2.2.2.8 MMS-1.3-int-237 - WBMP Image size 640x480**

Test Case Id	MMS-1.3-int-237
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a WBMP images of the size 640x480 is correctly sent from Client A to Client B and that the received message is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-011
Tool	
Test Code	
Preconditions	-Client A Capability: Content class greater than Image Basic class  -Client B  -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add image file/object WBMP_640x480.wbmp to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the received message is reasonably presented.

### 5.2.2.3 Audio

#### 5.2.2.3.1 MMS-1.3-int-238 - AMR audio NB

Test Case Id	MMS-1.3-int-238
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that an AMR audio NB object/content is correctly sent from Client A to Client B via the MMSC and that the AMR audio NB file/object is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-013
Tool	
Test Code	
Preconditions	-Client A -Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add audio file/object Audio1NB.amr to the message and set page timing to allow for the audio1NB.amr file to be played.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the AMR audio NB file/object is reasonably presented and AMR audioNB is played in its entirety.

**5.2.2.3.2 MMS-1.3-int-239 – 3GPP2 13k speech**

Test Case Id	MMS-1.3-int-239
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that an 13k speech object/content is correctly sent from Client A to Client B and that the 13k speech file/object is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-014
Tool	
Test Code	
Preconditions	-Client A -Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add speech file/object audio1.qcp to the message and set page timing to allow for the audio1.qcp file to be played.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the 13k speech file/object is reasonably presented and 13k speech is played in its entirety.

## 5.2.2.4 Video

### 5.2.2.4.1 MMS-1.3-int-240 - 3GPP Video QCIF

Test Case Id	MMS-1.3-int-240
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a QCIF video file/object is correctly sent from Client A to Client B and that the QCIF video file/object is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-020
Tool	
Test Code	
Preconditions	-Client A -Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add video file/object qcif_video.3gp to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the QCIF video file/object is reasonably presented and QCIF video file/object is played in its entirety.

**5.2.2.4.2 MMS-1.3-int-241 - 3GPP Video sub-QCIF**

Test Case Id	MMS-1.3-int-241
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a sub-QCIF video file/object is correctly sent from Client A to Client B and that the sub-QCIF video file/object is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-020
Tool	
Test Code	
Preconditions	-Client A -Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add video file/object sub-qcif_video.3gp to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the sub-QCIF video file/object is reasonably presented and sub-QCIF video file/object is played in its entirety.

**5.2.2.4.3 MMS-1.3-int-242 - 3GPP2 Video sub-QCIF (MPEG4 +13k)**

Test Case Id	MMS-1.3-int-242
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a sub-QCIF video file/object is correctly sent from Client A to Client B and that the sub-QCIF video file/object is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-030
Tool	
Test Code	
Preconditions	-Client A Capability supports MPEG4 and 13k  -Client B Capability supports MPEG4 and 13k
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add video file/object (mp4_13k_sqcif.3g2) to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the sub-QCIF video file/object is reasonably presented and sub-QCIF video file/object is played in its entirety.

**5.2.2.4.4 MMS-1.3-int-243 - 3GPP2 Video sub-QCIF (MPEG4 +AMR)**

Test Case Id	MMS-1.3-int-243
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a sub-QCIF video file/object is correctly sent from Client A to Client B and that the sub-QCIF video file/object is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-030
Tool	
Test Code	
Preconditions	-Client A Capability supports MPEG4 and AMR  -Client B Capability supports MPEG4 and AMR
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add video file/object (mp4_amr_sqcif.3g2) to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the sub-QCIF video file/object is reasonably presented and sub-QCIF video file/object is played in its entirety.

**5.2.2.4.5 MMS-1.3-int-244 - 3GPP2 Video sub-QCIF (H.263 +13k)**

Test Case Id	MMS-1.3-int-244
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a sub-QCIF video file/object is correctly sent from Client A to Client B and that the sub-QCIF video file/object is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-029
Tool	
Test Code	
Preconditions	-Client A Capability supports H.263 and 13k  -Client B Capability supports H.263 and 13k
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add video file/object (h263_13k_sqcif.3g2) to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the sub-QCIF video file/object is reasonably presented and sub-QCIF video file/object is played in its entirety.

**5.2.2.4.6 MMS-1.3-int-245 - 3GPP2 Video sub-QCIF (H.263 +AMR)**

Test Case Id	MMS-1.3-int-245
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a sub-QCIF video file/object is correctly sent from Client A to Client B and that the sub-QCIF video file/object is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-029
Tool	
Test Code	
Preconditions	-Client A Capability supports H.263 and AMR  -Client B Capability supports H.263 and AMR
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add video file/object (h263_amr_sqcif.3g2) to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the sub-QCIF video file/object is reasonably presented and sub-QCIF video file/object is played in its entirety.

## 5.2.2.5 Attachment

### 5.2.2.5.1 MMS-1.3-int-246 - vCard

Test Case Id	MMS-1.3-int-246
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a vCard2.1_MIP object is correctly sent from Client A to Client B via the MMSC and that the received vCard is textually correct.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-016
Tool	
Test Code	
Preconditions	-Client A Capability: vCard2.1_MIP  -Client B Capability: vCard2.1_MIP  -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new Address Book entry containing all possible fields of the reference content "John Doe.vcf" as supported by the MMI of Client A</li><li>2. In Client A, create a new MM with the vCard object from the above mentioned address book entry.</li><li>3. In MM header: To-field is set to Client B.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message. All mandatory properties of the vCard2.1_MIP object are present and are textually correct.

### 5.2.2.5.2 MMS-1.3-int-247 - vCalendar

Test Case Id	MMS-1.3-int-247
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a vCalendar1.0_MIP object correctly sent from Client A to Client B via the MMSC and that the received vCalendar1.0_MIP is textually correct.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-027
Tool	
Test Code	
Preconditions	-Client A Capability: vCalendar1.0_MIP  -Client B Capability: vCalendar1.0_MIP  -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new Calendar entry containing all possible fields of the reference content “Christmas.vcs” as supported by the MMI of Client A</li><li>2. In Client A, create a new MM with the above defined vCalendar1.0_MIP object.</li><li>3. In MM header: To-field is set to Client B.</li><li>4. In MM content: Add the vCalendar1.0 MIP object as defined above to the message.</li><li>5. In Client A, send MM to Client B.</li><li>6. In Client B, receive and open the MM.</li><li>7. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message. All mandatory properties of the vCalendar1.0_MIP object are present and are textually correct.

## 5.2.3 MMS Address Protocol

### 5.2.3.1 MMS-1.3-int-248 - Send and receive message to one MSISDN/MDN recipient (To:)

Test Case Id	MMS-1.3-int-248
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message with an MSISDN/MDN address in the “To:”-field is correctly sent from Client A to Client B via MMSC server and that the message is successfully received.
Specification Reference	[MMS-ENC] Chapter 6.1.1 Table 1
SCR Reference	MMSE-C-024, MMSE-C-021
Tool	
Test Code	
Preconditions	-Client A -Client B -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to an MSISDN/MDN address.</li><li>3. In MM content: In the message text part, enter the text “Hello World”.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message successfully as a “To:”-recipient.

### 5.2.3.2 MMS-1.3-int-249 - Send and receive message to one MSISDN/MDN recipient (Cc:)

Test Case Id	MMS-1.3-int-249
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message with an MSISDN/MDN address in the "Cc:"-field is correctly sent from Client A to Client B via MMSC server and that the message is successfully received.
Specification Reference	[MMS-ENC] Chapter 6.1.1 Table 1
SCR Reference	MMSE-C-024, MMSE-C-022
Tool	
Test Code	
Preconditions	-Client A -Client B -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: Cc-field is set to a single email address.</li><li>3. In MM content: In the message text part, enter the text "Hello World".</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message successfully as a "Cc:"-recipient.

### 5.2.3.3 MMS-1.3-int-250 - Send and receive message to one MSISDN/MDN recipient (Bcc:)

Test Case Id	MMS-1.3-int-250
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message with MSISDN/MDN address in the "Bcc:"-field is correctly sent from Client A to Client B via MMSC server and that the message is successfully received.
Specification Reference	[MMSENC] Chapter 6.1.1 Table 1
SCR Reference	MMSE-C-024, MMSE-C-023
Tool	
Test Code	
Preconditions	-Client A -Client B -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: Bcc-field is set to a single email address.</li><li>3. In MM content: In the message text part, enter the text "Hello World".</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message successfully as a "Bcc:"-recipient.

### 5.2.3.4 MMS-1.3-int-251 - Send and receive message to multiple MSISDN/MDN and email recipients (To:)

Test Case Id	MMS-1.3-int-251
Test Object	Client A, multiples of Client B, MMSC server and multiple email recipients
Test Case Description	The purpose is to verify that messages can be simultaneously and correctly sent from Client A to multiple MSISDN/MDN clients and multiple email recipients via MMSC and that the message is successfully received by all the recipients listed in the “To:”-field.
Specification Reference	[MMS-ENC] Chapter 6.1.1 Table 1
SCR Reference	MMSE-C-024, MMSE-C-021
Tool	
Test Code	
Preconditions	-Client A -Two Client B - Three email recipients Capability: Valid email address in US-ASCII format -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to two clients (using MSISDN/MDN numbering) and three email recipients.</li><li>3. In MM content: In the message text part, enter the text “Hello World”.</li><li>4. In Client A, send MM to multiple MSISDN/MDN clients and multiple email recipients via MMSC.</li><li>5. In multiple MSISDN/MDN clients and multiple email recipients via MMSC, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	All MSISDN/MDN clients and all email recipients listed in the “To:”-field have received the message successfully. .

### 5.2.3.5 MMS-1.3-int-252 - Send and receive message to multiple MSISDN/MDN and email recipients (Cc:)

Test Case Id	MMS-1.3-int-252
Test Object	Client A, multiples of Client B, MMSC server and multiple email recipients
Test Case Description	The purpose is to verify that messages can be simultaneously and correctly sent from Client A to multiple MSISDN/MDN clients and multiple email recipients via MMSC and that the message is successfully received by all the recipients listed in the "Cc:"-field.
Specification Reference	[MMS-ENC] Chapter 6.1.1 Table 1
SCR Reference	MMSE-C-024, MMSE-C-022
Tool	
Test Code	
Preconditions	-Client A -Two Client B - Three email recipients Capability: Valid email address in US-ASCII format -MMSC
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM header: Cc-field is set to two clients (using MSISDN/MDN numbering) and three email recipients.</li> <li>3. In MM content: In the message text part, enter the text "Hello World".</li> <li>4. In Client A, send MM to multiple MSISDN/MDN clients and multiple email recipients via MMSC.</li> <li>5. In multiple MSISDN/MDN clients and multiple email recipients via MMSC, receive and open the MM.</li> <li>6. Verify the pass criteria below.</li> </ol>
Pass Criteria	All MSISDN/MDN clients and all email recipients listed in the "Cc:"-field have received the message successfully. .

### 5.2.3.6 MMS-1.3-int-253 - Send and receive message to multiple MSISDN/MDN and email recipients (Bcc:)

Test Case Id	MMS-1.3-int-253
Test Object	Client A, multiples of Client B, MMSC server and multiple email recipients
Test Case Description	The purpose is to verify that messages can be simultaneously and correctly sent from Client A to multiple MSISDN/MDN clients and multiple email recipients via MMSC and that the message is successfully received by all the recipients listed in the "Bcc:"-field.
Specification Reference	[MMS-ENC] Chapter 6.1.1 Table 1
SCR Reference	MMSE-C-024, MMSE-C-023
Tool	
Test Code	
Preconditions	-Client A -Two Client B - Three email recipients Capability: Valid email address in US-ASCII format -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: Bcc-field is set to two clients (using MSISDN/MDN numbering) and three email recipients.</li><li>3. In MM content: In the message text part, enter the text "Hello World".</li><li>4. In Client A, send MM to multiple MSISDN/MDN clients and multiple email recipients via MMSC.</li><li>5. In multiple MSISDN/MDN clients and multiple email recipients via MMSC, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	All MSISDN/MDN clients and all email recipients listed in the "Bcc:"-field have received the message successfully. .

### 5.2.3.7 MMS-1.3-int-254 - Send message to one email recipient (To:)

Test Case Id	MMS-1.3-int-254
Test Object	Client A, MMSC server and email recipient
Test Case Description	The purpose is to verify that a message with a single email address in the "To:"-field is correctly sent from Client A to Client B via MMSC server and that the message is successfully received.
Specification Reference	[MMSENC] Chapter 6.1.1 Table 1
SCR Reference	MMSE-C-024, MMSE-C-021
Tool	
Test Code	
Preconditions	-Client A -Client B -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to a single email address.</li><li>3. In MM content: In the message text part, enter the text "Hello World".</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the message.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message successfully as a "To:"-recipient.

### 5.2.3.8 MMS-1.3-int-255 - Send message to one email recipient (Cc:)

Test Case Id	MMS-1.3-int-255
Test Object	Client A, MMSC server and email recipient
Test Case Description	The purpose is to verify that a message with a single email address in the "Cc:"-field is correctly sent from Client A to Client B via MMSC server and that the message is successfully received.
Specification Reference	[MMSENC] Chapter 6.1.1 Table 1
SCR Reference	MMSE-C-024, MMSE-C-022
Tool	
Test Code	
Preconditions	-Client A -Client B -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: Cc-field is set to a single email address.</li><li>3. In MM content: In the message text part, enter the text "Hello World".</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the message.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message successfully as a "Cc:"-recipient.

### 5.2.3.9 MMS-1.3-int-256 - Send message to one email recipient (Bcc:)

Test Case Id	MMS-1.3-int-256
Test Object	Client A, MMSC server and email recipient
Test Case Description	The purpose is to verify that a message with a single email address in the Bcc-field is correctly sent from Client A to Client B via MMSC server and that the message is successfully received.
Specification Reference	[MMSENC] Chapter 6.1.1 Table 1
SCR Reference	MMSE-C-024, MMSE-C-023
Tool	
Test Code	
Preconditions	-Client A -Client B -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: Bcc-field is set to a single email address.</li><li>3. In MM content: In the message text part, enter the text "Hello World".</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the message.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message successfully as a "Bcc:"-recipient.

## 5.3 MMSC TRANSACTION

### 5.3.1 Client A Address

#### 5.3.1.1 MMS-1.3-int-301 - Insert Address Token

Test Case Id	MMS-1.3-int-301
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message with the From-field left empty is correctly sent from Client A to Client B via MMSC and that the MMSC has processed/validated and inserted the correct MSISDN/MDN number of Client A and the message is successfully received with the correct MSISDN/MDN number of Client A in the From-field of the message.
Specification Reference	[MMSENC] Chapter 6.1.1 Table 1, Chapter 6.3 Table 5
SCR Reference	MMSE-S-082
Tool	
Test Code	
Preconditions	-Client A Capability: From Field Support  -Client B  -MMSC
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM header: From-Field is without its own MSISDN/MDN number. Ensure that Client A is not requesting address hiding (if applicable) and that Client A is not sending its own number (if applicable) in the From-field.</li> <li>3. In MM content: In the message text part, enter the text "Hello World".</li> <li>4. In Client A, send MM to Client B.</li> <li>5. In Client B, receive and open the MM.</li> <li>6. Verify the pass criteria below.</li> </ol>
Pass Criteria	Client B has received the message successfully and the correct MSISDN/MDN number of Client A appears in the From-field of the message.

## 5.3.2 Message Validity Time

### 5.3.2.1 MMS-1.3-int-302 - Validity Period (Expiry Time) set by Client

Test Case Id	MMS-1.3-int-302
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message sent with a Validity Period/Expiry Time, set by the client, is accepted by the MMSC.
Specification Reference	[MMS-ENC] Chapter 6.1.1 Table 1
SCR Reference	MMSE-S-085
Tool	
Test Code	
Preconditions	<p>-Client A</p> <p>-Client B Setting: Download option is set to Deferred Retrieval mode</p> <p>-MMSC Setting: Allow and abide by the sender's Validity Period/Expiry Time settings of 1 hour for the MM message Default message expiration time on the MMSC should be longer than that set on Client A (it is recommended to set the MMSC default Validity Period/Expiry Time to be at least 24 hours) and the MMSC should not override message expiration time set by Client A</p>
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM header: Validity Period/Expiry Time to 1 hour (or lowest possible value).</li> <li>3. In MM content: In the message text part, enter the text "Hello World".</li> <li>4. In Client A, send MM to Client B.</li> <li>5. In Client B, wait for MM notification to but do NOT download MM.</li> <li>6. In Client B, after the Validity Period/Expiry Time has expired, try to download the MM</li> <li>7. Verify the pass criteria below.</li> </ol>
Pass Criteria	The message has expired and MMSC has processed and delivered the notification to Client B. Client B attempts to download the message but fails to retrieve the message.

### 5.3.2.2 MMS-1.3-int-303 - Validity Period (Expiry Time) set by MMSC

Test Case Id	MMS-1.3-int-303
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message Validity Period/Expiry Time set by the client can be overwritten or redefined by the MMSC.
Specification Reference	[MMS-ENC] Chapter 6.1.1 Table 1
SCR Reference	MMSE-S-085
Tool	
Test Code	
Preconditions	-Client A  -Client B Setting: Download option is set to Deferred Retrieval mode  -MMSC Setting: Default message Validity Period/Expiry Time should be set to 1 hour (or minimum default value) and it should be configured to override a longer message expiration time if set by Client A.
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: In the message text part, enter the text "Hello World".</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, wait for MM notification to but do NOT download MM.</li><li>6. In Client B, after the Validity Period/Expiry Time has expired, try to download the MM</li><li>7. Verify the pass criteria below.</li></ol>
Pass Criteria	The message has expired and MMSC has processed and delivered the notification to Client B. Client B attempts to download the message but fails to retrieve the message.

### 5.3.2.3 MMS-1.3-int-304 - Delivery time

Test Case Id	MMS-1.3-int-304
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message sent with a Delivery Time, set by the Client A, is delivered at the specified time to the receiving Client B.
Specification Reference	[MMSENC] Chapter 6.1.1 Table 1
SCR Reference	MMSE-C-028
Tool	
Test Code	
Preconditions	-Client A  -Client B  -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: Delivery time set to +1 hour or less if applicable.</li><li>3. In MM content: In the message text part, enter the text "Hello World".</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	The message has not been delivered prior to the time specified

### 5.3.3 Time Stamp

#### 5.3.3.1 MMS-1.3-int-30- Time Stamp set by MMSC

Test Case Id	MMS-1.3-int-305
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that when a client does not set the message time stamp, the MMSC will set the time stamp.
Specification Reference	[MMSENC] Chapter 6.1.1 Table 1
SCR Reference	MMSE-C-019, MMSE-S-081
Tool	
Test Code	
Preconditions	-Client A Capability: Not providing the date field.  -Client B  -MMSC Setting Date Time Set By MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: In the message text part, enter the text “Hello World”.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message successfully with proper time stamp.

## 5.3.4 Retrieve Errors

### 5.3.4.1 MMS-1.3-int-306 - Retrieve status code – Error-permanent-service-denied

Test Case Id	MMS-1.3-int-306
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that the MMSC sets the X-Mms-Retrieve-Status field to Error-permanent-service-denied = <Octet 225 > when the corresponding retrieval attempt was rejected due to failure of authentication or authorization of the originating MMS Client and that the client acts in a proper way according to the Retrieve Status code.
Specification Reference	[MMSENC] Chapter 6.3, Table 5
SCR Reference	MMSE-C-075, MMSE-S-088
Tool	
Test code	
Preconditions	<ul style="list-style-type: none"> <li>- Client A, Client B and MMSC server</li> <li>- Settings: <ul style="list-style-type: none"> <li>- It is possible to check the X-Mms-Retrieve-Status field in the server log.</li> <li>- The MMSC is set to not authorize retrieval attempts from Client B.</li> </ul> </li> </ul>
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM</li> <li>2. Send message from Client A to Client B</li> <li>3. Try to retrieve the message to Client B</li> <li>4. Verify the pass criteria below</li> </ol>
Pass-Criteria	<p>The MMSC sets the X-Mms-Retrieve-Status field to Error-permanent-service-denied = &lt;Octet 225&gt;</p> <p>AND Client B acts in a proper way according to the Retrieve Status code</p>

### 5.3.4.2 MMS-1.3-int-307 - Retrieve status code – Error-permanent-message-not-found

Test Case Id	MMS-1.3-int-307
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that the MMSC sets the X-Mms-Retrieve-Status field to Error-permanent-message-not-found = <Octet 225 > when the content location URL in the retrieval attempt does not point to an MM and that the client acts in a proper way according to the Retrieve Status code.
Specification Reference	[MMSENC] Chapter 6.3, Table 5
SCR Reference	MMSE-C-075
Tool	
Test code	
Preconditions	<ul style="list-style-type: none"> <li>- Client A and Client B</li> <li>- It is possible to check the X-Mms-Retrieve-Status field in the server log.</li> <li>- It is possible to delete the MM from the server.</li> </ul>
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM</li> <li>2. Send message from Client A to Client B</li> <li>3. Let the MM expire or delete it from the server</li> <li>4. In Client B, try to retrieve the message</li> <li>5. Verify the pass criteria below</li> </ol>
Pass-Criteria	<p>The MMSC sets the X-Mms-Retrieve-Status field to Error-permanent-message-not-found = &lt;Octet 226&gt;</p> <p>AND Client B acts in a proper way according to the Retrieve Status code</p>

**5.3.4.3 MMS-1.3-int-308 - Retrieve text – Error-permanent-service-denied**

Test Case Id	MMS-1.3-int-308
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that the MMSC sets the X-Mms-Retrieve-Text field to the Retrieve text value and that Client B displays the Retrieve text when the corresponding retrieval attempt was rejected due to failure of authentication or authorization of the originating MMS Client.
Specification Reference	[MMSENC] Chapter 6.3, Table 5
SCR Reference	MMSE-C-076, MMSE-S-088
Tool	<None>
Test code	<None>
Preconditions	<ul style="list-style-type: none"> <li>-Client A</li> <li>-Client B <ul style="list-style-type: none"> <li>Has the ability to display the Retrieve text</li> </ul> </li> <li>-MMSC <ul style="list-style-type: none"> <li>It is possible to check the X-Mms-Retrieve-Text field in the server log.</li> <li>The MMSC is set to not authorize retrieval attempts from Client B.</li> </ul> </li> </ul>
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM header: To-field is set to Client B.</li> <li>3. In MM content: In the message text part, enter the text “Hello world”.</li> <li>4. In Client A, send MM to Client B.</li> <li>5. In Client B, try to download the MM.</li> <li>6. Verify the pass criteria below.</li> </ol>
Pass-Criteria	<p>Client B fails to download the MM since the retrieval attempt was rejected by the MMSC due to failure of authentication or authorization. The MMSC sets the X-Mms-Retrieve-Text field to the Retrieve text value. The description may be based on the status code “Error-permanent-service-denied”</p> <p>AND Client B is displaying the Retrieve text.</p>

**5.3.4.4 MMS-1.3-int-309 - Retrieve text – Error-permanent-message-not-found**

Test Case Id	MMS-1.3-int-309
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that the MMSC sets the X-Mms-Retrieve-Text field to the Retrieve text value and that Client B displays the Retrieve text when the content location URL in the retrieval attempt does not point to an MM.
Specification Reference	[MMSENC] Chapter 6.3, Table 5
SCR Reference	MMSE-C-076, MMSE-S-088
Tool	<None>
Test code	<None>
Preconditions	<p>-Client A</p> <p>-Client B Has the ability to display the Retrieve text Retrieval mode set to deferred</p> <p>-MMSC It is possible to check the X-Mms-Retrieve-Text field in the server log. It is possible to delete the MM from the server.</p>
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM header: To-field is set to Client B.</li> <li>3. In MM content: In the message text part, enter the text "Hello world".</li> <li>4. In Client A, send MM to Client B.</li> <li>5. Let the MM expire and make sure it is deleted from the server.</li> <li>6. In Client B, try to retrieve the MM.</li> <li>7. Verify the pass criteria below.</li> </ol>
Pass-Criteria	<p>Client B fails to download the MM since the content location URL in the retrieval attempt does not point to an MM. The MMSC sets the X-Mms-Retrieve-Text field to the Retrieve text value. The description may be based on the status code "Error-permanent-message-not-found"</p> <p>AND Client B is displaying the Retrieve text.</p>

## 5.4 CLIENT TRANSACTION

### 5.4.1 Message Delivery Status Report

#### 5.4.1.1 MMS-1.3-int-401 - Delivery report – Retrieved message

Test Case Id	MMS-1.3-int-401
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message with a request for delivery report is correctly sent from Client A to Client B via MMSC and that the originator can receive a delivery report with the Retrieved status after successful message delivery.
Specification Reference	[MMSENC] Chapter 6.1.1 Table 1 [MMSCTR] Chapter 6.5
SCR Reference	MMSE-C-031, MMSCTR-DRP-S-001, MMSCTR-DRP-C-001
Tool	
Test Code	
Preconditions	-Client A Capability: Delivery report request  - MMSC Setting: Allow the request of a Delivery report  -Client B
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM header: set Delivery Report Request-Field to ON.</li> <li>3. In MM content: In the message text part, enter the text “Hello World”.</li> <li>4. In Client A, send MM to Client B.</li> <li>5. In Client B, receive and open the MM.</li> <li>6. Verify the pass criteria below.</li> </ol>
Pass Criteria	Client B has received the message. Client A has received a delivery report with the Retrieved status after successful message delivery. The X-Mms-Status header has a Status-Value of Retrieved.

### 5.4.1.2 MMS-1.3-int-402 - Delivery report – Rejected message

Test Case Id	MMS-1.3-int-402
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message with a request for delivery report from Client A to Client B via MMSC and that the originator can receive a delivery report with the Rejected status after message rejection.
Specification Reference	[MMSENC] Chapter 6.1.1 Table 1 [MMSCTR] Chapter 6.5
SCR Reference	MMSE-C-031, MMSCTR-DRP-S-001, MMSCTR-DRP-C-001
Tool	
Test Code	
Preconditions	-Client A Capability: Delivery report request  - MMSC Setting: Allow the request of a Delivery report  -Client B Capability: To rejected message
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM header: set Delivery Report Request-Field to ON.</li> <li>3. In MM content: In the message text part, enter the text “Hello World”.</li> <li>4. In Client A, send MM to Client B.</li> <li>5. In Client B, wait until notification is received.</li> <li>6. In Client B, invoke MM rejection.</li> <li>7. Verify the pass criteria below.</li> </ol>
Pass Criteria	Client A has received a delivery report with the Rejected status. The X-Mms-Status header has a Status-Value of Rejected.

### 5.4.1.3 MMS-1.3-int-403 - Delivery report – Expired message

Test Case Id	MMS-1.3-int-403
Test Object	Client A and MMSC server
Test Case Description	The purpose is to verify that a message with a request for delivery report from Client A to Client B and that the originator can receive a delivery report with the Expired status after message expiration.
Specification Reference	[MMS-ENC] Chapter 6.1.1 Table 1 [MMS-CTR] Chapter 6.5
SCR Reference	MMSE-C-031, MMS-CTR-DRP-S-001, MMS-CTR-DRP-C-001
Tool	
Test Code	
Preconditions	-Client A Capability: Delivery report request  - MMSC Setting: Default Validity Period/Expiry Time is set to 1 hour or less If applicable Allow the request of a Delivery report  -Client B Setting: Switched off
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: set Delivery Report Request-Field to ON.</li><li>3. In MM content: In the message text part, enter the text “Hello World”.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client A, wait until delivery report is received.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client A has received a delivery report with the Expired status. The X-Mms-Status header has a Status-Value of Expired.

#### 5.4.1.4 MMS-1.3-int-404 - Delivery report – Multiple recipients each with Different Delivery Status

Test Case Id	MMS-1.3-int-404
Test Object	Client A, multiples of Client B and MMSC server
Test Case Description	The purpose is to verify that a message with a request for delivery report from Client A to multiple recipients and that the originator can receive a separate delivery report for each recipient, with the correct Delivery Status for each recipient after message delivery or message delivery attempt (in the case of Expired Status) to each separate recipient.
Specification Reference	[MMSENC] Chapter 6.1.1 Table 1 [MMSCTR] Chapter 6.5
SCR Reference	MMSE-C-031, MMSCTR-DRP-S-001, MMSCTR-DRP-C-001
Tool	
Test Code	
Preconditions	<ul style="list-style-type: none"> <li>-Client A <ul style="list-style-type: none"> <li>Capability:</li> <li>Delivery report request</li> </ul> </li> <li>- MMSC <ul style="list-style-type: none"> <li>Setting:</li> <li>Allow the request of a Delivery report</li> <li>Default Validity Period/Expiry Time is set to 1 hour</li> </ul> </li> <li>-1st client B <ul style="list-style-type: none"> <li>Setting:</li> <li>Retrieval mode set to immediate</li> </ul> </li> <li>-2nd and 3rd client B <ul style="list-style-type: none"> <li>Setting:</li> <li>Retrieval mode set to deferred</li> </ul> </li> <li>-4st client B <ul style="list-style-type: none"> <li>Setting:</li> <li>Switched off</li> </ul> </li> </ul>
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM header: set Delivery Report Request-Field to ON.</li> <li>3. In MM content: In the message text part, enter the text “Hello World”.</li> <li>4. In Client A, send MM to 4 Client Bs. NOTE: Each Client B will generate a different MM Delivery Status. 1st Client B will successfully retrieve the MM immediately. The 2nd Client B will defer delivery to a later time, less than 1 hour though so as to not allow the MM to expire. The 3rd Client B will reject the MM outright. The 4th Client B SHALL remain OFF for the duration of this test case, thus the MSMC will generate an Expired Status for the 4th Client B after approximately 1 hour</li> <li>5. In 1st Client B, immediately retrieve the MM.</li> <li>6. In 2nd Client B, initially Defer the MM and at a later time (within the 1 hour Validity Period/Expiry Time requested by the sender) Retrieve the</li> </ol>

MM.

7. In 3rd Client B, reject the MM outright.
8. In Client A, wait until all 4 delivery reports have arrived
9. Verify the pass criteria below.

Pass Criteria

Client A has received a separate delivery report for each recipient, with the correct Delivery Status for each recipient after message delivery or message delivery attempt (in the case of Expired Status) to each separate recipient.

## 5.4.2 Message Read-Reply Status Report

### 5.4.2.1 MMS-1.3-int-405 - Read-Reply report Date

Test Case Id	MMS-1.3-int-405
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message with a request for Read-Reply report is correctly sent from Client A to Client B via MMSC and that the read report contains the date on which the message was read
Specification Reference	[MMS-ENC] Chapter 6.7.1 Table 10, Table 11
SCR Reference	MMSE-RDR-C-001, MMSE-RDR-C-002, MMSE-RDR-C-003, MMSE-S-080,
Tool	May require tool
Test Code	
Preconditions	<ul style="list-style-type: none"> <li>-Client A           <ul style="list-style-type: none"> <li>Capability:</li> <li>Read Report request</li> </ul> </li> <li>- MMSC           <ul style="list-style-type: none"> <li>Setting:</li> <li>Allow the request of a Read-Reply report by the sender</li> </ul> </li> <li>-Client B           <ul style="list-style-type: none"> <li>Capability:</li> <li>Sending of Read-Reply report with the Date Field</li> <li>Setting:</li> <li>Allow of sending Read-Reply reports</li> </ul> </li> </ul>
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM header: Read-Reply Report Request-Field is set to ON.</li> <li>3. In MM content: In the message text part, enter the text "Hello World".</li> <li>4. In Client A, send MM to Client B.</li> <li>5. In Client B, receive MM.</li> <li>6. In Client B, accept Read-Reply report to be sent and open the received MM.</li> <li>7. Verify the pass criteria below.</li> </ol>
Pass Criteria	Client A has received a Read-Reply report with the date on which the message was read

### 5.4.2.2 MMS-1.3-int-406 - Read-Reply report Date set by server

Test Case Id	MMS-1.3-int-406
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message with a request for Read-Reply report is correctly sent from Client A to Client B via MMSC and that the originator can receive a read report after message has been read and that the current date of the read report is set by the MMSC when not set by Client B.
Specification Reference	[MMSENC] Chapter 6.7.1 Table 10, Table 11
SCR Reference	MMSE-RDR-C-001, MMSE-RDR-C-002, MMSE-RDR-C-003, MMSE-S-080,
Tool	Tool required
Test Code	
Preconditions	-Client A Capability: Read Report request  - MMSC Setting: Allow the request of a Read-Reply report by the sender  -Client B Capability: Sending of Read-Reply report without the Date Field Setting: Allow of sending Read-Reply reports
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: Read-Reply Report Request-Field is set to ON.</li><li>3. In MM content: In the message text part, enter the text "Hello World".</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive MM.</li><li>6. In Client B, accept Read-Reply report to be sent and open the received MM. Do not report date.</li><li>7. Verify the pass criteria below.</li></ol>
Pass Criteria	Client A has received a Read-Reply report with the date on which the message was read

### 5.4.2.3 MMS-1.3-int-407 - Read-Reply Report when sending to multiple recipients

Test Case Id	MMS-1.3-int-407
Test Object	Client A, multiples of Client B and MMSC server
Test Case Description	The purpose is to verify that a message with a request for a Read-Reply report is correctly sent from Client A to multiple recipients via MMSC and that the originator can receive a separate and correct Read-Reply report from each recipient after the message has been read by each recipient.
Specification Reference	[MMSENC] Chapter 6.7.1 Table 10, Table 11
SCR Reference	MMSE-RDR-C-001, MMSE-RDR-C-002, MMSE-RDR-C-003, MMSE-S-080,
Tool	
Test Code	
Preconditions	<ul style="list-style-type: none"> <li>-Client A <ul style="list-style-type: none"> <li>Capability: <ul style="list-style-type: none"> <li>Read Report request</li> </ul> </li> </ul> </li> <li>- MMSC <ul style="list-style-type: none"> <li>Setting: <ul style="list-style-type: none"> <li>Allow the request of a Read-Reply report by the sender</li> </ul> </li> </ul> </li> <li>-Three Client B <ul style="list-style-type: none"> <li>Capability: <ul style="list-style-type: none"> <li>Sending of Read-Reply report</li> </ul> </li> <li>Setting: <ul style="list-style-type: none"> <li>Allow sending of Read-Reply reports</li> </ul> </li> </ul> </li> </ul>
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM header: Read-Reply Report Request-Field is set to ON.</li> <li>3. In MM content: In the message text part, enter the text "Hello World".</li> <li>4. In Client A, send MM to 3 Client Bs.</li> <li>5. In each Client B, receive MM.</li> <li>6. In one client B, accept Read-Reply report to be sent and delete MM without reading it.</li> <li>7. In the other two Client Bs, accept Read-Reply report to be sent and read the MM.</li> <li>8. Verify the pass criteria below.</li> </ol>
Pass Criteria	Client A receives a separate Read-Reply report from 2 recipients that the messages was read, a Read-Reply report from the client B that the message was deleted without being read.

#### 5.4.2.4 MMS-1.3-int-408 - Read-Reply report when sending to single recipient

Test Case Id	MMS-1.3-int-408
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message with a request for Read-Reply report is correctly sent from Client A to Client B via MMSC and that the originator can receive a read report after message has been read
Specification Reference	[MMSENC] Chapter 6.7.1 Table 10, Table 11
SCR Reference	MMSE-RDR-C-001, MMSE-RDR-C-002, MMSE-RDR-C-003, MMSE-S-080,
Tool	
Test Code	
Preconditions	-Client A Capability: Read Report request  - MMSC Setting: Allow the request of a Read-Reply report by the sender  -Client B Capability: Sending of Read-Reply report Setting: Allow sending of Read-Reply
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: Read-Reply Report Request-Field is set to ON.</li><li>3. In MM content: In the message text part, enter the text "Hello World".</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive MM.</li><li>6. In Client B, accept Read-Reply report to be sent and open the received MM.</li><li>7. Verify the pass criteria below.</li></ol>
Pass Criteria	Client A has received a Read-Reply report with some indication or status of ""Read"".

## 5.4.3 Forwarding

### 5.4.3.1 MMS-1.3-int-409 - Forward without Prior retrieval - Previously sent By field

Test Case Id	MMS-1.3-int-409
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message that is forwarded without prior retrieval has the X-Mms Previously-Sent-By field set to the originator of the initial message.
Specification Reference	[MMSENC] Chapter 6.3 Table 5, Chapter 6.5
SCR Reference	MMSE-C-081
Tool	
Test Code	
Preconditions	<p>-Client A</p> <p>-1st Client B</p> <p>Capability</p> <p>    Forward without prior retrieval     Setting:     Retrieval mode set to deferred</p> <p>-2nd Client B</p> <p>Capability</p> <p>    Support of X-Mms -Previously-Sent-By field so that its status can be checked from the UI.</p> <p>-MMSC</p>
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM header: To-field is set to Client B.</li> <li>3. In MM content: In the message text part, enter the text "Hello World".</li> <li>4. In Client A, send MM to 1st Client B.</li> <li>5. In 1st Client B, initiate the forwarding of the MM, without prior retrieval, to 2nd Client B.</li> <li>6. In 2nd Client B, receive and open the MM.</li> <li>7. Verify the pass criteria below.</li> </ol>
Pass Criteria	The 2nd Client B has received the message successfully and the message is reasonably presented AND the X-Mms -Previously-Sent-By field is set to the original sender.

### 5.4.3.2 MMS-1.3-int-410 - Forward without Prior retrieval - Previously sent Date field

Test Case Id	MMS-1.3-int-410
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message that is forwarded without prior retrieval has the X-Mms-Previously-Sent-Date field set to the date of the initial message.
Specification Reference	[MMS-ENC] Chapter 6.3 Table 5, Chapter 6.5
SCR Reference	MMSE-C-082
Tool	
Test Code	
Preconditions	<p>-Client A</p> <p>-1st Client B</p> <p>Capability</p> <p style="padding-left: 40px;">Forward without prior retrieval</p> <p style="padding-left: 40px;">Setting:</p> <p style="padding-left: 80px;">Retrieval mode set to deferred</p> <p>-2nd Client B</p> <p>Capability</p> <p style="padding-left: 40px;">Support of X-Mms-Previously-Sent-Date field so that its status can be checked from the UI.</p> <p>-MMSC</p>
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM header: To-field is set to Client B.</li> <li>3. In MM content: In the message text part, enter the text "Hello World".</li> <li>4. In Client A, send MM to 1st Client B.</li> <li>5. In 1st Client B, initiate the forwarding of the MM, without prior retrieval, to 2nd Client B.</li> <li>6. In 2nd Client B, receive and open the MM.</li> <li>7. Verify the pass criteria below.</li> </ol>
Pass Criteria	The 2nd Client B has received the message successfully and the message is reasonably presented AND the X-Mms-Previously-Sent-Date field is set to the original date.

### 5.4.3.3 MMS-1.3-int-411 - Forward without Prior retrieval

Test Case Id	MMS-1.3-int-411
Test Object	Client A, multiples of Client B and MMSC server
Test Case Description	The purpose is to verify that a message addressed to a client can be forwarded without prior retrieval. The originally addressed client shall NOT retrieve the message. The messages forwarded from one client to another client shall be received in full and be reasonably presented.
Specification Reference	[MMS-ENC] Chapter 6.3 Table 5, Chapter 6.5
SCR Reference	Invalid SCR reference as it is obsolete in OMA-TS-MMS-ENC-V1_3
Tool	
Test Code	
Preconditions	-Client A -1st Client B Setting: Retrieval mode set to deferred -2nd Client B -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: In the message text part, enter the text "Hello World".</li><li>4. In Client A, send MM to 1st Client B.</li><li>5. In 1st Client B, initiate the forwarding of the MM, without prior retrieval, to 2nd Client B.</li><li>6. In 2nd Client B, receive and open the MM.</li><li>7. Verify the pass criteria below.</li></ol>
Pass Criteria	The 2nd Client B has received the message successfully and the message is reasonably presented.

#### 5.4.3.4 MMS-1.3-int-412 - Forward without Prior retrieval- Validity period (Expiry-value) set by Client when forwarding

Test Case Id	MMS-1.3-int-412
Test Object	Client A, 1 <sup>st</sup> Client B, 2 <sup>nd</sup> Client B and MMSC server
Test Case Description	The purpose is to verify that a message forwarded with a Expiry -value, set by the Client, is accepted by the MMSC.
Specification Reference	[MMS-ENC] Chapter 6.1 Table 1
SCR Reference	MMSE-FWD-C-010 (X-Mms-Expiry field)
Tool	
Test Code	
Preconditions	<p>-Client A</p> <p>Capability</p> <p>Support of setting Validity period (Expiry-value) of the MM.</p> <p>- 1<sup>st</sup> Client B</p> <p>Capability</p> <p>Forward without prior retrieval</p> <p>Setting:</p> <p>Download option is set to Deferred Retrieval mode</p> <p>-2<sup>nd</sup> Client B</p> <p>Setting:</p> <p>Download option is set to Deferred Retrieval mode</p> <p>-MMSC</p> <p>Setting:</p> <p>Allow and abide by the sender's Validity Period/Expiry Time settings of 1 hour for the MM message</p> <p>Default message expiration time on the MMSC should be longer than that set on Client A (it is recommended to set the MMSC default Validity Period/Expiry Time to be at least 24 hours) and the MMSC should not override message expiration time set by Client A</p>
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM header: Validity Period/Expiry Time to 1 hour (or lowest possible value).</li> <li>3. In MM content: In the message text part, enter the text "Hello World".</li> <li>4. In Client A, send MM to 1st Client B.</li> <li>5. In 1st Client B, initiate the forwarding of the MM, without prior retrieval, to 2nd Client B.</li> <li>6. Never retrieve the MM in 2<sup>nd</sup> Client B</li> <li>7. Verify the pass criteria below.</li> </ol>

## Pass Criteria

The message has expired and MMSC has processed and delivered the notification to 2<sup>nd</sup> Client B. Client B attempts to download the message but fails to retrieve the message.

### 5.4.3.5 MMS-1.3-int-413 - Forward without Prior retrieval- Forwarding Delivery report – Retrieved message

Test Case Id	MMS-1.3-int-413
Test Object	Client A, two Client Bs and MMSC server
Test Case Description	The purpose is to verify that a message addressed to a client can be forwarded without prior retrieval. The originally addressed client shall NOT retrieve the message. The messages forwarded from one client to another client shall be received in full and be reasonably presented. The forwarding Client B can receive a delivery report with the Retrieved status after successful message delivery.
Specification Reference	[MMS-ENC] Chapter 6.5.1 Table 7
SCR Reference	MMSE-FWD-C-013
Tool	
Test Code	
Preconditions	-Client A  - MMSC Setting: Allow the request of a Delivery report  -1st Client B Capability: Forward without prior retrieval ,To request a Delivery report  -2nd Client B
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM content: In the message text part, enter the text “Hello World”.</li> <li>3. In Client A, send MM to Client B.</li> <li>4. In 1st Client B, initiate the forwarding of the MM, without prior retrieval, to 2nd Client B set Delivery Report Request-Field to ON.</li> <li>5. In 2nd Client B, receive and open the MM.</li> <li>6. Verify the pass criteria below.</li> </ol>
Pass Criteria	2nd Client B has received the message and 1st Client B has received a delivery report with the Retrieved status after successful message delivery. The X-Mms-Status header has a Status-Value of Retrieved.

### 5.4.3.6 MMS-1.3-int-414 - Forward without Prior retrieval Forwarding Delivery report – Rejected message

Test Case Id	MMS-1.3-int-414
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message addressed to a client can be forwarded without prior retrieval. The originally addressed client shall NOT retrieve the message. The forwarding Client B can receive a delivery report with the Rejected status after message rejection.
Specification Reference	[MMSENC] Chapter 6.5.1 Table 7
SCR Reference	MMSE-FWD-C-013
Tool	
Test Code	
Preconditions	-Client A  - MMSC Setting: Allow the request of a Delivery report  -1st Client B Capability: To request a Delivery report  -2nd Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM content: In the message text part, enter the text “Hello World”.</li><li>3. In Client A, send MM to Client B.</li><li>4. In 1st Client B, initiate the forwarding of the MM, without prior retrieval, to 2nd Client B set Delivery Report Request-Field to ON.</li><li>5. In 2nd Client B, reject the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	1st Client B has received a delivery report with the Rejected status. The X-Mms-Status header has a Status-Value of Rejected.

### 5.4.3.7 MMS-1.3-int-415 - Forward without Prior retrieval Forwarding Delivery report – Expired message

Test Case Id	MMS-1.3-int-415
Test Object	Client A, two Client B and MMSC server
Test Case Description	The purpose is to verify that a message addressed to a client can be forwarded without prior retrieval. The originally addressed client shall NOT retrieve the message. The forwarding Client B can receive a delivery report with the Expired status after message expiration.
Specification Reference	[MMSENC] Chapter 6.5.1 Table 7
SCR Reference	MMSE-FWD-C-013
Tool	
Test Code	
Preconditions	-Client A  - MMSC Setting: Allow the request of a Delivery report  -1st Client B Capability: To request a Delivery report  -2nd Client B Setting: Switched off –
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM content: In the message text part, enter the text “Hello World”.</li> <li>3. In Client A, send MM to 1st Client B.</li> <li>4. In 1st Client B, initiate the forwarding of the MM, without prior retrieval, to 2nd Client B set Delivery Report Request-Field to ON.</li> <li>5. Verify the pass criteria below.</li> </ol>
Pass Criteria	1st Client B has received a delivery report with the Expired status. The X-Mms-Status header has a Status-Value of Expired.

### 5.4.3.8 MMS-1.3-int-416 - Forward without Prior retrieval Read-Report when forwarding to single recipient

Test Case Id	MMS-1.3-int-416
Test Object	Client A, two Client B and MMSC server
Test Case Description	The purpose is to verify that a message addressed to a client can be forwarded without prior retrieval. The originally addressed client shall NOT retrieve the message. The forwarding Client B can receive a Read Report after message has been read.
Specification Reference	[MMS-ENC] Chapter 6.5.1 Table 7
SCR Reference	MMSE-FWD-C-014
Tool	
Test Code	
Preconditions	-Client A  - MMSC Setting: Allow the request of a Read Report  -1st Client B Capability: To request a Read Report  -2 <sup>nd</sup> Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM content: In the message text part, enter the text "Hello World".</li><li>3. In Client A, send MM to 1st Client B.</li><li>4. In 1st Client B, initiate the forwarding of the MM, without prior retrieval, to 2nd Client B set Read Report Request-Field to ON.</li><li>5. In 2nd Client B, receive the MM.</li><li>6. In 2nd Client B, accept Read-Reply report to be sent and open the received MM.</li><li>7. Verify the pass criteria below.</li></ol>
Pass Criteria	1st Client B has received a Read Report with some indication or status of "Read".

## 5.5 CLIENT B

### 5.5.1 Download options

#### 5.5.1.1 MMS-1.3-int-501 - Download options – Immediate retrieval

Test Case Id	MMS-1.3-int-501
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message is correctly sent from Client A to Client B and that the message is immediately retrieved by using the Immediate Retrieval mode.
Specification Reference	[MMSCTR] Chapter 6.3.1 [MMSCTR] Chapter 6.2.1
SCR Reference	MMSCTR-FTC-S-002, MMSCTR-NTF-C-003
Tool	
Test Code	
Preconditions	-Client A  - MMSC  -Client B Setting: Download option is set to Immediate Retrieval mode
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM header: To-field is set to Client B.</li> <li>3. In MM content: In the message text part, enter the text “Hello World”.</li> <li>4. In Client A, send MM to Client B.</li> <li>5. In Client B, receive and open the MM.</li> <li>6. Verify the pass criteria below.</li> </ol>
Pass Criteria	Client B has retrieved the messages immediately and responded with M-NotifyResp.ind to the MMSC with the message retrieval status code set to Retrieved. The X-Mms-Status field SHALL have a Status-value of Retrieved.

### 5.5.1.2 MMS-1.3-int-502 - Download options – Deferred retrieval

Test Case Id	MMS-1.3-int-502
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message is correctly sent from Client A to Client B and that the message is retrieved by using the Deferred Retrieval mode.
Specification Reference	[MMSCTR] Chapter 6.3.1 [MMSCTR] Chapter 6.2.1
SCR Reference	MMSCTR-FTC-S-002, MMSCTR-NTF-C-003
Tool	
Test Code	
Preconditions	-Client A  - MMSC  -Client B Setting: Download option is set to Deferred Retrieval mode
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: In the message text part, enter the text “Hello World”.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the notification and initially responded with M-NotifyResp.ind to the MMSC with the message retrieval status code set to Deferred. The X-Mms-Status field SHALL have a Status-value of Deferred. After user interaction, client B has successfully downloaded the message and sent the M-acknowledge.ind.

### 5.5.1.3 MMS-1.3-int-503 - Download options – Rejected retrieval

Test Case Id	MMS-1.3-int-503
Test Object	Client A, Client B and MMSC server
Test Case Description	The purpose is to verify that a message is correctly sent from Client A to Client B and that Client B can reject the messages and not attempt message download.
Specification Reference	[MMSCTR] Chapter 6.3.1 [MMSCTR] Chapter 6.2.1
SCR Reference	MMSCTR-FTC-S-002, MMSCTR-NTF-C-003
Tool	
Test Code	
Preconditions	-Client A  - MMSC  -Client B Setting: Download option is set to Rejected Retrieval mode
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: In the message text part, enter the text “Hello World”.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, reject MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the notification. Client B has successfully rejected the message by responding with M-NotifyResp.ind to the MMSC with the message retrieval status code set to Rejected.

**5.5.1.4 MMS-1.3-int 508 - Recommended Retrieval Mode**

Test Case Id	MMS-1.3-int-508
Test Object	MMSC Server, Client B
Test Case Description	Verify that the MMSC Server supports the indication of the Recommended Retrieval Mode in the MMS notification and that the recipient MMS client takes this indication into consideration.
Specification Reference	[MMSENC] 6.2
SCR Reference	MMSE-NTF-C-020
Tool	N/a
Test Code	N/a
Preconditions	MMSC Server supports X-Mms-Recommended-Retrieval-Mode and is configured to set this field to manual in the MMS notification of this test case Client B is configured to automatically retrieve the messages
Test Procedure	<ol style="list-style-type: none"> <li>1) In client A, compose an MM</li> <li>2) In client A, send the MM to client B</li> <li>3) The MMSC Server sends the MMS notification including the X-Mms-Recommended-Retrieval-Mode field set to manual</li> <li>4) Client B receives the MMS notification</li> <li>5) In client B, check that the message is not automatically retrieved</li> <li>6) In client B, manually retrieve the message.</li> </ol>
Pass-Criteria	The MMSC Server includes in the MMS notification the X-Mms-Recommended-Retrieval-Mode field set to manual. The MM is not automatically retrieved regardless of the retrieval mode configuration of Client B.

**5.5.1.5 MMS-1.3-int-504 - DRM support – Forward Lock**

Test Case Id	MMS-1.3-int-504
Test Object	Client B
Test Case Description	The purpose is to verify that the terminal is able to receive a message containing DRM protected content and that the received objects are properly protected.
Specification Reference	[MMSCONF] Chapter 7.1.4
SCR Reference	MMSCONF-MED-C-022
Tool	The Client B can not send messages containing protected content, this must be sent from an email client or an MMS tool
Test code	
Preconditions	-Client B
Test Procedure	<ol style="list-style-type: none"> <li>1. PDU, containing protected content which an email client or MMS tool, is sent to Client B</li> <li>2. In Client B, receive and open the MM containing DRM protected content</li> <li>3. In client B, try to forward the MM to client A</li> </ol>
Pass-Criteria	<p>The PDU containing protected content passes transparently through the MMSC</p> <p>Client B receives the protected content and the received message is reasonably presented</p> <p>Verify that the received objects are properly protected and cannot be forwarded.</p>

### 5.5.1.6 MMS-1.3-int-505 - DRM - Super distribution -Message presentation with valid rights

Test Case Id	MMS-1.3-int-505
Test Object	Client A Client B
Test Case Description	The purpose of this test is to verify that the MMS Client is able to share the protected content using so called super distribution when the valid rights are available to the user.
Specification Reference	[MMSCONF] 16.2
SCR Reference	
Tool	MMS Conformance tool
Test Code	
Preconditions	<ul style="list-style-type: none"><li>- Client A</li><li>- Client B<ul style="list-style-type: none"><li>terminals supports OMA DRM Separate delivery protection mechanisms</li></ul></li><li>- Server<ul style="list-style-type: none"><li>MMC connected to a DRM server or equivalent.</li></ul></li></ul>
Test Procedure	<ol style="list-style-type: none"><li>1. In test tool or content server, create MM that contains a combination of DRM Message(s) and DCF's protected objects (note: rights to be delivered separately)</li><li>2. In test tool or content server, send MM to Client A</li><li>3. In Client A, receive and open MM</li><li>4. In Client A, receive valid rights and present the content</li><li>5. In Client A forward the MM to Client B</li><li>6. In Client B, receive an open MM</li><li>7. In Client B, receive valid rights and present the content</li><li>8. Verify pass criteria below</li></ol>
Pass Criteria	Client B presents the MM reasonable with the protected content

### 5.5.1.7 MMS-1.3-int-509 - Message presentation with valid rights: Combined delivery

Test Case Id	MMS-1.3-int-509
Test Object	Client B, MMSC
Test Case Description	The purpose of this test is to verify that the Client is able to present a MM containing DRM combined delivery protected content when the valid rights are available to the user.
Specification Reference	[MMSCONF] 16.2
SCR Reference	
Tool	Test Tool or Server
Test Code	
Preconditions	-Client B  terminal supports OMA DRM Combined delivery protection mechanisms  - Test Tool or Server available and configured so that an MM with DRM content can be submitted via the MMSC under test.
Test Procedure	<ol style="list-style-type: none"> <li>1. In test tool or content server, create MM that contains a combination of DRM Message(s) and DCF's protected objects and send together with the valid rights to visualize the content (Combined delivery)</li> <li>2. In test tool, send MM via MMSC to Client B</li> <li>3. In Client B, receive MM</li> <li>4. Verify pass criteria below</li> </ol>
Pass Criteria	Client B presents the MM with the protected content

### 5.5.1.8 MMS-1.3-int-510 - Message presentation with valid rights: Separate delivery

Test Case Id	MMS-1.3-int-510
Test Object	Client B, MMSC
Test Case Description	The purpose of this test is to verify that the MMS Client is able to present the protected content using separate delivery when the valid rights are available to the user.
Specification Reference	[MMSCONF] 16.2
SCR Reference	
Tool	Test Tool or Server
Test Code	
Preconditions	-Client B  terminal supports OMA DRM Separate delivery protection mechanisms  - Test Tool or Server available and configured so that an MM with DRM content can be submitted via the MMSC under test.
Test Procedure	9. In test tool or content server, create MM that contains a combination of DRM Message(s) and DCF's protected objects (note: rights to be delivered separately)  10. In test tool, send MM via MMSC to Client B  11. In Client B, receive MM  12. In Client B, retrieve valid rights to handle the protected content if necessary  13. Verify pass criteria below
Pass Criteria	Client B presents the MM with the protected content

### 5.5.1.9 MMS-1.3-int-511 - Message presentation with rights expired: Combined delivery

Test Case Id	MMS-1.3-int-511
Test Object	Client B, MMSC
Test Case Description	The purpose of this test case is to verify that the client can not visualize a multimedia message containing an DRM combined delivery protected object if the rights are expired.
Specification Reference	[MMSCONF] 16.2
SCR Reference	
Tool	Test Tool or Server
Test Code	
Preconditions	-Client B  terminal supports OMA DRM Combined delivery protection mechanisms  - Test Tool or Server available and configured so that an MM with DRM content can be submitted via the MMSC under test.
Test Procedure	<ol style="list-style-type: none"><li>1. In test tool or content server, create MM that contains a combination of DRM Message(s) and DCF's protected objects and send together with the expired rights to visualize the content (Combined delivery)</li><li>2. In test tool, send MM via MMSC to Client B</li><li>3. In Client B, receive MM</li><li>4. Verify pass criteria (a) or (b) below</li></ol>
Pass Criteria	<ol style="list-style-type: none"><li>a) Client B presents the MM but without any protected content (note: the terminal could prompt a message indicating that the DRM protected content could not be presented) part.</li><li>b) Client B restricts the presentation of the whole MM (note: the terminal could prompt a message indicating that the MM message could not be presented because a valid rights object was not available to present the protected content contained in the MM)</li></ol>

### 5.5.1.10 MMS-1.3-int-512 - Message presentation without valid rights: Separate delivery

Test Case Id	MMS-1.3-int-512
Test Object	Client B, MMSC
Test Case Description	The purpose of this test is to verify that, in the absence of a required valid rights object for a protected content within an MM, the MMS Client presents the MM without the protected content, or restricts the presentation of the whole MM
Specification Reference	[MMSCONF] 16.2
SCR Reference	
Tool	Test Tool or Server
Test Code	
Preconditions	-Client B  terminal supports OMA DRM Separate delivery protection mechanisms  - Test Tool or Server available and configured so that an MM with DRM content can be submitted via the MMSC under test.
Test Procedure	<ol style="list-style-type: none"> <li>1. In test tool or content server, create MM that contains a combination of DRM Message(s) and DCF's protected objects (note: rights to be delivered separately)</li> <li>2. In test tool, send MM via MMSC to Client B</li> <li>3. In Client B, receive MM without retrieving a valid rights object</li> <li>4. Verify pass criteria (a) or (b) below</li> </ol>
Pass Criteria	<ol style="list-style-type: none"> <li>a) Client B presents the MM but without any protected content (note: the terminal could prompt a message indicating that the DRM protected content could not be presented)</li> <li>b) Client B restricts the presentation of the whole MM (note: the terminal could prompt a message indicating that the MM message could not be presented because a valid rights object was not available to present the protected content contained in the MM)</li> </ol>

### 5.5.1.11 MMS-1.3-int-506 – UAProf header exists when using WSP

Test Case Id	MMS-1.3-int-506
Test Object	Client B and MMSC
Test Case Description	The purpose is to verify that Client sends a UAProf header with the GET request when retrieving a message from the MMSC and that the MMSC receives this header. Client uses WSP and a WAP GW is between the Client B and the MMSC.
Specification Reference	[MMSCONF] Chapter 9.5.1, [MMSCTR], Chapter 7, 8.1.3
SCR Reference	MMSCONF-CAD-C-002, (Client use UAProf) MMSCTR-WSP-C-003 (Client use GET), MMSCTR-SLF-S-004 (Server support UAProf)
Tool	Sniffing tool may be needed to verify the existence of the header
Test Code	None
Preconditions	Client B supports WSP Client B setting: Immediate mode retrieval WSP is used WAP GW: A WAP GW is used between the Client and the MMSC
Test Procedure	From the MMSC send a notification to Client B (this may mean that a message needs to be sent from a client A). Client B will retrieve the message. Verify the pass criteria below.
Pass Criteria	The WSP GET request, sent by Client B contains a valid UAProf header. The HTTP GET command received by the MMSC also contains the UAProf header.

### 5.5.1.12 MMS-1.3-int-507 – UAProf header exists when using HTTP

Test Case Id	MMS-1.3-int-507
Test Object	Client B and MMSC
Test Case Description	The purpose is to verify that Client sends a UAProf header with the GET request when retrieving a message from the MMSC and that the MMSC receives this header. The Client uses HTTP.
Specification Reference	[MMSCONF] Chapter 9.5.1, [MMSCCTR], Chapter 7, 8.2.3
SCR Reference	MMSCONF-CAD-C-002, (Client use UAProf) MMSCCTR-WSP-C-003 (Client use GET), MMSCCTR-SLF-S-004 (Server support UAProf)
Tool	Sniffing tool may be needed to verify the existence of the header
Test Code	None
Preconditions	Client B supports HTTP Client B setting: Immediate mode retrieval HTTP is used
Test Procedure	1. From the MMSC send a notification to Client B (this may mean that a message needs to be sent from a client A). Client B will retrieve the message. Verify the pass criteria below.
Pass Criteria	The HTTP GET request, sent by Client B contains a valid UAProf header. The command received by the MMSC also contains the UAProf header.

## 5.6 E-MAIL Test Cases

When MM sent to email recipient the SMIL may be removed.

### 5.6.1 Send Content Object to email recipient

#### 5.6.1.1 MMS-1.3-int-601 - Send text object to email recipient

Test Case Id	MMS-1.3-int-601
Test Object	Client A, MMSC server and email recipient
Test Case Description	The purpose is to verify that a text object is correctly sent from Client A to an email recipient via MMSC and that the received message is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7.1.8
SCR Reference	MMSCONF-MED-C-002
Tool	
Test Code	
Preconditions	-Client A -MMSC -Email recipient
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM header: To-field is set to a single email address.</li> <li>3. In MM content: In the message text part, enter the text "Hello World".</li> <li>4. In Client A, send MM to Email recipient.</li> <li>5. In Email recipient, receive and open the MM.</li> <li>6. Verify the pass criteria below.</li> </ol>
Pass Criteria	Email recipient has received the message and the received message is reasonably presented.

### 5.6.1.2 MMS-1.3-int-602 - Send image object to email recipient

Test Case Id	MMS-1.3-int-602
Test Object	Client A, MMSC server and email recipient
Test Case Description	The purpose is to verify that an image object is correctly sent from Client A to an email recipient via MMSC and that the received message is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-007
Tool	
Test Code	
Preconditions	-Client A -MMSC -Email recipient
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to a single email address.</li><li>3. In MM content: Add image file/object JPG160x120.jpg to the message.</li><li>4. In Client A, send MM to Email recipient.</li><li>5. In Email recipient, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Email recipient has received the message and the received message is reasonably presented.

### 5.6.1.3 MMS-1.3-int-603 - Send audio object to email recipient

Test Case Id	MMS-1.3-int-603
Test Object	Client A, MMSC server and email recipient
Test Case Description	The purpose is to verify that an audio object is correctly sent from Client A to an email recipient via MMSC and that the received message is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-013
Tool	
Test Code	
Preconditions	-Client A -MMSC -Email recipient
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to a single email address.</li><li>3. In MM content: Add audio file/object (either Audio1NB.amr or audio1.qcp) to the message and set page timing to allow for the (Audio1NB.amr or audio1.qcp) file to be played.</li><li>4. In Client A, send MM to Email recipient.</li><li>5. In Email recipient, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Email recipient has received the message and the received message is reasonably presented.

### 5.6.1.4 MMS-1.3-int-604 - Send text, image and audio objects to email recipient

Test Case Id	MMS-1.3-int-604
Test Object	Client A, MMSC server and email recipient
Test Case Description	The purpose is to verify that that a message with multiple objects (text, image, audio and presentation) is correctly sent from Client A to an email recipient via MMSC and that the received message is reasonably presented.
Specification Reference	[MMSCONF] Chapter 7.1.7
SCR Reference	MMSCONF-MED-C-023
Tool	
Test Code	
Preconditions	-Client A -MMSC
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to a single email address.</li><li>3. In MM content: In the message body, create one page and enter the text "Hello World", add the image JPG80x60.jpg file/object and add the file/object (either audio1NB.amr or audio1.qcp).</li><li>4. In Client A, send MM to Email recipient.</li><li>5. In Email recipient, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Email recipient has received the message and all objects exist and are reasonably presented.

## 5.6.2 Receive Content Object from email recipient

### 5.6.2.1 MMS-1.3-int-605 - Receive text, image and audio objects from email

Test Case Id	MMS-1.3-int-605
Test Object	Email recipient, MMSC server, Client B
Test Case Description	The purpose is to verify that a message with multiple objects (text, image, audio and presentation) is correctly sent from an email sender to an MMS client (Client B) via MMSC and that the received message is reasonably presented.
Specification Reference	[MMS-ENC] Chapter 5
SCR Reference	MMSE-C-005, MMSE-C-013
Tool	
Test Code	
Preconditions	<p>-Email sender          Capability:            encode image/jpeg            audio/(either amr or 13k speech)            text/plain</p> <p>-MMSC</p> <p>- Client B</p>
Test Procedure	<ol style="list-style-type: none"> <li>1. In Email sender, create a new MM.</li> <li>2. In MM header: To-field is set to Client B.</li> <li>3. In MM content: In the message body, create one page and enter the text "Hello World", add the image JPG80x60.jpg file/object and add the file/object (either audio1NB.amr or audio1.qcp).</li> <li>4. In Email sender, send MM to Client B.</li> <li>5. In Client B, receive and open the MM.</li> <li>6. Verify the pass criteria below.</li> </ol>
Pass Criteria	Client B has received the message and all objects exist and are reasonably presented.

## 5.6.3 Send Attachment to e-mail recipient

### 5.6.3.1 MMS-1.3-int-606 - Send vCard object to email recipient

Test Case Id	MMS-1.3-int-606
Test Object	Client A, MMSC server and email recipient
Test Case Description	The purpose is to verify that a vCard2.1_MIP object is correctly sent from Client A to an email recipient via MMSC and that the received vCard2.1_MIP is textually correct.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-016
Tool	
Test Code	
Preconditions	-Client A Capability: vCard2.1_MIP  -MMSC  -Email recipient
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new Address Book entry containing all possible fields of the reference content "John Doe.vcf" as supported by the MMI of Client A</li><li>2. In Client A, create a new MM with the vCard object from the above mentioned address book entry.</li><li>3. In MM header: To-field is set to a single email address.</li><li>4. In Client A, send MM to Email recipient.</li><li>5. In Email recipient, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Email recipient has received the message and the received vCard2.1_MIP object is textually correct.

### 5.6.3.2 MMS-1.3-int-607 - Send vCalendar object to email recipient

Test Case Id	MMS-1.3-int-607
Test Object	Client A, MMSC server and email recipient
Test Case Description	The purpose is to verify that a vCalendar1.0_MIP object correctly sent from Client A to an email recipient via MMSC and that the received vCalendar1.0_MIP is textually correct.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-027
Tool	
Test Code	
Preconditions	-Client A Capability: vCalendar1.0_MIP  -MMSC  -Email recipient
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new Calender entry containing all possible fields of the reference content "Christmas.vcs" as supported by the MMI of Client A</li><li>2. In Client A, create a new MM with the above defined vCalendar1.0_MIP object.</li><li>3. In MM header: To-field is set to a single email address.</li><li>4. In Client A, send MM to Email recipient.</li><li>5. In Email recipient, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Email recipient has received the message and the received vCalendar1.0_MIP object is textually correct.

## 5.6.4 Receive Attachment from e-mail

### 5.6.4.1 MMS-1.3-int-608 - Receive vCard object from email

Test Case Id	MMS-1.3-int-608
Test Object	Client B, MMSC server and email
Test Case Description	The purpose is to verify that a vCard object correctly sent from an email sender to an MMS client (Client B) via MMSC and that the received vCard is textually correct.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-016
Tool	
Test Code	
Preconditions	-Email sender Capability: vCard  -MMSC  - Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Email sender, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add a business vCard object “John Doe.vcf” to the message.</li><li>4. In Email sender, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the received vCard is textually correct.

### 5.6.4.2 MMS-1.3-int-609 - Receive vCalendar object from email

Test Case Id	MMS-1.3-int-609
Test Object	Client A, MMSC server and email
Test Case Description	The purpose is to verify that a vCalendar object is correctly sent from Client A to an email recipient via MMSC and that the received vCalendar is textually correct.
Specification Reference	[MMSCONF] Chapter 7
SCR Reference	MMSCONF-MED-C-027
Tool	
Test Code	
Preconditions	-Email sender Capability: vCalendar  -MMSC  - Client B
Test Procedure	<ol style="list-style-type: none"><li>1. In Email sender, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add a vCalendar object “Christmas.vcs” to the message.</li><li>4. In Email sender, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message and the received vCalendar is textually correct.

## 5.7 Content Adaptation

### 5.7.1 General functions

#### 5.7.1.1 MMS-1.3-int-801 - Function to enable or disable major content adaptation

Test Case Id	MMS-1.3-int-801
Test Object	Client A, Client B and MMSC
Test Case Description	The purpose is to verify that the MMS Relay/Server has mechanisms to enable or disable major content adaptation.
Specification Reference	[MMSCONF] Chapter 9.4.2
SCR Reference	MMSCONF-CAG-S-003, MMSCONF-CAG-S-004
Tool	
Test Code	
Preconditions	<ul style="list-style-type: none"> <li>-Client A           <ul style="list-style-type: none"> <li>Capability:               <ul style="list-style-type: none"> <li>image rich class conformant</li> </ul> </li> <li>Setting:               <ul style="list-style-type: none"> <li>Creation Mode set to Restricted</li> </ul> </li> </ul> </li> <li>-Client B           <ul style="list-style-type: none"> <li>Capability:               <ul style="list-style-type: none"> <li>image basic class conformant</li> </ul> </li> <li>Setting:               <ul style="list-style-type: none"> <li>Creation Mode set to Restricted</li> </ul> </li> </ul> </li> <li>-MMSC           <ul style="list-style-type: none"> <li>Setting               <ul style="list-style-type: none"> <li>Content adaptation enabled</li> </ul> </li> </ul> </li> </ul>
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. Header: To-field is set to Client B.</li> <li>3. Content: Add image file/object JPG_99k.gif to the message.</li> <li>4. In Client A, send MM to Client B.</li> <li>5. In Client B, receive MM.</li> <li>6. Verify the pass criteria below.</li> <li>7. Disable Content adaptation on the MMSC server</li> <li>8. In Client A, create a new MM.</li> <li>9. Header: To-field is set to Client B.</li> <li>10. Content: Add image file/object JPG_99k.gif to the message.</li> <li>11. In Client A, send MM to Client B.</li> <li>12. In Client B, receive MM.</li> </ol>

13. Verify the pass criteria below.

Pass Criteria

In Client B the first message is content adapted to Image Basic, the second is not content adapted.

### 5.7.1.2 MMS-1.3-int-802 - Availability of original content after major content adaptation

Test Case Id	MMS-1.3-int-802
Test Object	Client A, Client B and MMSC
Test Case Description	The purpose is to verify that the MMS Relay/Server has a mechanism to make available the original content of the MM to the end-user when major content adaptation is or needs to be applied
Specification Reference	[MMSCONF] Chapter 9.4.2
SCR Reference	MMSCONF-CAG-S-005, MMSCONF-CAG-S-006
Tool	Test Tool Required
Test Code	
Preconditions	<p>-Client A  Capability:  image rich class conformant  Setting:  Creation Mode set to Restricted</p> <p>-Client B  Capability:  image basic class conformant  Setting:  Shall be in Image Basic  Creation Mode set to Restricted</p> <p>-MMSC  Setting:  Content adaptation is enabled</p>
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. Header: To-field is set to Client B.</li> <li>3. Content: Add image file/object MIDI file, audio.mid to the message.</li> <li>4. In Client A, send MM to Client B.</li> <li>5. In Client B, receive MM.</li> <li>6. Verify the pass criteria below.</li> <li>7. Set Client B to be Image Rich</li> <li>8. In Client A, create a new MM.</li> <li>9. Header: To-field is set to Client B.</li> <li>10. Content: Add image file/object MIDI file, audio.mid to the message.</li> <li>11. In Client A, send MM to Client B.</li> <li>12. In Client B, receive MM.</li> <li>13. Verify the pass criteria below.</li> </ol>

## Pass Criteria

In Client B the first message is content adapted to Image Basic and the user is informed that the original message is available on the server, the second time the message is retrieved, by whichever means, it shall not be content adapted.

### 5.7.1.3 MMS-1.3-int-803 - Update labels in the presentation after media type adaptation

Test Case Id	MMS-1.3-int-803
Test Object	Client A, Client B and MMSC
Test Case Description	The purpose is to verify that the MMS Relay/Server updates labels in the presentation element after media type adaptation is applied
Specification Reference	[MMSCONF] Chapter 9.4.2
SCR Reference	MMSCONF-CAG-S-007,
Tool	Test Tool Required
Test Code	
Preconditions	<ul style="list-style-type: none"> <li>-Client A <ul style="list-style-type: none"> <li>Capability: <ul style="list-style-type: none"> <li>Video rich conformant</li> </ul> </li> <li>Setting: <ul style="list-style-type: none"> <li>Creation Mode set to Restricted</li> </ul> </li> </ul> </li> <li>-Client B <ul style="list-style-type: none"> <li>Capability: <ul style="list-style-type: none"> <li>image basic class conformant</li> </ul> </li> <li>Setting: <ul style="list-style-type: none"> <li>Creation Mode set to Restricted</li> </ul> </li> </ul> </li> <li>-MMSC <ul style="list-style-type: none"> <li>Setting: <ul style="list-style-type: none"> <li>Content adaptation is enabled</li> </ul> </li> </ul> </li> </ul>
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM header: To-field is set to Client B.</li> <li>3. In MM content: Add midi1.mid to the message.</li> <li>4. In Client A, send MM to Client B.</li> <li>5. In Client B, receive and open the MM.</li> <li>6. Verify the pass criteria below.</li> </ol>
Pass Criteria	Client B has received the message and it is reasonable presented. The labels in the presentation element, corresponding to the media that have been removed or whose type has changed, have been modified accordingly.

### 5.7.1.4 MMS-1.3-int-804 - Update file extensions and MIME types after media format

Test Case Id	MMS-1.3-int-804
Test Object	Client A, Client B and MMSC
Test Case Description	The purpose is to verify that the MMS Relay/Server updates the file extensions and MIME types after media format adaptation is applied.
Specification Reference	[MMSCONF] Chapter 9.4.2
SCR Reference	MMSCONF-CAG-S-008
Tool	Test Tool Required
Test Code	
Preconditions	<ul style="list-style-type: none"> <li>-Client A <ul style="list-style-type: none"> <li>Capability: <ul style="list-style-type: none"> <li>Video rich conformant</li> </ul> </li> <li>Setting: <ul style="list-style-type: none"> <li>Creation Mode set to Restricted</li> </ul> </li> </ul> </li> <li>-Client B <ul style="list-style-type: none"> <li>Capability: <ul style="list-style-type: none"> <li>image basic class conformant</li> </ul> </li> <li>Setting: <ul style="list-style-type: none"> <li>Creation Mode set to Restricted</li> </ul> </li> </ul> </li> <li>-MMSC <ul style="list-style-type: none"> <li>Setting: <ul style="list-style-type: none"> <li>Content adaptation is enabled</li> </ul> </li> </ul> </li> </ul>
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM header: To-field is set to Client B.</li> <li>3. In MM content: Add qcif_video.3gp.</li> <li>4. In Client A, send MM to Client B.</li> <li>5. In Client B, receive and open the MM.</li> <li>6. Verify the pass criteria below.</li> </ol>
Pass Criteria	Client B has received the message and it is reasonable presented. The updated media format have been modified accordingly in the file themselves and in their reference in the presentation element.

## 5.7.2 Client B in Image Basic

### 5.7.2.1 MMS-1.3-int-805 - Image resolution set to 160x120

Test Case Id	MMS-1.3-int-805
Test Object	Client A, Client B and MMSC
Test Case Description	The purpose is to verify that an image with a greater resolution than 160x120 is correctly sent from Client A larger than Image Basic Content Class to Client B in Content Class Image Basic and that the received image is less than or equal to 160x120.
Specification Reference	[MMSCONF] Chapter 9.2
SCR Reference	MMSCONF-AMJ-S-003, MMSCONF-AMN-S-001
Tool	
Test Code	
Preconditions	<ul style="list-style-type: none"> <li>-Client A <ul style="list-style-type: none"> <li>Capability: <ul style="list-style-type: none"> <li>Larger than Image Basic Content Class</li> </ul> </li> <li>Setting: <ul style="list-style-type: none"> <li>Creation Mode set to Restricted</li> </ul> </li> </ul> </li> <li>-Client B <ul style="list-style-type: none"> <li>Capability: <ul style="list-style-type: none"> <li>image basic class conformant</li> </ul> </li> <li>Setting: <ul style="list-style-type: none"> <li>Creation Mode set to Restricted</li> </ul> </li> </ul> </li> <li>-MMSC <ul style="list-style-type: none"> <li>Setting: <ul style="list-style-type: none"> <li>Content adaptation is enabled</li> </ul> </li> </ul> </li> </ul>
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM header: To-field is set to Client B.</li> <li>3. In MM content: Add image file/object JPG640x480.jpg to the message.</li> <li>4. In Client A, send MM to Client B.</li> <li>5. In Client B, receive and open the MM.</li> <li>6. Verify the pass criteria below.</li> </ol>
Pass Criteria	In Client B the received Image is less than or equal to 160x120 and is reasonably presented.

**5.7.2.2 MMS-1.3-int-806 - Size reduction to 30k, GIF87**

Test Case Id	MMS-1.3-int-806
Test Object	Client A, Client B and MMSC
Test Case Description	The purpose is to verify that a GIF87 image larger than 30k is correctly sent from Client A larger than Image Basic Content Class to Client B in Content Class Image Basic and that the received image is less than or equal to 30k.
Specification Reference	[MMSCONF] Chapter 9.2
SCR Reference	MMSCONF-AMN-S-002
Tool	
Test Code	
Preconditions	<ul style="list-style-type: none"> <li>-Client A <ul style="list-style-type: none"> <li>Capability: <ul style="list-style-type: none"> <li>Larger than Image Basic Content Class</li> </ul> </li> <li>Setting: <ul style="list-style-type: none"> <li>Creation Mode set to Restricted</li> </ul> </li> </ul> </li> <li>-Client B <ul style="list-style-type: none"> <li>Capability: <ul style="list-style-type: none"> <li>image basic class conformant</li> </ul> </li> <li>Setting: <ul style="list-style-type: none"> <li>Creation Mode set to Restricted</li> </ul> </li> </ul> </li> <li>-MMSC <ul style="list-style-type: none"> <li>Setting: <ul style="list-style-type: none"> <li>Content adaptation is enabled</li> </ul> </li> </ul> </li> </ul>
Test Procedure	<ol style="list-style-type: none"> <li>2. In Client A, create a new MM.</li> <li>3. In MM header: To-field is set to Client B.</li> <li>4. In MM content: Add image file/object GIF87a99k.gif to the message.</li> <li>5. In Client A, send MM to Client B.</li> <li>6. In Client B, receive and open the MM.</li> <li>7. Verify the pass criteria below.</li> </ol>
Pass Criteria	In Client B the received Image size is less than or equal to 30k and reasonably presented.

### 5.7.2.3 MMS-1.3-int-807 - Size reduction to 30k, JPEG

Test Case Id	MMS-1.3-int-807
Test Object	Client A, Client B and MMSC
Test Case Description	The purpose is to verify that a JPEG image larger than 30k is correctly sent from Client A larger than Image Basic Content Class to Client B in Content Class Image Basic and that the received image is less than or equal to 30k.
Specification Reference	[MMSCONF] Chapter 9.2
SCR Reference	MMSCONF-AMN-S-002
Tool	
Test Code	
Preconditions	-Client A Capability: larger than Image Basic Content Class Setting: Creation Mode set to Restricted  -Client B Capability: image basic class conformant Setting: Creation Mode set to Restricted  -MMSC Setting: Content adaptation is enabled
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add image file/object JPG_99k.gif to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	In Client B the received Image is less than or equal to 30k and reasonably presented.

### 5.7.2.4 MMS-1.3-int-808 - GIF89a image larger than 30k

Test Case Id	MMS-1.3-int-808
Test Object	Client A, Client B and MMSC
Test Case Description	The purpose is to verify that a GIF89 image larger than 30k is correctly sent from Client A larger than Image Basic Content Class to Client B in Content Class Image Basic and that the received image is less than or equal to 30k in GIF87 (or JPEG).
Specification Reference	[MMSCONF] Chapter 9.2
SCR Reference	MMSCONF-AMN-S-002
Tool	
Test Code	
Preconditions	<ul style="list-style-type: none"> <li>-Client A <ul style="list-style-type: none"> <li>Capability: <ul style="list-style-type: none"> <li>Larger Image Basic Content Class</li> </ul> </li> <li>Setting: <ul style="list-style-type: none"> <li>Creation Mode set to Restricted</li> </ul> </li> </ul> </li> <li>-Client B <ul style="list-style-type: none"> <li>Capability: <ul style="list-style-type: none"> <li>image basic class conformant</li> </ul> </li> <li>Setting: <ul style="list-style-type: none"> <li>Creation Mode set to Restricted</li> </ul> </li> </ul> </li> <li>-MMSC <ul style="list-style-type: none"> <li>Setting: <ul style="list-style-type: none"> <li>Content adaptation is enabled</li> </ul> </li> </ul> </li> </ul>
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM header: To-field is set to Client B.</li> <li>3. In MM content: Add image file/object GIF89a99k.gif to the message.</li> <li>4. In Client A, send MM to Client B.</li> <li>5. In Client B, receive and open the MM.</li> <li>6. Verify the pass criteria below.</li> </ol>
Pass Criteria	In Client B the received Image is less than or equal to 30k

### 5.7.2.5 MMS-1.3-int-809 - SP-MIDI sound

Test Case Id	MMS-1.3-int-809
Test Object	Client A, Client B and MMSC
Test Case Description	The purpose is to verify that a SP-MIDI file larger than 30k is correctly sent from Client A larger than Image Basic Content Class to Client B in Content Class Image Basic and that the received message does not contain the file.
Specification Reference	[MMSCONF] Chapter 9.2
SCR Reference	MMSCONF-AMJ-S-001
Tool	
Test Code	
Preconditions	<ul style="list-style-type: none"><li>-Client A<ul style="list-style-type: none"><li>Capability:<ul style="list-style-type: none"><li>image rich class conformant</li></ul></li><li>Setting:<ul style="list-style-type: none"><li>Creation Mode set to Restricted</li></ul></li></ul></li><li>-Client B<ul style="list-style-type: none"><li>Capability:<ul style="list-style-type: none"><li>image basic class conformant</li></ul></li><li>Setting:<ul style="list-style-type: none"><li>Creation Mode set to Restricted</li></ul></li></ul></li><li>-MMSC<ul style="list-style-type: none"><li>Setting:<ul style="list-style-type: none"><li>Content adaptation is enabled</li></ul></li></ul></li></ul>
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add image file/object MIDI file, audio.mid to the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	In Client B the received Message does not contain the SP-MIDI

### 5.7.2.6 MMS-1.3-int-810 - Video QCIF to Image reduced to 160x120

Test Case Id	MMS-1.3-int-810
Test Object	Client A, Client B and MMSC
Test Case Description	The purpose is to verify that a video file is correctly sent from Client A (either in content class Video Basic or Video rich) to Client B in Content Class Image Basic and that the received image is less than or equal to 30k and has a resolution of 160x120 or less.
Specification Reference	[MMSCONF] Chapter 9.2
SCR Reference	MMSCONF-AMJ-S-003
Tool	
Test Code	
Preconditions	<p>-Client A          Capability:              video basic class conformant          Setting:              Creation Mode set to Restricted</p> <p>-Client B          Capability:              image basic class conformant          Setting:              Creation Mode set to Restricted</p> <p>-MMSC          Setting:              Content adaptation is enabled</p> <p>-Capability to; either capture the PDU sent from the MMSC to Client B or possibility to view updated labels within Client B</p>
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM header: To-field is set to Client B.</li> <li>3. In MM content: Add image file/object sub-qcif_video.3gp to the message.</li> <li>4. In Client A, send MM to Client B.</li> <li>5. In Client B, receive and open the MM.</li> <li>6. Verify the pass criteria below.</li> </ol>
Pass Criteria	Client B received an image that is less than or equal to 30k and has a resolution of 160x120 or less. The labels in the presentation element, corresponding to the media that have been removed or whose type has changed, have been modified accordingly. The updated media format have been modified accordingly in the file themselves and in their reference in the presentation element.

### 5.7.2.7 MMS-1.3-int-818 – Video Rich to Image Basic

Test Case Id	MMS-1.3-int-818
Test Object	MMSC
Test Case Description	The purpose is to verify that a video Rich file with a size of 300k is correctly sent from Client A in content class Video Rich to Client B in Content Class Image Basic and that one ore more video frames are converted to JPEG images in Client B.
Specification Reference	[MMSCONF] Chapter 9.5.2
SCR Reference	MMSCONF-CAG-S-002; MMSCONF-AMJ-S-002; MMSCONF-MIN-S-003
Tool	
Test Code	
Preconditions	-Client A Capability: video rich class conformant  -Client B Capability: image basic class conformant  -MMSC Setting: Content adaptation is enabled and configured for JPEG image as output format
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In MM content: Add image file/object VideoRich300k.3gpto the message.</li><li>4. In Client A, send MM to Client B.</li><li>5. In Client B, receive and open the MM.</li><li>6. Verify the pass criteria below.</li></ol>
Pass Criteria	The received message in Client B contains one or more jpeg images which are converted from one or more Video frames and the message is reasonably presented.

**5.7.2.8 MMS-1.3-int-819 – SP-MIDI to AMR**

Test Case Id	MMS-1.3-int-819
Test Object	MMSC
Test Case Description	The purpose is to verify that a SP-MIDI file is correctly sent from Client A in Image Rich Content Class to Client B in Content Class Image Basic and that the received message contains an AMR audio file.
Specification Reference	[MMSCONF] Chapter 9.5.2
SCR Reference	MMSCONF-CAG-S-002
Tool	
Test Code	
Preconditions	<p>-Client A Capability: image rich class conformant</p> <p>-Client B Capability: image basic class conformant</p> <p>-MMSC Setting: Content adaptation is enabled</p>
Test Procedure	<ol style="list-style-type: none"> <li>7. In Client A, create a new MM.</li> <li>8. In MM header: To-field is set to Client B.</li> <li>9. In MM content: Add image file/object MIDI file, audio.mid to the message.</li> <li>10. In Client A, send MM to Client B.</li> <li>11. In Client B, receive and open the MM.</li> <li>12. Verify the pass criteria below.</li> </ol>
Pass Criteria	In Client B the received Message contain an AMR audio file as a result of the SP-MIDI conversion.

### 5.7.2.9 MMS-1.3-int-833 – Video Rich with multiple objects to Image Basic

Test Case Id	MMS-1.3-int-833
Test Object	MMSC
Test Case Description	The purpose is to verify that a message with multiple objects is correctly sent from Client A in Video Rich Content Class to Client B in Content Class Image Basic and that the received message contains all the objects appropriate of the receivers MM class.
Specification Reference	[MMSCONF] Chapter 9.5.2
SCR Reference	MMSCONF-CAG-S-002; MMSCONF-MAJ-S-001
Tool	
Test Code	
Preconditions	<p>-Client A Capability: Video rich class conformant</p> <p>-Client B Capability: image basic class conformant</p> <p>-MMSC Setting: Content adaptation is enabled</p>
Test Procedure	<ol style="list-style-type: none"> <li>13. In Client A, create a new MM.</li> <li>14. In MM header: To-field is set to Client B.</li> <li>15. In MM content: Add to the first slide image file/object JPG640x480.jpg and object MIDI file, audio.mid. Add to the second slide image file/object GIF640x480.jpg to the message.</li> <li>16. In Client A, send MM to Client B.</li> <li>17. In Client B, receive and open the MM.</li> <li>18. Verify the pass criteria below.</li> </ol>
Pass Criteria	In Client B the received Message contains on the first slide a JPEG image with a resolution of 160x120 and an AMR audio file as a result of the SP-MIDI conversion; on the second slide a GIF image with a resolution of 160x120. The message size is reduced to less or equal to 30k.

## 5.7.3 Client B in Image Rich

### 5.7.3.1 MMS-1.3-int-811 - Video to Image

Test Case Id	MMS-1.3-int-811
Test Object	Client A, Client B and MMSC
Test Case Description	The purpose is to verify that a video file is correctly sent from Client A (either in content class Video Basic or Video Rich) to Client B in Content Class Image Rich and that the received image is less than or equal to 100k.
Specification Reference	[MMSCONF] Chapter 9.2
SCR Reference	MMSCONF-AMJ-S-002
Tool	
Test Code	
Preconditions	<ul style="list-style-type: none"> <li>-Client A           <ul style="list-style-type: none"> <li>Capability:               <ul style="list-style-type: none"> <li>either in content class Video Basic or Video Rich</li> </ul> </li> <li>Setting:               <ul style="list-style-type: none"> <li>Creation Mode set to Restricted</li> </ul> </li> </ul> </li> <li>-Client B           <ul style="list-style-type: none"> <li>Capability:               <ul style="list-style-type: none"> <li>image rich class conformant</li> </ul> </li> <li>Setting:               <ul style="list-style-type: none"> <li>Creation Mode set to Restricted</li> </ul> </li> </ul> </li> <li>-MMSC           <ul style="list-style-type: none"> <li>Setting:               <ul style="list-style-type: none"> <li>Content adaptation is enabled</li> </ul> </li> </ul> </li> </ul>
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM header: To-field is set to Client B.</li> <li>3. In MM content: Add image file/object VideoRich300k.3gpto the message.</li> <li>4. In Client A, send MM to Client B.</li> <li>5. In Client B, receive and open the MM.</li> <li>6. Verify the pass criteria below.</li> </ol>
Pass Criteria	In Client B the received image is less than or equal to 100k

### 5.7.3.2 MMS-1.3-int-820 – Video Rich to image GIF 87a

Test Case Id	MMS-1.3-int-820
Test Object	MMSC
Test Case Description	The purpose is to verify that a video Rich file with a size of 300k is correctly sent from Client A in content class Video Rich to Client B in Content Class Image Rich and that one or more video frames are converted to GIF 87a images in Client B.
Specification Reference	[MMSCONF] Chapter 9.5.2
SCR Reference	MMSCONF-CAG-S-002; MMSCONF-AMJ-S-002
Tool	
Test Code	
Preconditions	<p>-Client A Capability: video rich class conformant</p> <p>-Client B Capability: image rich class conformant</p> <p>-MMSC Setting: Content adaptation is enabled and configured for GIF 87a image as output format</p>
Test Procedure	<ol style="list-style-type: none"> <li>7. In Client A, create a new MM.</li> <li>8. In MM header: To-field is set to Client B.</li> <li>9. In MM content: Add image file/object VideoRich300k.3gpto the message.</li> <li>10. In Client A, send MM to Client B.</li> <li>11. In Client B, receive and open the MM.</li> <li>12. Verify the pass criteria below.</li> </ol>
Pass Criteria	The received message in Client B contains one or more jpeg images which are converted from one or more Video frames and the message is reasonably presented.

### 5.7.3.3 MMS-1.3-int-821 – Video Rich to image GIF89a

Test Case Id	MMS-1.3-int-821x
Test Object	MMSC
Test Case Description	The purpose is to verify that a video file with a size of 300k is correctly sent from Client A in content class Video Rich to Client B in Content Class Image Rich and that one or more video frames are converted to GIF89a images in Client B.
Specification Reference	[MMSCONF] Chapter 9.5.2
SCR Reference	MMSCONF-CAG-S-002; MMSCONF-AMJ-S-002
Tool	
Test Code	
Preconditions	<p>-Client A Capability: video Basic class conformant</p> <p>-Client B Capability: image rich or image basic class conformant</p> <p>-MMSC Setting: Content adaptation is enabled and configured for GIF 89a image as output format</p>
Test Procedure	<p>13. In Client A, create a new MM.</p> <p>14. In MM header: To-field is set to Client B.</p> <p>15. In MM content: Add image file/object VideoRich300k.3gpto the message.</p> <p>16. In Client A, send MM to Client B.</p> <p>17. In Client B, receive and open the MM.</p> <p>18. Verify the pass criteria below.</p>
Pass Criteria	The received message in Client B contains one or more GIF89a images which are converted from one or more Video frames and the message is reasonably presented.

## 5.7.4 Client B in Video Basic

### 5.7.4.1 MMS-1.3-int-812 - Size reduction to 100k

Test Case Id	MMS-1.3-int-812
Test Object	Client A, Client B and MMSC
Test Case Description	The purpose is to verify that a video file larger than 100k is correctly sent from Client A in content class Video Rich to Client B in Content Class Video Basic and that the received video file is less than or equal to 100k.
Specification Reference	[MMSCONF] Chapter 9.2
SCR Reference	MMSCONF-AMN-S-003
Tool	
Test Code	
Preconditions	<ul style="list-style-type: none"> <li>-Client A <ul style="list-style-type: none"> <li>Capability: video rich class conformant</li> <li>Setting: Creation Mode set to Restricted</li> </ul> </li> <li>-Client B <ul style="list-style-type: none"> <li>Capability: image rich class conformant</li> <li>Setting: Creation Mode set to Restricted</li> </ul> </li> <li>-MMSC <ul style="list-style-type: none"> <li>Setting: Content adaptation is enabled</li> </ul> </li> </ul>
Test Procedure	<ol style="list-style-type: none"> <li>19. In Client A, create a new MM.</li> <li>20. In MM header: To-field is set to Client B.</li> <li>21. In MM content: VideoRich300k.</li> <li>22. In Client A, send MM to Client B.</li> <li>23. In Client B, receive and open the MM.</li> <li>24. Verify the pass criteria below.</li> </ol>
Pass Criteria	In Client B the received video is less than or equal to 100k and reasonably presented.

### 5.7.4.2 MMS-1.3-int-822 – Video MPEG4 to H263

Test Case Id	MMS-1.3-int-822
Test Object	MMSC
Test Case Description	The purpose is to verify that a MPEG4 video file is correctly sent from Client A in content class Video Basic to Client B in Content Class Video Basic and that the received video file is converted to a H263 video file.
Specification Reference	[MMSCONF] Chapter 95.2
SCR Reference	MMSCONF-CAG-S-001
Tool	
Test Code	
Preconditions	-Client A Capability: video Basic class conformant and support for sending MPEG4 video file  -Client B Capability: image rich class conformant  -MMSC Setting: Content adaptation is enabled
Test Procedure	25. In Client A, create a new MM. 26. In MM header: To-field is set to Client B. 27. In MM content: Video-mpeg4. 28. In Client A, send MM to Client B. 29. In Client B, receive and open the MM. 30. Verify the pass criteria below.
Pass Criteria	In Client B the received video file is converted to a H263 file and reasonably presented.

## 5.7.5 Additional MMSC Server Content adaptation Tests

### 5.7.5.1 MMS-1.3-int-813 - Image resolution reduction

Test Case Id	MMS-1.3-int-813
Test Object	Client A, Client B and MMSC
Test Case Description	The purpose is to verify that an image with a resolution greater than Client B's maximum image resolution is correctly sent from Client A to Client B and the received image is less than or equal to Client B's maximum image resolution.
Specification Reference	[MMSCONF] Chapter 9.2, [MMSCONF] Chapter 9.4.2
SCR Reference	MMSCONF-AMJ-S-003, MMSCONF-AMN-S-002, MMSCONF-AMN-S-001, MMSCONF-CAG-S-003, MMSCONF-CAG-S-004, MMSCONF-CAG-S-005, MMSCONF-CAG-S-006,
Tool	
Test Code	
Preconditions	Client A setting: Creation Mode set to free  MMSC setting: Content adaptation is enabled and Client B's UA Profile is added to MMSC
Test Procedure	<ol style="list-style-type: none"><li>7. In Client A, create a new MM.</li><li>8. In MM header: To-field is set to Client B.</li><li>9. In MM content: Add image file/object JPG1000x500.jpg to the message.</li><li>10. In Client A, send MM to Client B.</li><li>11. In Client B, receive and open the MM.</li><li>12. Verify the pass criteria below.</li></ol>
Pass Criteria	In Client B the received Image is less than or equal to its maximum resolution and the received image is reasonably presented.

### 5.7.5.2 MMS-1.3-int-814 - Size reduction

Test Case Id	MMS-1.3-int-814
Test Object	Client A, Client B and MMSC
Test Case Description	The purpose is to verify that a message larger than Client B's max message size is sent from Client A to Client B. With MMSC performs the content adaptation, the received message is less than or equal to Client B's max message size.
Specification Reference	[MMSCONF] Chapter 9.2
SCR Reference	MMSCONF-AMN-S-002, MMSCONF-CAG-S-003, MMSCONF-CAG-S-004, MMSCONF-CAG-S-005, MMSCONF-CAG-S-006, MMSCONF-CAG-S-007
Tool	
Test Code	
Preconditions	Client A setting: Creation Mode set to free  MMSC setting: Content adaptation is enabled and Client B's UA Profile is added to MMSC
Test Procedure	<ol style="list-style-type: none"><li>8. In Client A, create a new MM.</li><li>9. In MM header: To-field is set to Client B.</li><li>10. In MM content: Add image, audio, text and video clip to message, so that message size is larger than Client B's max message size.</li><li>11. In Client A, send MM to Client B.</li><li>12. In Client B, receive and open the MM.</li><li>13. Verify the pass criteria below.</li></ol>
Pass Criteria	In Client B the received message size is less than or equal to Client B's max message size and content of message reasonably presented. The labels in the presentation element, corresponding to the media that have been removed or whose type has changed, have been modified accordingly.

### 5.7.5.3 MMS-1.3-int-815 - Drop unsupported object type

Test Case Id	MMS-1.3-int-815
Test Object	Client A, Client B and MMSC
Test Case Description	The purpose is to verify that an unsupported file for Client B is correctly sent from Client A to Client B and that the received message does not contain the file.
Specification Reference	[MMSCONF] Chapter 9.2
SCR Reference	MMSCONF-AMJ-S-001, MMSCONF-CAG-S-003, MMSCONF-CAG-S-004, MMSCONF-CAG-S-005, MMSCONF-CAG-S-006, MMSCONF-CAG-S-007
Tool	
Test Code	
Preconditions	Client A Creation Mode set to free and is able to add unsupported object type to the messageMMSC setting: Content adaptation is enabled and Client B's UA Profile is added to MMSC
Test Procedure	19. In Client A, create a new MM. 20. In MM header: To-field is set to Client B. 21. In MM content: Add unsupported object type to the message. 22. In Client A, send MM to Client B. 23. In Client B, receive and open the MM. 24. Verify the pass criteria below.
Pass Criteria	In Client B the received Message does not contain the unsupported file. The labels in the presentation element, corresponding to the media that have been removed or whose type has changed, have been modified accordingly.

**5.7.5.4 MMS-1.3-int-817 - Video Basic: Size reduction to 100kB**

Test Case Id	MMS-1.3-int-817
Test Object	Client A, Client B and MMSC
Test Case Description	The purpose is to verify that a video file larger than 100k is correctly sent from Client A in content class Video Rich to Client B in Content Class Video Basic and that the received video file is less than or equal to 100k.
Specification Reference	[MMSCONF] Chapter 9.2
SCR Reference	MMSCONF-AMN-S-003, MMSCONF-CAG-S-003, MMSCONF-CAG-S-004, MMSCONF-CAG-S-005, MMSCONF-CAG-S-006, MMSCONF-CAG-S-007
Tool	
Test Code	
Preconditions	<p>-Client A Capability: Video rich class conformant Setting: Creation Mode set to Restricted</p> <p>-Client B Capability: Image rich class conformant and max message size is 100 kB</p> <p>-MMSC setting: Content adaptation is enabled and Client B's UA Profile is added to MMSC</p>
Test Procedure	<ol style="list-style-type: none"> <li>31. In Client A, create a new MM.</li> <li>32. In MM header: To-field is set to Client B.</li> <li>33. In MM content: VideoRich300kB.</li> <li>34. In Client A, send MM to Client B.</li> <li>35. In Client B, receive and open the MM.</li> <li>36. Verify the pass criteria below.</li> </ol>
Pass Criteria	In Client B the received video is less than or equal to 100kB and reasonably presented. The labels in the presentation element, corresponding to the media that have been removed or whose type has changed, have been modified accordingly.

## 5.8 Server MM4 Test Cases

### 5.8.1 General functions

#### 5.8.1.1 MMS-1.3.int-823 - Blind carbon copy only through MM4

Test Case Id	MMS-1.3-int-823
Test Object	MMSC1 and MMSC2
Test Case Description	The purpose is to verify that messages can be simultaneously and correctly sent from Client A to multiple clients via MM4 between MMSC 1 and MMSC2 and that the message is successfully received by all the recipients. Only Bcc address field is used for the addressing.
Specification Reference	[MMSCONF] Chapter
SCR Reference	MMSCONF-
Tool	
Test Code	
Preconditions	-MMSC 1 and MMSC 2 configured to communicate to each other through MM4 -Client A Configured to send/receive MMS through MMSC1  -Client B, C and D Configured to send/receive MMS through MMSC2
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM header Bcc-field is set to address the recipient Clients B, C and D</li> <li>3. In MM content: In the message text part, enter the text "Hello World".</li> <li>4. From Client A, send MM.</li> <li>5. In Client B, C and D receive and open the MM.</li> <li>6. Verify the pass criteria below.</li> </ol>
Pass Criteria	The message is successfully received by all Clients B, C and D. The recipients cannot see any of the receiving client addresses.

### 5.8.1.2 MMS-1.3.int-824 - Delivery reports generated by MMSC1 due to the message being rejected by MMSC2

Test Case Id	MMS-1.3-int-824
Test Object	MMSC1 and MMSC2
Test Case Description	The purpose is to verify that if delivery reporting is requested from the recipients across the MM4, the reporting is taking place also in cases when the message is rejected by the MMSC2
Specification Reference	[MMSCONF] Chapter
SCR Reference	MMSCONF-
Tool	
Test Code	
Preconditions	<p>-MMSC 1 and MMSC 2 configured to communicate to each other through MM4</p> <p>The size of the message is to be bigger than MMSC2 is set to approve.</p> <p>The recipient can be set to 'black list' or is not in the subscriber data base.</p> <p>-Client A Configured to send/receive MMS through MMSC1</p> <p>-Client B Configured to send/receive MMS through MMSC2</p>
Test Procedure	<ol style="list-style-type: none"> <li>1 In this case a message is sent across the MM4 in circumstances, when MMSC2 will not approve the reception.</li> <li>2 With Client A, create a new MM. Make sure that MMSC2 rejects the message.</li> <li>3. In MM header: To-field is set to Client B and delivery report is requested</li> <li>4 Send the MM from Client A to Client B</li> <li>5. Verify the pass criteria below.</li> </ol>
Pass Criteria	Client A receives report stating that message has been failed or rejected. Client B did not receive the message. Optionally it can be verified that MMSC2 rejects the message indicating the status 'Reject' in the MM4_forward.RES message to MMSC1.

### 5.8.1.3 MMS-1.3.int-825- Read-Reply report / single recipient

Test Case Id	MMS-1.3.int-825
Test Object	MM4 between MMSC1 and MMSC2
Test Case Description	The purpose is to verify that a message with a request for a Read-Reply report is correctly sent from Client A across the MM4 interface and the Client B sends the read report back to the message originator after the message has been opened. The originator can receive the read report correctly after it passes the MM4 back to MMSC1
Specification Reference	[MMS-ENC]
SCR Reference	
Tool	
Test Code	
Preconditions	<p>-Client A; subscriber of MMSC1          Capability:          Setting of the Read Report request          Able to display the read reply report</p> <p>-Client B; subscriber of MMSC2          Capability:          Capable of answering the Read Report Requests</p> <p>MMSC1 and MMSC2 configured to communicate over MM4</p>
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM header: Read-Reply Report Request-Field is set to ON.</li> <li>3. In MM header: To-field is set to Client B</li> <li>4. In MM content: In the message text part, enter the text "Hello World".</li> <li>5. In Client A, send MM</li> <li>6. In Client B receive the message in MMSC2</li> <li>7. In Client B open the message</li> <li>8. Client B approves the sending of Read-Reply report; message gets sent</li> <li>9. In Client A receives the Read-Reply report and opens it</li> <li>10. Verify the pass criteria below.</li> </ol>
Pass Criteria	Client A has received a Read-Reply report from Client B. and the retrieved status is appropriately indicated

### 5.8.1.4 MMS-1.3.int-826- Read-Reply Report / multiple recipients

Test Case Id	MMS-1.3.int-826
Test Object	MM4 between MMSC1 and MMSC2
Test Case Description	The purpose is to verify that a message with a request for a Read-Reply report is correctly sent from Client A across the MM4 to multiple recipients and that the originator can receive a separate and correct Read-Reply report from each recipient after the message has been read by each recipient.
Specification Reference	[MMSENC]
SCR Reference	
Tool	
Test Code	
Preconditions	<p>--Client A; subscriber of MMSC1          Capability:          Setting of the Read Report request            Able to display the read reply report</p> <p>-Client B; subscriber of MMSC2          Capability:          Capable of answering the Read Report Requests</p> <p>-Client C; subscriber of MMSC2          Capability:          Capable of answering the Read Report Requests</p> <p>-Client D; subscriber of MMSC2          Capability:          Capable of answering the Read Report Requests</p> <p>MMSC1 and MMSC2 configured to communicate over MM4</p>
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM header: Read-Reply Report Request-Field is set to ON.</li> <li>3. In MM header: To-field is set to: Client B, Client C and to Client D</li> <li>4. In MM content: In the message text part, enter the text "Hello World".</li> <li>5. In Client A, send the MM</li> <li>6. In Client B, C and D receive the message in MMSC2</li> <li>7. In Client B delete the message without opening it. Read report message MM4_read_reply_report.REQ is sent to Client A in MMSC1 over the MM4 reporting that Client B deleted the MM without reading it.</li> <li>8. Open the message in Clients C and D. Read report messages are sent back to Client A across the MM4 informing, that Client C and Client D have opened the MM.</li> <li>9. Verify the pass criteria below.</li> </ol>
Pass Criteria	Client A has received three Read-Reply reports. The statuses 'Message deleted

without reading' from Client B and 'Message read' from both Client C and D are appropriately indicated

### 5.8.1.5 MMS-1.3.int-827- Text only message through MM4; UTF-8 characters used in text and subject fields

Test Case Id	MMS-1.3-int-827
Test Object	MMSC1 and MMSC2
Test Case Description	The purpose is to verify that a message with text only is successfully delivered through MM4 when UTF-8 characters are used in both Subject and Text fields.
Specification Reference	[MMSCONF] Chapter 8.4
SCR Reference	MMSCONF-
Tool	
Test Code	
Preconditions	-MMSC 1 and MMSC 2 configured to communicate to each other through MM4 -Client A Configured to send/receive MMS through MMSC1  -Client B Configured to send/receive MMS through MMSC2
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM with text only. Use UTF-8 characters only.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. In subject field enter text to “Shõ?t Téxt- üëä”</li><li>4. In MM content: In the message text part, enter the text “French ê has a roof over the e. German ü is an u with two dots”.</li><li>5. From Client A, send MM to Client B</li><li>6. In Client B, receive and open the MM.</li><li>7. Verify the pass criteria below.</li></ol>
Pass Criteria	The message is successfully received in Client B and subject and message test part are textually correct.

### 5.8.1.6 MMS-1.3.int-828- Message Priority

Test Case Id	MMS-1.3.int-828
Test Object	MMSC1 and MMSC2 servers
Test Case Description	The purpose is to verify that a message having different priorities is correctly sent from Client A to Client B via the MM4 interface between MMSC1 and MMSC2 and that the message is successfully received and message priority is the same at each client.
Specification Reference	
SCR Reference	
Tool	
Test Code	
Preconditions	MMSC 1 and MMSC 2 configured to communicate to each other through MM4  -Client A; subscriber of MMSC1 Configured to send/receive MMS through MMSC1  Capable of setting the priority to Normal, Low and High  -Client B; subscriber of MMSC2 Configured to send/receive MMS through MMSC2  Capable of displaying message priority levels
Test Procedure	<ol style="list-style-type: none"><li>7. In Client A, create a new MM.</li><li>8. In MM header: Priority-Field is set to Normal.</li><li>9. In message text part, enter the text "Hello World".</li><li>10. In Client A, send the MM to Client B.</li><li>11. Go through steps 1 to 4 with the remaining priority settings, first Low and then High</li><li>12. In Client B, receive and open the three MMs.</li><li>13. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received three messages successfully and the message priorities are set to Normal, Low and High just like they were sent from Client A

### 5.8.1.7 MMS-1.3.int-829- Subject field with 40 Characters

Test Case Id	MMS-1.3-int-829
Test Object	MMSC1 and MMSC2 servers
Test Case Description	The purpose is to verify that a message with 40 chars in the Subject-field is correctly sent from Client A to Client B via MMSC and that the message is successfully received and the subject is textually correct.
Specification Reference	[MMSCONF] Chapter 10.2.5
SCR Reference	MMSCONF- GEN-C-003
Tool	
Test Code	
Preconditions	-Client A; subscriber of MMSC1 Capability: Subject with 40 characters length  -Client B subscriber of MMSC2 Capability: Subject with 40 characters length  -MMSC1 and two are configured to communicate with each other across the MM4 interface
Test Procedure	<ol style="list-style-type: none"><li>7. In Client A, create a new MM.</li><li>8. In MM header: Add following 40 chars to subject field: “abcdefghijklmnopqrstuvwxy0123456789/+/@”.</li><li>9. In MM content: In the message text part, enter the text “Hello World”.</li><li>10. In Client A, send MM to Client B via the MM4.</li><li>11. In Client B, receive and open the MM.</li><li>12. Verify the pass criteria below.</li></ol>
Pass Criteria	Client B has received the message successfully and the subject is textually correct.

### 5.8.1.8 MMS-1.3.int-830- Sending the maximum sized message through MM4

Test Case Id	MMS-1.3-int-830
Test Object	MMSC1 and MMSC2
Test Case Description	The purpose is to verify that a message with the maximum size claimed to be supported by both MMSCs is successfully delivered through MM4.
Specification Reference	[MMSCONF] Chapter
SCR Reference	
Tool	
Test Code	
Preconditions	<ul style="list-style-type: none"><li>-MMSC 1 and MMSC 2 configured to communicate to each other through MM4</li><li>- No content adaptations are used during the test case</li><li>-Client A Configured to send/receive MMS through MMSC1</li><li>-Client B Configured to send/receive MMS through MMSC2</li></ul>
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM. The size is to be at the limit both MMSCs are claimed to support on MM4 interface.</li><li>2. In MM header: To-field is set to Client B.</li><li>3. From Client A, send MM to Client B</li><li>4. In Client B, receive and open the MM.</li></ol>
Pass Criteria	The message is successfully received in Client B and the message details are the same as in the original message.

### 5.8.1.9 MMS-1.3.int-831- Sending an oversized message through MM4

Test Case Id	MMS-1.3-int-831
Test Object	MMSC1 and MMSC2
Test Case Description	The purpose is to verify that a message with too big a size will be rejected correctly by the receiving MMSC
Specification Reference	[MMSCONF] Chapter
SCR Reference	
Tool	
Test Code	
Preconditions	<ul style="list-style-type: none"><li>-MMSC 1 and MMSC 2 configured to communicate to each other through MM4</li><li>- MMSC1 is set to support bigger message size than MMSC2</li><li>-Client A Configured to send/receive MMS through MMSC1</li><li>-Client B Configured to send/receive MMS through MMSC2</li></ul>
Test Procedure	<ol style="list-style-type: none"><li>1. In Client A, create a new MM. The size is to be bigger than MMSC2 is set to support</li><li>2. In MM header: To-field is set to Client B.</li><li>3. From Client A, send MM to Client B</li><li>4. Verify the result according the pass criteria.</li></ol>
Pass Criteria	MMSC2 rejects the message.

**5.8.1.9.1 MMS-1.3.int-832- Message Classes**

Test Case Id	MMS-1.3.int-832
Test Object	MMSC1 and MMSC2 servers
Test Case Description	The purpose is to verify that messages having different Message Classes are correctly sent from Client A to Client B via the MM4 interface between MMSC1 and MMSC2 and that the message is successfully received and message class remains the same after passing through the MM4.
Specification Reference	
SCR Reference	
Tool	
Test Code	
Preconditions	<p>MMSC 1 and MMSC 2 configured to communicate with each other through MM4</p> <p>-Client A (test tool); subscriber of MMSC1 Configured to send/receive MMS through MMSC1</p> <p>Client is capable of setting the priority to Personal, Advertisement, Informational and Auto</p> <p>-Client B; subscriber of MMSC2 Configured to send/receive MMS through MMSC2</p> <p>Capable of displaying the different message classes</p>
Test Procedure	<ol style="list-style-type: none"> <li>1. In Client A, create a new MM.</li> <li>2. In MM header: Priority-Field is set to Personal (default setting of a basic message).</li> <li>3. In message text part, enter the text "Hello World".</li> <li>4. In Client A, send the MM to Client B.</li> <li>5. Go through steps 1 to 4 and use once each of the remaining three message classes, Advertisement, Informational and Auto in these new messages</li> <li>6. In Client B, receive and open the four MMs.</li> <li>7. Verify the pass criteria below.</li> </ol>
Pass Criteria	Client B has received the four messages successfully and the message classes are set to Personal, Advertisement and Auto, just like they were sent from Client A

## Appendix A. OBSOLETE TESTS

(Informative)

The following table, listing test cases which have been deleted from this or earlier version of this ETS, is provided for informative purposes. The Test Case IDs listed here should be regarded as reserved and should not be allocated to other test cases.

Test Case Id	Test Object	Title
MMS-1.2-int-101	Client A, Client B	Empty Message
MMS-1.2-int-110	Client A, Client B	Long Filename
MMS-1.2-int-114	Client A, Client B	Text with UTF-16 encoding
MMS-1.2-int-115	Client A, Client B	JPG image size 80x60
MMS-1.2-int-117	Client A, Client B	JPG image size 60x80
MMS-1.2-int-119	Client A, Client B	GIF image size 80x60
MMS-1.2-int-121	Client A, Client B	GIF image size 60x80
MMS-1.2-int-123	Client A, Client B	Animated GIF image size 80x60
MMS-1.2-int-125	Client A, Client B	Animated GIF image size 60x80
MMS-1.2-int-127	Client A, Client B	WBMP image size 80x60
MMS-1.2-int-129	Client A, Client B	WBMP image size 60x80
MMS-1.2-int-201	Client A, Client B, MMSC	Empty message

MMS-1.2-int-222	Client A, Client B, MMSC	Text with UTF-16 encoding
MMS-1.2-int-701	Client A	Creation mode - Restricted - oversize
MMS-1.2-int-702	Client A	Creation mode - Restricted - inclusion of non core domain content
MMS-1.2-int-703	Client A	Creation mode - Restricted - oversize image resolution
MMS-1.2-int-704	Client A	Creation mode - Restricted – forwarding oversize
MMS-1.2-int-705	Client A	Creation mode - Restricted – forwarding non core domain content
MMS-1.2-int-706	Client A	Creation mode - Restricted - forwarding oversize image resolution
MMS-1.3-int-212		To-field with UTF-8 encoding
MMS-1.3-int-219		Text with US-ASCII encoding



## Appendix B. Change History

(Informative)

### B.1 Approved Version History

Reference	Date	Description
n/a	n/a	No prior version –or- No previous version within OMA

### B.2 Draft/Candidate Version 1.3 History

Document Identifier	Date	Sections	Description
Draft version OMA-ETS-MMS-INT-V1_3	01 Apr 2005		The initial version of this document. Changed the ETS 1.2 to a first draft version of the ETS 1.3
Draft version OMA-ETS-MMS-INT-V1_3	15 Oct 2005	All	Deleted test cases according to CRs: Included OMA-IOP-MMS-2005-0252 Included OMA-IOP-MMS-2005-0253R01 Included OMA-IOP-MMS-2005-254 Included OMA-IOP-MMS-2005-0101 Included OMA-IOP-MMS-2005-0139R01 Included OMA-IOP-MMS-2005-0138R01 Included OMA-IOP-MMS-2005-0130R01
Draft version OMA-ETS-MMS-INT-V1_3	31 Jan 2006	5	Included OMA-IOP-MMS-2005-0246R2 New ETS template
Draft version OMA-ETS-MMS-INT-V1_3	15 Feb 2006	All	New agreed CRs added to the draft : -2005-0133-CR_MMS1.3_int112_int113 -2005-0135R02-MMS1.3_DRM_SuperDistribution -2005-0136R01-MMS1.3_int-202_int-203_int-204 -2005-0231-ETS-IOT-CR-MMS-Template -MEC-2006-0058R01-Recommended-Retrieval-mode-IOT-test -MEC-2006-0059R01-Hyperlink-IOT-test -MEC-2006-0068-CR-message-classes -MEC-2006-0083R01-MMS-1.3-CR-INT-vCard-vCalendar-attachment-tests -MEC-2006-0087-MMS-1.3-CR-INT-message-priority-test-cases -OMA-IOP-MEC-2006-0084 -OMA-IOP-MEC-2005-0012
Draft version OMA-ETS-MMS-INT-V1_3	6 Apr 2006	n/a	OMA-TP-2006-0130-OMA-ETS-MMS-V1_3_for_Approval
Candidate version OMA-ETS-MMS-INT-V1_3	25 Apr 2006	n/a	Approved through TP R&A 12 to 25 Apr 2006 OMA-TP-2006-0130-OMA-ETS-MMS-V1_3_for_Approval