Enabler Test Specification (Interoperability) for MMS 1.3
Candidate Version – 15 Jun 2006

Open Mobile Alliance
OMA-ETS-MMS_INT-V1_3-20060615-D
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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.
2 References

2.1 Normative References


2.2 Informative References


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 an 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

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
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<td>AMR</td>
<td>Adaptive Multi Rate</td>
</tr>
<tr>
<td>Email</td>
<td>Electronic mail</td>
</tr>
<tr>
<td>GIF</td>
<td>Graphics Interchange Format</td>
</tr>
<tr>
<td>HTTP</td>
<td>Hyper text Transfer Protocol</td>
</tr>
<tr>
<td>EICS</td>
<td>Enabler Implementation Conformance Statement</td>
</tr>
<tr>
<td>JPG</td>
<td>Joint Photographic (Experts’) Group</td>
</tr>
<tr>
<td>MIME</td>
<td>Multipurpose Internet Mail Extensions</td>
</tr>
<tr>
<td>MM</td>
<td>Multimedia Message</td>
</tr>
<tr>
<td>MMS</td>
<td>Multimedia Messaging Service</td>
</tr>
<tr>
<td>MMSC</td>
<td>MMS Proxy/Server</td>
</tr>
<tr>
<td>MS</td>
<td>Mobile Station</td>
</tr>
<tr>
<td>MSISDN</td>
<td>Mobile Station ISDN Number</td>
</tr>
<tr>
<td>NAS</td>
<td>Network Access Point</td>
</tr>
<tr>
<td>OMA</td>
<td>Open Mobile Alliance</td>
</tr>
<tr>
<td>OTA</td>
<td>Over The Air</td>
</tr>
<tr>
<td>PDU</td>
<td>Protocol Data Unit</td>
</tr>
<tr>
<td>PIM</td>
<td>Personal Information Management</td>
</tr>
<tr>
<td>SMIL</td>
<td>Synchronised Multimedia Integration Language</td>
</tr>
<tr>
<td>SMS</td>
<td>Short Message Service</td>
</tr>
<tr>
<td>UTF-8</td>
<td>Unicode Transformation Format, 8-bit encoding form.</td>
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<td>UTF-16</td>
<td>Unicode Transformation Format, 16-bit encoding form.</td>
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<td>Term</td>
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<td>WAP</td>
<td>Wireless Application Protocol</td>
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<td>Moving Picture Experts Group 4 standard</td>
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<td>QCIF</td>
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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 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

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-102</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client A and Client B</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSCONF] Chapter 8</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>MMSCONF-MED-C-025</td>
</tr>
</tbody>
</table>

Test Code

Preconditions

-Client A
  - Capability: Ability to create portrait layout

-Client B

Test Procedure

1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
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.
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. 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:
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
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.
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. A layout is used where text is below the image and both image and text objects are reasonably presented.
5.1.1.4 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
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
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.
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. A layout is used where text is to the left of the image and both image and text objects are reasonably presented.
5.1.1.5 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:
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
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.
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. A layout is used where text is to the right of the image and both image and text objects are reasonably presented.
5.1.1.6 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
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
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).
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 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
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
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.
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 and all pages are reasonably presented in the correct order.
5.1.1.8 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:
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. 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 JPG80x60.jpg, add the file/object (either audio1NB.amr or audio1.qcp) and specify page timing to 3 seconds if applicable.
   - 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.
   - 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.
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 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: 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:
- Page 1 with page timing 100 ms or client minimum
- Page 2 with 5 seconds page timing
- Page 3 with page time 20 seconds or client maximum
- Page 4 with no page timing
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.

Specification Reference: [MMSCONF] Chapter 7.1.7
SCR Reference: MMSCONF-MED-C-023

Tool: MMSCONF-MED-C-023

Test Code:

Preconditions:
- Client A
  - Capability: Ability to specify different SMIL page timings and support multiple pages with images
- Client B

Test Procedure:
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: In the message body, create the following four pages:
   - Page 1, enter the text “Page 1” and specify timing to 100 ms or client minimum.
   - Page 2, add the file/object JPG80x60.jpg and specify timing to 5 seconds.
   - Page 3, enter the text “Page 3” and specify timing to 20 seconds or client maximum.
   - Page 4, add the file/object JPG80x60.jpg.
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 and the received message is reasonably presented. The timing of the pages follows the specified values.
5.1.1.10 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

Preconditions
- Client A
  Capability:
  UTF-8 charset
- Client B

Test Procedure
1. In Client A, create a new MM.
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).
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 and the message subject is textually correct.
### 5.1.1.11 MMS-1.3-int-147 - Content Rich - Message with multiple slides and content

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-147</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client A, Client B and MMSC server</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSCONF] Chapter 7.1.9.2</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>MMSCONF-RTX-C-002</td>
</tr>
</tbody>
</table>

#### Tool

#### Test Code

**Preconditions**

- **Client A**
  - Content Class: Content Rich

- **Client B**

- **MMSC**

**Test Procedure**

1. In client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. 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 JPG1600x1200.jpg, add the file/object EnhancedAACplusAudio.3gp and specify page.
   - Page 2, enter the text as in file USASCII.txt, add the file/object ContentRich.svg.
   - Page 3, enter the text Generic_Text.txt, add the file/object VideoRich300k.3gp.
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 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:
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: In the message body, enter text as in file Text_us-ascii.txt.
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 and the received message is textually correct.
### 5.1.2.1.2 MMS-1.3-int-113 - Text with UTF-8 encoding

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-113</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client A and Client B</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSCONF] Chapter 7.1.8</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>MMSCONF-MED-C-003</td>
</tr>
<tr>
<td>Tool</td>
<td></td>
</tr>
<tr>
<td>Test Code</td>
<td></td>
</tr>
<tr>
<td>Preconditions</td>
<td>-Client A Supports utf-8 encoding when creating messages</td>
</tr>
<tr>
<td></td>
<td>-Client B</td>
</tr>
<tr>
<td>Test Procedure</td>
<td>1. In Client A, create a new MM.</td>
</tr>
<tr>
<td></td>
<td>2. In MM header: To-field is set to Client B.</td>
</tr>
<tr>
<td></td>
<td>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)</td>
</tr>
<tr>
<td></td>
<td>4. In Client A, send MM to Client B.</td>
</tr>
<tr>
<td></td>
<td>5. In Client B, receive and open the MM.</td>
</tr>
<tr>
<td></td>
<td>6. Verify the pass criteria below.</td>
</tr>
<tr>
<td>Pass Criteria</td>
<td>Client B has received the message and the received message is textually correct.</td>
</tr>
</tbody>
</table>
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:
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add image file/object JPG160x120.jpg to the message.
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 and the received message is reasonably presented.
5.1.2.2 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:
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add image file/object JPG640x480.jpg to the message.
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 and the received message is reasonably presented.
### 5.1.2.2.3 MMS-1.3-int-120 - GIF Image size 160x120

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-120</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client A and Client B</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSCONF] Chapter 7</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>MMSCONF-MED-C-009</td>
</tr>
<tr>
<td>Tool</td>
<td></td>
</tr>
<tr>
<td>Test Code</td>
<td></td>
</tr>
<tr>
<td>Preconditions</td>
<td>-Client A</td>
</tr>
<tr>
<td></td>
<td>-Client B</td>
</tr>
<tr>
<td>Test Procedure</td>
<td>1. In Client A, create a new MM.</td>
</tr>
<tr>
<td></td>
<td>2. In MM header: To-field is set to Client B.</td>
</tr>
<tr>
<td></td>
<td>3. In MM content: Add image file/object GIF87a160x120.gif to the message.</td>
</tr>
<tr>
<td></td>
<td>4. In Client A, send MM to Client B.</td>
</tr>
<tr>
<td></td>
<td>5. In Client B, receive and open the MM.</td>
</tr>
<tr>
<td></td>
<td>6. Verify the pass criteria below.</td>
</tr>
<tr>
<td>Pass Criteria</td>
<td>Client B has received the message and the received message is reasonably presented.</td>
</tr>
</tbody>
</table>
## 5.1.2.2.4 MMS-1.3-int-122 - GIF Image size 640x480

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-122</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client A and Client B</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSCONF] Chapter 7</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>MMSCONF-MED-C-009</td>
</tr>
<tr>
<td>Tool</td>
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<tr>
<td>Test Code</td>
<td></td>
</tr>
<tr>
<td>Preconditions</td>
<td></td>
</tr>
<tr>
<td>-Client A</td>
<td>Capability:</td>
</tr>
<tr>
<td></td>
<td>Content class greater than Image Basic class</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>-Client B</td>
<td></td>
</tr>
<tr>
<td>Test Procedure</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>In Client A, create a new MM.</td>
</tr>
<tr>
<td>2.</td>
<td>In MM header: To-field is set to Client B.</td>
</tr>
<tr>
<td>3.</td>
<td>In MM content: Add image file/object GIF87a640x480.gif to the message.</td>
</tr>
<tr>
<td>4.</td>
<td>In Client A, send MM to Client B.</td>
</tr>
<tr>
<td>5.</td>
<td>In Client B, receive and open the MM.</td>
</tr>
<tr>
<td>6.</td>
<td>Verify the pass criteria below.</td>
</tr>
<tr>
<td>Pass Criteria</td>
<td>Client B has received the message and the received message is reasonably presented.</td>
</tr>
</tbody>
</table>
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:
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add image file/object AnimatedGIF89a_160x120.gif to the message.
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 and the received message is reasonably presented.
### 5.1.2.2.6 MMS-1.3-int-126 - Animated GIF Image size 640x480

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-126</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client A and Client B</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSCONF] Chapter 7</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>MMSCONF-MED-C-010</td>
</tr>
<tr>
<td>Tool</td>
<td></td>
</tr>
<tr>
<td>Test Code</td>
<td></td>
</tr>
</tbody>
</table>

#### Preconditions
- **Client A**
  - Capability: Content class greater than Image Basic class
- **Client B**

#### Test Procedure
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add image file/object AnimatedGIF89a_640x480.gif to the message.
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 and the received message is reasonably presented.
### 5.1.2.2.7 MMS-1.3-int-128 - WBMP Image size 160x120

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-128</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client A and Client B</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSCONF] Chapter 7</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>MMSCONF-MED-C-011</td>
</tr>
</tbody>
</table>

#### Tool

#### Test Code

#### Preconditions

- Client A
- Client B

#### Test Procedure

1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add image file/object WBMP_160x120.wbmp to the message.
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 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**

1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add image file/object WBMP_640x480.wbmp to the message.
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 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

Test Procedure
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
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.
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 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:
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
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.
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 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:
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add video file/object qcif_video.3gp to the message.
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 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
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add video file/object sub-qcif_video.3gp to the message.
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 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
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add video file/object (mp4_13k_qcif.3g2) to the message.
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 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 1. In Client A, create a new MM.

2. In MM header: To-field is set to Client B.

3. In MM content: Add video file/object (mp4_amr_qcif.3g2) to the message.

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 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:
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add video file/object (h263_13k_qcif.3g2) to the message.
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 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
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add video file/object (h263_amr_qcif.3g2) to the message.
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 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 1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add video file/object (mp4_13k_sqcif.3g2) to the message.
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 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:
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add video file/object (mp4_amr_sqcif.3g2) to the message.
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 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)**

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-141</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client A and Client B</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSCONF] Chapter 7</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>MMSCONF-MED-C-020</td>
</tr>
<tr>
<td>Tool</td>
<td></td>
</tr>
<tr>
<td>Test Code</td>
<td></td>
</tr>
</tbody>
</table>
| Preconditions | -Client A  
Capability supports H.263 and 13k  
-Client B  
Capability supports H.263 and 13k |
| Test Procedure | 1. In Client A, create a new MM.  
2. In MM header: To-field is set to Client B.  
3. In MM content: Add video file/object (h263_13k_sqcif.3g2) to the message.  
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 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)**

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-142</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client A and Client B</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSCONF] Chapter 7</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>MMSCONF-MED-C-020</td>
</tr>
<tr>
<td>Tool</td>
<td></td>
</tr>
<tr>
<td>Test Code</td>
<td></td>
</tr>
<tr>
<td>Preconditions</td>
<td></td>
</tr>
<tr>
<td>-Client A</td>
<td>Capability supports H.263 and AMR</td>
</tr>
<tr>
<td>-Client B</td>
<td>Capability supports H.263 and AMR</td>
</tr>
<tr>
<td>Test Procedure 1</td>
<td>In Client A, create a new MM.</td>
</tr>
<tr>
<td>2.</td>
<td>In MM header: To-field is set to Client B.</td>
</tr>
<tr>
<td>3.</td>
<td>In MM content: Add video file/object (h263_amr_sqcif.3g2) to the message.</td>
</tr>
<tr>
<td>4.</td>
<td>In Client A, send MM to Client B.</td>
</tr>
<tr>
<td>5.</td>
<td>In Client B, receive and open the MM.</td>
</tr>
<tr>
<td>6.</td>
<td>Verify the pass criteria below.</td>
</tr>
<tr>
<td>Pass Criteria</td>
<td>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.</td>
</tr>
</tbody>
</table>
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

Test Code:

Preconditions:
-Client A
  Capability: vCard2.1 MIP

-Client B
  Capability: vCard2.1 MIP

Test Procedure:
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
2. In Client A, create a new MM with the vCard object from the above mentioned address book entry
3. In MM header: To-field is set to Client B.
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. 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  
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
2. In Client A, create a new MM with the above defined vCalendar object.
3. In MM header: To-field is set to Client B.
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. 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

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-145</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client A and B</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSCONF] 8.2</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>MMSCONF-MED-C-039, MMSCONF-MED-C-040, MMSCONF-MED-C-041, MMSCONF-MED-C-042 and MMSCONF-MED-C-043</td>
</tr>
<tr>
<td>Tool</td>
<td>N/A</td>
</tr>
<tr>
<td>Test Code</td>
<td>N/A</td>
</tr>
<tr>
<td>Preconditions</td>
<td>Client A and B support Hyperlinks embedded in MMs</td>
</tr>
<tr>
<td></td>
<td>Client B supports browser</td>
</tr>
<tr>
<td>Test Procedure</td>
<td>1) In client A, compose an MM including a hyperlink at any point in the MM</td>
</tr>
<tr>
<td></td>
<td>2) In client A, send the MM to client B</td>
</tr>
<tr>
<td></td>
<td>3) In client B, retrieve the message</td>
</tr>
<tr>
<td></td>
<td>4) In client B, display the message</td>
</tr>
<tr>
<td></td>
<td>5) In client B, select the hyperlink and request to follow it</td>
</tr>
<tr>
<td>Pass-Criteria</td>
<td>In client A, a hyperlink can be inserted in the MM</td>
</tr>
<tr>
<td></td>
<td>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</td>
</tr>
</tbody>
</table>
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:
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B
3. In MM content: attach MMS Message Template with the MM.
4. In Client A, send MM to Client B.
5. In Client B, receive the MM notification and retrieve the MM that contains a MMS Message Template.
6. In Client B, select the received MMS Message Template for creating MM.
7. Verify the pass criteria below.

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:

<table>
<thead>
<tr>
<th>MM Content: MMS</th>
<th>Content-Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headers:</td>
<td>application/vnd.wap.multipart.mixed</td>
</tr>
</tbody>
</table>
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 to 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 1. In client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add audio file/object 30k_basic_AMR.amr to the message.
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 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 1. In client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add audio file/object 100k_rich_AMR.amr to the message.
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 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:
1. In client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. 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 JPG320x240-40k.jpg, add the file/object audio10k.amr and specify page.
   - 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
   - Page 3, enter the text Generic_Text.txt, add the file/object WBMP_80x60.wbmp.
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 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

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-204</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client A, Client B and MMSC server</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>MMSCONF 12</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>MMSCONF-VRC-C-001</td>
</tr>
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<td>MMSCONF-VRC-C-002</td>
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<td>MMSCONF-VRC-C-003</td>
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<td>MMSCONF-VRC-C-004</td>
</tr>
<tr>
<td>Tool</td>
<td>-Client A</td>
</tr>
<tr>
<td></td>
<td>-Client B</td>
</tr>
<tr>
<td></td>
<td>-MMSC</td>
</tr>
<tr>
<td>Test Procedure</td>
<td>7. In client A, create a new MM.</td>
</tr>
<tr>
<td></td>
<td>8. In MM header: To-field is set to Client B.</td>
</tr>
<tr>
<td></td>
<td>9. In MM content: Add audio file/object 300k_rich_AMR.amr to the message.</td>
</tr>
<tr>
<td></td>
<td>10. In client A, send MM to Client B.</td>
</tr>
<tr>
<td></td>
<td>11. In Client B, receive and open the MM.</td>
</tr>
<tr>
<td></td>
<td>12. Verify the pass criteria below.</td>
</tr>
<tr>
<td>Pass Criteria</td>
<td>Client B has received the message and the received message is correctly presented.</td>
</tr>
</tbody>
</table>
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 1. In client A, create a new MM.
   2. In MM header: To-field is set to Client B.
   3. In MM content: In the message body, create the following two pages:
      - Page 1, enter text as in file Generic_Text.txt, add the file/object JPG1600x1200-300k.jpg.
      - Page 2, enter the text as in file TEXT_US-ASCII.txt, add the file/object video_300k.3gp.
   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 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:

1. In Client A, create a new MM.

2. In MM header: To-field is set to Client B.

3. 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 JPG80x60.jpg, add the file/object (either audio1NB.amr or audio1.qcp) and specify page timing to 3 seconds if applicable.
   - 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.
   - 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.

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 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:
1. In Client A, create a new MM.
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).
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 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 charaters length

-Client B
  Capability:
  Subject with 40 charaters length

-MMSC

Test Procedure

1. In Client A, create a new MM.
2. In MM header: Add following 40 chars to subject field: “abcdefghijklmnopqrstuvwxyz0123456789/-+@”.
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 and the message is successfully received and the subject is textually correct.
5.2.1.11 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
1. In Client A, create a new MM.
2. In MM header: Subject-field is set to “Hello World” in US-ASCII characters.
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 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:
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”
2. In Client A, create a new postcard MM.
3. In MM header: To-field is set to Postcard service address
4. In MM content: add image file/object JPG640X480PC.jpg
5. Add vCard objects from the above mentioned address book entries
6. Verify the pass criteria below.

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 1. In Client A, create a new MM.
2. In MM header: To-field is set to an MSISDN/MDN address in US-ASCII characters.
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 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:
1. In Client A, create a new MM.
2. In MM header: Cc-field is set to an MSISDN/MDN address in US-ASCII characters.
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 and the message is successfully received.
### 5.2.1.2.3 MMS-1.3-int-211 - Bcc-field

<table>
<thead>
<tr>
<th>Test Case Id</th>
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</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client A, Client B and MMSC server</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSCONF] Chapter 10.2</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>MMSCONF- GEN-C-002</td>
</tr>
<tr>
<td>Tool</td>
<td></td>
</tr>
<tr>
<td>Test Code</td>
<td></td>
</tr>
<tr>
<td>Preconditions</td>
<td>-Client A</td>
</tr>
<tr>
<td></td>
<td>-Client B</td>
</tr>
<tr>
<td></td>
<td>-MMSC</td>
</tr>
<tr>
<td>Test Procedure 1.</td>
<td>In Client A, create a new MM.</td>
</tr>
<tr>
<td>2.</td>
<td>In MM header: Bcc-field is set to an MSISDN/MDN address in US-ASCII characters.</td>
</tr>
<tr>
<td>3.</td>
<td>In MM content: In the message text part, enter the text “Hello World”.</td>
</tr>
<tr>
<td>4.</td>
<td>In Client A, send MM to Client B.</td>
</tr>
<tr>
<td>5.</td>
<td>In Client B, receive and open the MM.</td>
</tr>
<tr>
<td>6.</td>
<td>Verify the pass criteria below.</td>
</tr>
<tr>
<td>Pass Criteria</td>
<td>Client B has received the message and the message is successfully received.</td>
</tr>
</tbody>
</table>
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 1. In Client A, create a new MM.
2. In MM header: Cc-field is set to the email address “êü”<nn@xxx>. 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.
3. In MM content: In the message text part, enter the text “Hello World”.
4. In Client A, send MM to email recipient.
5. In email recipient, receive and open the MM.
6. Verify the pass criteria below.

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            1. In Client A, create a new MM.
                        2. In MM header: Bcc-field is set to the email address “êü”<nn@xxx>. 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.
                        3. In MM content: In the message text part, enter the text “Hello World”.
                        4. In Client A, send MM to email recipient.
                        5. In email recipient, receive and open the MM.
                        6. Verify the pass criteria below.
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 1. In Client A, create a new MM.
2. In MM header: Priority-Field is set to Normal.
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 Normal.
### 5.2.1.3.2 MMS-1.3-int-216 - Priority – Low

<table>
<thead>
<tr>
<th>Test Case Id</th>
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</thead>
<tbody>
<tr>
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<td>Client A, Client B and MMSC server</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
</tbody>
</table>
| 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 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: [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 High.
- 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 High.
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 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:
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
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 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 1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
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).
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 and the received message is textually correct.
5.2.2.2 Image

5.2.2.1 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 1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add image file/object JPG160x120.jpg to the message.
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 and the received message is reasonably presented.
5.2.2.2 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 1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add image file/object JPG640x480.jpg to the message.
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 and the received message is reasonably presented.
### 5.2.2.3 MMS-1.3-int-227 - GIF Image size 160x120

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-227</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client A, Client B and MMSC server</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSCONF] Chapter 7</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>MMSCONF-MED-C-009</td>
</tr>
<tr>
<td>Tool</td>
<td></td>
</tr>
<tr>
<td>Test Code</td>
<td></td>
</tr>
<tr>
<td>Preconditions</td>
<td>-Client A</td>
</tr>
<tr>
<td></td>
<td>-Client B</td>
</tr>
<tr>
<td></td>
<td>-MMSC</td>
</tr>
<tr>
<td>Test Procedure</td>
<td>1. In Client A, create a new MM.</td>
</tr>
<tr>
<td></td>
<td>2. In MM header: To-field is set to Client B.</td>
</tr>
<tr>
<td></td>
<td>3. In MM content: Add image file/object GIF87a160x120.gif to the message.</td>
</tr>
<tr>
<td></td>
<td>4. In Client A, send MM to Client B.</td>
</tr>
<tr>
<td></td>
<td>5. In Client B, receive and open the MM.</td>
</tr>
<tr>
<td></td>
<td>6. Verify the pass criteria below.</td>
</tr>
<tr>
<td>Pass Criteria</td>
<td>Client B has received the message and the received message is reasonably presented.</td>
</tr>
</tbody>
</table>
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  
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add image file/object GIF87a640x480.gif to the message.
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 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 1. In Client A, create a new MM.
                2. In MM header: To-field is set to Client B.
                3. In MM content: Add image file/object AnimatedGIF89a_160x120.gif to the message.
                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 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
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add image file/object AnimatedGIF89a_640x480.gif to the message.
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 and the received message is reasonably presented.
### 5.2.2.2.7 MMS-1.3-int-235 - WBMP Image size 160x120

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-235</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client A, Client B and MMSC server</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSCONF] Chapter 7</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>MMSCONF-MED-C-011</td>
</tr>
<tr>
<td>Tool</td>
<td></td>
</tr>
<tr>
<td>Test Code</td>
<td></td>
</tr>
<tr>
<td>Preconditions</td>
<td>-Client A</td>
</tr>
<tr>
<td></td>
<td>-Client B</td>
</tr>
<tr>
<td></td>
<td>-MMSC</td>
</tr>
<tr>
<td>Test Procedure</td>
<td>1. In Client A, create a new MM.</td>
</tr>
<tr>
<td></td>
<td>2. In MM header: To-field is set to Client B.</td>
</tr>
<tr>
<td></td>
<td>3. In MM content: Add image file/object WBMP_160x120.wbmp to the message.</td>
</tr>
<tr>
<td></td>
<td>4. In Client A, send MM to Client B.</td>
</tr>
<tr>
<td></td>
<td>5. In Client B, receive and open the MM.</td>
</tr>
<tr>
<td></td>
<td>6. Verify the pass criteria below.</td>
</tr>
<tr>
<td>Pass Criteria</td>
<td>Client B has received the message and the received message is reasonably presented.</td>
</tr>
</tbody>
</table>
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 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-011

Tool
Test Code

Preconditions
-Client A
  Capability:
  Content class greater than Image Basic class

-Client B

-MMSC

Test Procedure
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add image file/object WBMP_640x480.wbmp to the message.
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 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:
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
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.
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 and the AMR audio NB file/object is reasonably presented and AMR audioNB is played in its entirety.
### 5.2.3.2 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**

1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
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.
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 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 1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add video file/object qcif_video.3gp to the message.
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 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

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-241</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client A, Client B and MMSC server</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSCONF] Chapter 7</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>MMSCONF-MED-C-020</td>
</tr>
<tr>
<td>Tool</td>
<td></td>
</tr>
<tr>
<td>Test Code</td>
<td></td>
</tr>
<tr>
<td>Preconditions</td>
<td>-Client A</td>
</tr>
<tr>
<td></td>
<td>-Client B</td>
</tr>
<tr>
<td>Test Procedure</td>
<td>1. In Client A, create a new MM.</td>
</tr>
<tr>
<td></td>
<td>2. In MM header: To-field is set to Client B.</td>
</tr>
<tr>
<td></td>
<td>3. In MM content: Add video file/object sub-qcif_video.3gp to the message.</td>
</tr>
<tr>
<td></td>
<td>4. In Client A, send MM to Client B.</td>
</tr>
<tr>
<td></td>
<td>5. In Client B, receive and open the MM.</td>
</tr>
<tr>
<td></td>
<td>6. Verify the pass criteria below.</td>
</tr>
<tr>
<td>Pass Criteria</td>
<td>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.</td>
</tr>
</tbody>
</table>
5.2.2.4.3 MMS-1.3-int-242 - 3GPP2 Video sub-QCIF (MPEG4 +13k)

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-242</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client A, Client B and MMSC server</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSCONF] Chapter 7</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>MMSCONF-MED-C-030</td>
</tr>
<tr>
<td>Tool</td>
<td></td>
</tr>
<tr>
<td>Test Code</td>
<td></td>
</tr>
<tr>
<td>Preconditions</td>
<td></td>
</tr>
<tr>
<td>-Client A</td>
<td>Capability supports MPEG4 and 13k</td>
</tr>
<tr>
<td>-Client B</td>
<td>Capability supports MPEG4 and 13k</td>
</tr>
<tr>
<td>Test Procedure</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>In Client A, create a new MM.</td>
</tr>
<tr>
<td>2.</td>
<td>In MM header: To-field is set to Client B.</td>
</tr>
<tr>
<td>3.</td>
<td>In MM content: Add video file/object (mp4_13k_sqcif.3g2) to the message.</td>
</tr>
<tr>
<td>4.</td>
<td>In Client A, send MM to Client B.</td>
</tr>
<tr>
<td>5.</td>
<td>In Client B, receive and open the MM.</td>
</tr>
<tr>
<td>6.</td>
<td>Verify the pass criteria below.</td>
</tr>
<tr>
<td>Pass Criteria</td>
<td></td>
</tr>
<tr>
<td>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.</td>
<td></td>
</tr>
</tbody>
</table>
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
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add video file/object (mp4_amr_sqcif.3g2) to the message.
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 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
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add video file/object (h263_13k_sqcif.3g2) to the message.
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 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:
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add video file/object (h263_amr_sqcif.3g2) to the message.
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 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
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
2. In Client A, create a new MM with the vCard object from the above mentioned address book entry.
3. In MM header: To-field is set to Client B.
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. 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

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-247</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client A, Client B and MMSC server</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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 object is textually correct.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSCONF] Chapter 7</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>MMSCONF-MED-C-027</td>
</tr>
<tr>
<td>Tool</td>
<td></td>
</tr>
<tr>
<td>Test Code</td>
<td></td>
</tr>
</tbody>
</table>
| Preconditions | -Client A  
  Capacity:  
  vCalendar1.0_MIP  
-Client B  
  Capacity:  
  vCalendar1.0_MIP  
-MMSC |
| Test Procedure | 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  
2. In Client A, create a new MM with the above defined vCalendar1.0_MIP object.  
3. In MM header: To-field is set to Client B.  
4. In MM content: Add the vCalendar1.0 MIP object as defined above to the message.  
5. In Client A, send MM to Client B.  
6. In Client B, receive and open the MM.  
7. Verify the pass criteria below. |
| 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 [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 1. In Client A, create a new MM.
2. In MM header: To-field is set to an MSISDN/MDN address.
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 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: [MMSENC] Chapter 6.1.1 Table 1

SCR Reference: MMSE-C-024, MMSE-C-022

Test Procedure:

1. In Client A, create a new MM.
2. In MM header: Cc-field is set to a single email address.
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 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 1. In Client A, create a new MM.
2. In MM header: Bcc-field is set to a single email address.
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 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 [MMSENC] 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
1. In Client A, create a new MM.
2. In MM header: To-field is set to two clients (using MSISDN/MDN numbering) and three email recipients.
3. In MM content: In the message text part, enter the text “Hello World”.
4. In Client A, send MM to multiple MSISDN/MDN clients and multiple email recipients via MMSC.
5. In multiple MSISDN/MDN clients and multiple email recipients via MMSC, receive and open the MM.
6. Verify the pass criteria below.
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: [MMSENC] 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:
1. In Client A, create a new MM.
2. In MM header: Cc-field is set to two clients (using MSISDN/MDN numbering) and three email recipients.
3. In MM content: In the message text part, enter the text “Hello World”.
4. In Client A, send MM to multiple MSISDN/MDN clients and multiple email recipients via MMSC.
5. In multiple MSISDN/MDN clients and multiple email recipients via MMSC, receive and open the MM.
6. Verify the pass criteria below.

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: [MMSENC] 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:
1. In Client A, create a new MM.
2. In MM header: Bcc-field is set to two clients (using MSISDN/MDN numbering) and three email recipients.
3. In MM content: In the message text part, enter the text “Hello World”.
4. In Client A, send MM to multiple MSISDN/MDN clients and multiple email recipients via MMSC.
5. In multiple MSISDN/MDN clients and multiple email recipients via MMSC, receive and open the MM.
6. Verify the pass criteria below.

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:)

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-254</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client A, MMSC server and email recipient</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSENC] Chapter 6.1.1 Table 1</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>MMSE-C-024, MMSE-C-021</td>
</tr>
</tbody>
</table>

**Tool**

**Test Code**

**Preconditions**

- Client A
- Client B
- MMSC

**Test Procedure**

1. In Client A, create a new MM.
2. In MM header: To-field is set to a single email address.
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 message.
6. Verify the pass criteria below.

**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:)

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-255</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client A, MMSC server and email recipient</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSENC] Chapter 6.1.1 Table 1</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>MMSE-C-024, MMSE-C-022</td>
</tr>
<tr>
<td>Tool</td>
<td></td>
</tr>
<tr>
<td>Test Code</td>
<td></td>
</tr>
</tbody>
</table>
| Preconditions    | -Client A  
|-Client B  
|-MMSC |
| Test Procedure   | 1. In Client A, create a new MM.  
|                  | 2. In MM header: Cc-field is set to a single email address.  
|                  | 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 message.  
|                  | 6. Verify the pass criteria below. |
| 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:
1. In Client A, create a new MM.
2. In MM header: Bcc-field is set to a single email address.
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 message.
6. Verify the pass criteria below.

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 1. In Client A, create a new MM.
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.
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 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 [MMSENC] 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:
  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

Test Procedure

1. In Client A, create a new MM.
2. In MM header: Validity Period/Expiry Time to 1 hour (or lowest possible value).
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, wait for MM notification to but do NOT download MM.
6. In Client B, after the Validity Period/Expiry Time has expired, try to download the MM
7. Verify the pass criteria below.

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: [MMSENC] 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:
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
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, wait for MM notification but do NOT download MM.
6. In Client B, after the Validity Period/Expiry Time has expired, try to download the MM.
7. Verify the pass criteria below.

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:

1. In Client A, create a new MM.
2. In MM header: Delivery time set to +1 hour or less if applicable.
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: 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**

1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
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 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

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-306</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client A, Client B and MMSC server</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>The purpose is to verify that the MMSC sets the X-Mms-Retrieve-Status field to Error-permanent-service-denied = &lt;Octet 225&gt; 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.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSENC] Chapter 6.3, Table 5</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>MMSE-C-075, MMSE-S-088</td>
</tr>
<tr>
<td>Tool</td>
<td></td>
</tr>
<tr>
<td>Test code</td>
<td></td>
</tr>
</tbody>
</table>

#### Preconditions
- Client A, Client B and MMSC server  
- Settings:  
  - It is possible to check the X-Mms-Retrieve-Status field in the server log.  
  - The MMSC is set to not authorize retrieval attempts from Client B.

#### Test Procedure
1. In Client A, create a new MM  
2. Send message from Client A to Client B  
3. Try to retrieve the message to Client B  
4. Verify the pass criteria below

#### Pass-Criteria
The MMSC sets the X-Mms-Retrieve-Status field to Error-permanent-service-denied = <Octet 225>

AND Client B acts in a proper way according to the Retrieve Status code
### 5.3.4.2 MMS-1.3-int-307 - Retrieve status code – Error-permanent-message-not-found

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-307</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client A, Client B and MMSC server</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSENC] Chapter 6.3, Table 5</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>MMSE-C-075</td>
</tr>
<tr>
<td>Tool</td>
<td></td>
</tr>
<tr>
<td>Test code</td>
<td></td>
</tr>
</tbody>
</table>
| Preconditions | - Client A and Client B  
- It is possible to check the X-Mms-Retrieve-Status field in the server log.  
- It is possible to delete the MM from the server. |
| Test Procedure | 1. In Client A, create a new MM  
2. Send message from Client A to Client B  
3. Let the MM expire or delete it from the server  
4. In Client B, try to retrieve the message  
5. Verify the pass criteria below |
| Pass-Criteria | The MMSC sets the X-Mms-Retrieve-Status field to Error-permanent-message-not-found = Octet 226 AND Client B acts in a proper way according to the Retrieve Status code |
### 5.3.4.3 MMS-1.3-int-308 - Retrieve text – Error-permanent-service-denied

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-308</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client A, Client B and MMSC server</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSENC] Chapter 6.3, Table 5</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>MMSE-C-076, MMSE-S-088</td>
</tr>
<tr>
<td>Tool</td>
<td>&lt;None&gt;</td>
</tr>
<tr>
<td>Test code</td>
<td>&lt;None&gt;</td>
</tr>
<tr>
<td>Preconditions</td>
<td>-Client A</td>
</tr>
<tr>
<td></td>
<td>-Client B</td>
</tr>
<tr>
<td></td>
<td>Has the ability to display the Retrieve text</td>
</tr>
<tr>
<td></td>
<td>-MMSC</td>
</tr>
<tr>
<td></td>
<td>It is possible to check the X-Mms-Retrieve-Text field in the server log.</td>
</tr>
<tr>
<td></td>
<td>The MMSC is set to not authorize retrieval attempts from Client B.</td>
</tr>
<tr>
<td>Test Procedure</td>
<td>1. In Client A, create a new MM.</td>
</tr>
<tr>
<td></td>
<td>2. In MM header: To-field is set to Client B.</td>
</tr>
<tr>
<td></td>
<td>3. In MM content: In the message text part, enter the text “Hello world”.</td>
</tr>
<tr>
<td></td>
<td>4. In Client A, send MM to Client B.</td>
</tr>
<tr>
<td></td>
<td>5. In Client B, try to download the MM.</td>
</tr>
<tr>
<td></td>
<td>6. Verify the pass criteria below.</td>
</tr>
<tr>
<td>Pass-Criteria</td>
<td>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”</td>
</tr>
<tr>
<td></td>
<td>AND Client B is displaying the Retrieve text.</td>
</tr>
</tbody>
</table>
### 5.3.4.4 MMS-1.3-int-309 - Retrieve text – Error-permanent-message-not-found

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-309</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client A, Client B and MMSC server</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSENC] Chapter 6.3, Table 5</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>MMSE-C-076, MMSE-S-088</td>
</tr>
<tr>
<td>Tool</td>
<td>&lt;None&gt;</td>
</tr>
<tr>
<td>Test code</td>
<td>&lt;None&gt;</td>
</tr>
</tbody>
</table>

#### Preconditions

- Client A
- Client B
  - Has the ability to display the Retrieve text
  - Retrieval mode set to deferred
- 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.

#### Test Procedure

1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: In the message text part, enter the text “Hello world”.
4. In Client A, send MM to Client B.
5. Let the MM expire and make sure it is deleted from the server.
6. In Client B, try to retrieve the MM.
7. Verify the pass criteria below.

#### Pass-Criteria

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” AND Client B is displaying the Retrieve text.
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:
1. In Client A, create a new MM.
2. In MM header: set Delivery Report Request-Field to ON.
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. 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

Preconditions:

- Client A
  Capability:
    Delivery report request

- MMSC
  Setting:
    Allow the request of a Delivery report

- Client B
  Capability:
    To rejected message

Test Procedure:

1. In Client A, create a new MM.
2. In MM header: set Delivery Report Request-Field to ON.
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, wait until notification is received.
7. Verify the pass criteria below.

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: [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: 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:
1. In Client A, create a new MM.
2. In MM header: set Delivery Report Request-Field to ON.
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 A, wait until delivery report is received.
6. Verify the pass criteria below.

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: - Client A
   Capability: Delivery report request
   - MMSC
      Setting: Allow the request of a Delivery report
      Default Validity Period/Expiry Time is set to 1 hour
   - 1st client B
      Setting: Retrieval mode set to immediate
   - 2nd and 3rd client B
      Setting: Retrieval mode set to deferred
   - 4th client B
      Setting: Switched off

Test Procedure:
1. In Client A, create a new MM.
2. In MM header: set Delivery Report Request-Field to ON.
3. In MM content: In the message text part, enter the text “Hello World”.
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 MMSC will generate an Expired Status for the 4th Client B after approximately 1 hour
5. In 1st Client B, immediately retrieve the MM.
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...
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: [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: May require 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 with the Date Field
  Setting: Allow of sending Read-Reply reports

Test Procedure:
1. In Client A, create a new MM.
2. In MM header: Read-Reply Report Request-Field is set to ON.
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 MM.
6. In Client B, accept Read-Reply report to be sent and open the received MM.
7. Verify the pass criteria below.

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

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:
1. In Client A, create a new MM.
2. In MM header: Read-Reply Report Request-Field is set to ON.
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 MM.
6. In Client B, accept Read-Reply report to be sent and open the received MM. Do not report date.
7. Verify the pass criteria below.

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  
-Client A  
  Capability:  
  Read Report request  
-MMSC  
  Setting:  
  Allow the request of a Read-Reply report by the sender  
-Three Client B  
  Capability:  
  Sending of Read-Reply report  
  Setting:  
  Allow sending of Read-Reply reports  

Test Procedure  
1. In Client A, create a new MM.
2. In MM header: Read-Reply Report Request-Field is set to ON.
3. In MM content: In the message text part, enter the text “Hello World”.
4. In Client A, send MM to 3 Client Bs.
5. In each Client B, receive MM.
6. In one client B, accept Read-Reply report to be sent and delete MM without reading it.
7. In the other two Client Bs, accept Read-Reply report to be sent and read the MM.
8. Verify the pass criteria below.

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:
1. In Client A, create a new MM.
2. In MM header: Read-Reply Report Request-Field is set to ON.
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 MM.
6. In Client B, accept Read-Reply report to be sent and open the received MM.
7. Verify the pass criteria below.

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**

- Client A
- 1st Client B

**Capability**

Forward without prior retrieval

**Setting**

Retrieval mode set to deferred

- 2nd Client B

**Capability**

Support of X-Mms -Previously-Sent-By field so that its status can be checked from the UI.

**MMSC**

**Test Procedure**

1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: In the message text part, enter the text “Hello World”.
4. In Client A, send MM to 1st Client B.
5. In 1st Client B, initiate the forwarding of the MM, without prior retrieval, to 2nd Client B.
6. In 2nd Client B, receive and open the MM.
7. Verify the pass criteria below.

**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: [MMSENC] Chapter 6.3 Table 5, Chapter 6.5

SCR Reference: MMSE-C-082

Tool

Test Code: -Client A

Preconditions: -1st Client B

Capability:

Forward without prior retrieval
Setting:
Retrieval mode set to deferred

-2nd Client B

Capability:

Support of X-Mms–Previously-Sent-Date field so that its status can be checked from the UI.

-MMSC

Test Procedure:

1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: In the message text part, enter the text “Hello World”.
4. In Client A, send MM to 1st Client B.
5. In 1st Client B, initiate the forwarding of the MM, without prior retrieval, to 2nd Client B.
6. In 2nd Client B, receive and open the MM.
7. Verify the pass criteria below.

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  [MMSENC] 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  1.  In Client A, create a new MM.
  2.  In MM header: To-field is set to Client B.
  3.  In MM content: In the message text part, enter the text “Hello World”.
  4.  In Client A, send MM to 1st Client B.
  5.  In 1st Client B, initiate the forwarding of the MM, without prior retrieval, to 2nd Client B.
  6.  In 2nd Client B, receive and open the MM.
  7.  Verify the pass criteria below.

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, 1st Client B, 2nd 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 [MMSENC] Chapter 6.1 Table 1
SCR Reference MMSE-FWD-C-010 (X-Mms-Expiry field)
Tool
Test Code
Preconditions  -Client A
   Capability
   Support of setting Validity period (Expiry-value) of the MM.
   - 1st Client B
   Capability
   Forward without prior retrieval
   Setting:
   Download option is set to Deferred Retrieval mode
   -2nd Client B
   Setting:
   Download option is set to Deferred Retrieval mode
   -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

Test Procedure  1. In Client A, create a new MM.
   2. In MM header: Validity Period/Expiry Time to 1 hour (or lowest possible value).
   3. In MM content: In the message text part, enter the text “Hello World”.
   4. In Client A, send MM to 1st Client B.
   5. In 1st Client B, initiate the forwarding of the MM, without prior retrieval, to 2nd Client B.
   6. Never retrieve the MM in 2nd Client B.
   7. Verify the pass criteria below.
Pass Criteria

The message has expired and MMSC has processed and delivered the notification to 2nd 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 [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:
 Forward without prior retrieval ,To request a Delivery report

-2nd Client B

Test Procedure 1. In Client A, create a new MM.
2. In MM content: In the message text part, enter the text “Hello World”.
3. In Client A, send MM to Client B.
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.
5. In 2nd Client B, receive and open the MM.
6. Verify the pass criteria below.

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 1. In Client A, create a new MM.
2. In MM content: In the message text part, enter the text “Hello World”.
3. In Client A, send MM to Client B.
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.
5. In 2nd Client B, reject the MM.
6. Verify the pass criteria below.

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 1. In Client A, create a new MM.
2. In MM content: In the message text part, enter the text “Hello World”.
3. In Client A, send MM to 1st Client B.
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.
5. Verify the pass criteria below.

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: [MMSENC] 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
- 2nd Client B

Test Procedure:
1. In Client A, create a new MM.
2. In MM content: In the message text part, enter the text “Hello World”.
3. In Client A, send MM to 1st Client B.
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.
5. In 2nd Client B, receive the MM.
6. In 2nd Client B, accept Read-Reply report to be sent and open the received MM.
7. Verify the pass criteria below.

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

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-501</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client A, Client B and MMSC server</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSCTR] Chapter 6.3.1, [MMSCTR] Chapter 6.2.1</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>MMSCTR-FTC-S-002, MMSCTR-NTF-C-003</td>
</tr>
</tbody>
</table>

Tool

Test Code

Preconditions
- Client A
- MMSC
- Client B
Setting:
   - Download option is set to Immediate Retrieval mode

Test Procedure
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
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 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
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
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 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

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-503</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client A, Client B and MMSC server</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
</tbody>
</table>
| 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     | 1. In Client A, create a new MM.  
2. In MM header: To-field is set to Client B.  
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, reject MM.  
6. Verify the pass criteria below. |
| 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

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-508</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>MMSC Server, Client B</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSENC] 6.2</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>MMSE-NTF-C-020</td>
</tr>
<tr>
<td>Tool</td>
<td>N/a</td>
</tr>
<tr>
<td>Test Code</td>
<td>N/a</td>
</tr>
<tr>
<td>Preconditions</td>
<td>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</td>
</tr>
</tbody>
</table>
| Test Procedure     | 1) In client A, compose an MM  
2) In client A, send the MM to client B  
3) The MMSC Server sends the MMS notification including the X-Mms-Recommended-Retrieval-Mode field set to manual  
4) Client B receives the MMS notification  
5) In client B, check that the message is not automatically retrieved  
6) In client B, manually retrieve the message. |
| 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

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-504</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client B</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSCONF] Chapter 7.1.4</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>MMSCONF-MED-C-022</td>
</tr>
<tr>
<td>Tool</td>
<td>The Client B can not send messages containing protected content, this must be sent from an email client or an MMS tool</td>
</tr>
<tr>
<td>Preconditions</td>
<td>-Client B</td>
</tr>
</tbody>
</table>
| Test Procedure | 1. PDU, containing protected content which an email client or MMS tool, is sent to Client B  
  2. In Client B, receive and open the MM containing DRM protected content  
  3. In client B, try to forward the MM to client A |
| Pass-Criteria | The PDU containing protected content passes transparently through the MMSC  
  Client B receives the protected content and the received message is reasonably presented  
  Verify that the received objects are properly protected and cannot be forwarded. |
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:
- Client A
- Client B
  - terminals support OMA DRM Separate delivery protection mechanisms
- Server
  - MMC connected to a DRM server or equivalent.

Test Procedure:
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)
2. In test tool or content server, send MM to Client A
3. In Client A, receive and open MM
4. In Client A, receive valid rights and present the content
5. In Client A forward the MM to Client B
6. In Client B, receive an open MM
7. In Client B, receive valid rights and present the content
8. Verify pass criteria below

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:
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)
2. In test tool, send MM via MMSC to Client B
3. In Client B, receive MM
4. Verify pass criteria below

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

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-511</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client B, MMSC</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSCONF] 16.2</td>
</tr>
<tr>
<td>SCR Reference</td>
<td></td>
</tr>
<tr>
<td>Tool</td>
<td>Test Tool or Server</td>
</tr>
<tr>
<td>Test Code</td>
<td>-Client B</td>
</tr>
</tbody>
</table>
| 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     | 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)  
                        2. In test tool, send MM via MMSC to Client B  
                        3. In Client B, receive MM  
                        4. Verify pass criteria (a) or (b) below |
| Pass Criteria      | 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.  
                        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) |
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

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:
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)
2. In test tool, send MM via MMSC to Client B
3. In Client B, receive MM without retrieving a valid rights object
4. Verify pass criteria (a) or (b) below

Pass Criteria:

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)

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)
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, [MMSCTR], Chapter 7, 8.2.3
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 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 1. In Client A, create a new MM.
2. In MM header: To-field is set to a single email address.
3. In MM content: In the message text part, enter the text “Hello World”.
4. In Client A, send MM to Email recipient.
5. In Email recipient, receive and open the MM.
6. Verify the pass criteria below.
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:
1. In Client A, create a new MM.
2. In MM header: To-field is set to a single email address.
3. In MM content: Add image file/object JPG160x120.jpg to the message.
4. In Client A, send MM to Email recipient.
5. In Email recipient, receive and open the MM.
6. Verify the pass criteria below.

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 1. In Client A, create a new MM.
2. In MM header: To-field is set to a single email address.
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.
4. In Client A, send MM to Email recipient.
5. In Email recipient, receive and open the MM.
6. Verify the pass criteria below.
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 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 1. In Client A, create a new MM.
2. In MM header: To-field is set to a single email address.
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).
4. In Client A, send MM to Email recipient.
5. In Email recipient, receive and open the MM.
6. Verify the pass criteria below.
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: [MMSEN] Chapter 5
SCR Reference: MMSE-C-005, MMSE-C-013

Tool
Test Code

Preconditions
- Email sender
  Capability:
  - encode image/jpeg
  - audio/(either amr or 13k speech)
  - text/plain
- MMSC
- Client B

Test Procedure
1. In Email sender, create a new MM.
2. In MM header: To-field is set to Client B.
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).
4. In Email sender, 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 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:
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
2. In Client A, create a new MM with the vCard object from the above mentioned address book entry.
3. In MM header: To-field is set to a single email address.
4. In Client A, send MM to Email recipient.
5. In Email recipient, receive and open the MM.
6. Verify the pass criteria below.

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

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
2. In Client A, create a new MM with the above defined vCalendar1.0_MIP object.
3. In MM header: To-field is set to a single email address.
4. In Client A, send MM to Email recipient.
5. In Email recipient, receive and open the MM.
6. Verify the pass criteria below.

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

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-608</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client B, MMSC server and email</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSCONF] Chapter 7</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>MMSCONF-MED-C-016</td>
</tr>
<tr>
<td>Tool</td>
<td></td>
</tr>
<tr>
<td>Test Code</td>
<td></td>
</tr>
<tr>
<td>Preconditions</td>
<td>-Email sender</td>
</tr>
<tr>
<td></td>
<td>Capability:</td>
</tr>
<tr>
<td></td>
<td>vCard</td>
</tr>
<tr>
<td></td>
<td>-MMSC</td>
</tr>
<tr>
<td></td>
<td>- Client B</td>
</tr>
<tr>
<td>Test Procedure</td>
<td>1. In Email sender, create a new MM.</td>
</tr>
<tr>
<td></td>
<td>2. In MM header: To-field is set to Client B.</td>
</tr>
<tr>
<td></td>
<td>4. In Email sender, send MM to Client B.</td>
</tr>
<tr>
<td></td>
<td>5. In Client B, receive and open the MM.</td>
</tr>
<tr>
<td></td>
<td>6. Verify the pass criteria below.</td>
</tr>
<tr>
<td>Pass Criteria</td>
<td>Client B has received the message and the received vCard is textually correct.</td>
</tr>
</tbody>
</table>
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
1. In Email sender, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add a vCalendar object “Christmas.vcs” to the message.
4. In Email sender, 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 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:
- Client A
  Capability: image rich class conformant
  Setting: Creation Mode set to Restricted
- Client B
  Capability: image basic class conformant
  Setting: Creation Mode set to Restricted
- MMSC
  Setting: Content adaptation enabled

Test Procedure:
1. In Client A, create a new MM.
2. Header: To-field is set to Client B.
3. Content: Add image file/object JPG_99k.gif to the message.
4. In Client A, send MM to Client B.
5. In Client B, receive MM.
6. Verify the pass criteria below.
7. Disable Content adaptation on the MMSC server
8. In Client A, create a new MM.
9. Header: To-field is set to Client B.
10. Content: Add image file/object JPG_99k.gif to the message.
11. In Client A, send MM to Client B.
12. In Client B, receive MM.
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

Preconditions:
- Client A
  Capability: image rich class conformant
  Setting: Creation Mode set to Restricted
- Client B
  Capability: image basic class conformant
  Setting: Shall be in Image Basic
  Creation Mode set to Restricted
- MMSC
  Setting: Content adaptation is enabled

Test Procedure:
1. In Client A, create a new MM.
2. Header: To-field is set to Client B.
3. Content: Add image file/object MIDI file, audio.mid to the message.
4. In Client A, send MM to Client B.
5. In Client B, receive MM.
6. Verify the pass criteria below.
7. Set Client B to be Image Rich
8. In Client A, create a new MM.
9. Header: To-field is set to Client B.
10. Content: Add image file/object MIDI file, audio.mid to the message.
11. In Client A, send MM to Client B.
12. In Client B, receive MM.
13. Verify the pass criteria below.
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
-Client A
   Capability:  Video rich conformant
   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
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add midi1.mid to the message.
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 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 adaptation

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
- Client A
  Capability: Video rich conformant
  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
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add qcif_video.3gp.
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 and it is reasonably 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  
-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  
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add image file/object JPG640x480.jpg to the message.
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  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:

-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:

2. In Client A, create a new MM.
3. In MM header: To-field is set to Client B.
4. In MM content: Add image file/object GIF87a99k.gif to the message.
5. In Client A, send MM to Client B.
6. In Client B, receive and open the MM.
7. Verify the pass criteria below.

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

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
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add image file/object JPG_99k.gif to the message.
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 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
- Client A
  Capability: Larger 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
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add image file/object GIF89a99k.gif to the message.
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: 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:
-Client A
  Capability: image rich class conformant
  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:
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add image file/object MIDI file, audio.mid to the message.
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: 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

Test Code

Preconditions

-Client A
  Capability: video basic class conformant
  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

-Capability to; either capture the PDU sent from the MMSC to Client B or possibility to view updated labels within Client B

Test Procedure

1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add image file/object sub-qcif_video.3gp to the message.
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 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 1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add image file/object VideoRich300k.3gpto the message.
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 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:

- Client A
  Capability:
  image rich class conformant

- Client B
  Capability:
  image basic class conformant

- MMSC
  Setting:
  Content adaptation is enabled

Test Procedure:

7. In Client A, create a new MM.
8. In MM header: To-field is set to Client B.
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: 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 -Client A
   Capability:
      Video rich class conformant

   -Client B
   Capability:
      image basic class conformant

   -MMSC
   Setting:
      Content adaptation is enabled

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: 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.
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 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
   -Client A
      Capability: either in content class Video Basic or Video Rich
      Setting: Creation Mode set to Restricted
   -Client B
      Capability: image rich class conformant
      Setting: Creation Mode set to Restricted
   -MMSC
      Setting: Content adaptation is enabled

Test Procedure
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add image file/object VideoRich300k.3gpto the message.
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 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:
- Client A
  Capability: video rich class conformant
- Client B
  Capability: image rich class conformant
- MMSC
  Setting: Content adaptation is enabled and configured for GIF 87a image as output format

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 image file/object VideoRich300k.3gpto 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: 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

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-821x</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>MMSC</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSCONF] Chapter 9.5.2</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>MMSCONF-CAG-S-002; MMSCONF-AMJ-S-002</td>
</tr>
<tr>
<td>Tool</td>
<td></td>
</tr>
<tr>
<td>Test Code</td>
<td></td>
</tr>
<tr>
<td>Preconditions</td>
<td></td>
</tr>
<tr>
<td>- Client A</td>
<td></td>
</tr>
<tr>
<td>Capability:</td>
<td></td>
</tr>
<tr>
<td>video Basic class conformant</td>
<td></td>
</tr>
<tr>
<td>- Client B</td>
<td></td>
</tr>
<tr>
<td>Capability:</td>
<td></td>
</tr>
<tr>
<td>image rich or image basic class conformant</td>
<td></td>
</tr>
<tr>
<td>- MMSC</td>
<td></td>
</tr>
<tr>
<td>Setting:</td>
<td></td>
</tr>
<tr>
<td>Content adaptation is enabled and configured for GIF 89a image as output format</td>
<td></td>
</tr>
<tr>
<td>Test Procedure</td>
<td></td>
</tr>
<tr>
<td>13. In Client A, create a new MM.</td>
<td></td>
</tr>
<tr>
<td>14. In MM header: To-field is set to Client B.</td>
<td></td>
</tr>
<tr>
<td>15. In MM content: Add image file/object VideoRich300k.3gpto the message.</td>
<td></td>
</tr>
<tr>
<td>16. In Client A, send MM to Client B.</td>
<td></td>
</tr>
<tr>
<td>17. In Client B, receive and open the MM.</td>
<td></td>
</tr>
<tr>
<td>18. Verify the pass criteria below.</td>
<td></td>
</tr>
<tr>
<td>Pass Criteria</td>
<td>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.</td>
</tr>
</tbody>
</table>
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

-Client A
 Capability: video rich class conformant
 Setting: Creation Mode set to Restricted

-Client B
 Capability: image rich class conformant
 Setting: Creation Mode set to Restricted

-MMSC
 Setting: Content adaptation is enabled

Test Procedure

19. In Client A, create a new MM.
20. In MM header: To-field is set to Client B.
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 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

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-813</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client A, Client B and MMSC</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>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,</td>
</tr>
</tbody>
</table>

**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**
1. In Client A, create a new MM.
2. In MM header: To-field is set to Client B.
3. In MM content: Add image file/object JPG1000x500.jpg to the message.
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**
- 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


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:
8. In Client A, create a new MM.
9. In MM header: To-field is set to Client B.
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.
11. In Client A, send MM to Client B.
12. In Client B, receive and open the MM.
13. Verify the pass criteria below.

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.
<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-815</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>Client A, Client B and MMSC</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>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.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSCONF] Chapter 9.2</td>
</tr>
<tr>
<td>SCR Reference</td>
<td>MMSCONF-AMJ-S-001, MMSCONF-CAG-S-003, MMSCONF-CAG-S-004, MMSCONF-CAG-S-005, MMSCONF-CAG-S-006, MMSCONF-CAG-S-007</td>
</tr>
<tr>
<td>Tool</td>
<td></td>
</tr>
<tr>
<td>Test Code</td>
<td></td>
</tr>
</tbody>
</table>
| Preconditions | Client A
Creation Mode set to free and is able to add unsupported object type to the message
MMSC 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 -Client A
  Capability: Video rich class conformant
  Setting: Creation Mode set to Restricted

-Client B
  Capability: Image rich class conformant and max message size is 100 kB

-MMSC setting:
  Content adaptation is enabled and Client B’s UA Profile is added to MMSC

Test Procedure
31. In Client A, create a new MM.
32. In MM header: To-field is set to Client B.
33. In MM content: VideoRich300kB.
34. In Client A, send MM to Client B.
35. In Client B, receive and open the MM.
36. Verify the pass criteria below.

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:
1. In Client A, create a new MM.
2. In MM header Bcc-field is set to address the recipient Clients B, C and D
3. In MM content: In the message text part, enter the text “Hello World”.
4. From Client A, send MM.
5. In Client B, C and D receive and open the MM.
6. Verify the pass criteria below.

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: - MMSC 1 and MMSC 2 configured to communicate to each other through MM4
- The size of the message is to be bigger than MMSC2 is set to approve.
- The recipient can be set to ‘black list’ or is not in the subscriber data base.
- Client A
  Configured to send/receive MMS through MMSC1
- Client B
  Configured to send/receive MMS through MMSC2

Test Procedure:
1. In this case a message is sent across the MM4 in circumstances, when MMSC2 will not approve the reception.
2. With Client A, create a new MM. Make sure that MMSC2 rejects the message.
3. In MM header: To-field is set to Client B and delivery report is requested
4. Send the MM from Client A to Client B
5. Verify the pass criteria below.

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 [MMSENC]

SCR Reference

Tool

Test Code

Preconditions

- Client A; subscriber of MMSC1
  Capability: Setting of the Read Report request
  Able to display the read reply report

- Client B; subscriber of MMSC2
  Capability: Capable of answering the Read Report Requests

MMSC1 and MMSC2 configured to communicate over MM4

Test Procedure

1. In Client A, create a new MM.
2. In MM header: Read-Reply Report Request-Field is set to ON.
3. In MM header: To-field is set to Client B
4. In MM content: In the message text part, enter the text “Hello World”.
5. In Client A, send MM
6. In Client B receive the message in MMSC2
7. In Client B open the message
8. Client B approves the sending of Read-Reply report; message gets sent
9. In Client A receives the Read-Reply report and opens it
10. Verify the pass criteria below.

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: --Client A; subscriber of MMSC1  
Capability:  
Setting of the Read Report request  
Able to display the read reply report  

-Client B; subscriber of MMSC2  
Capability:  
Capable of answering the Read Report Requests  

-Client C; subscriber of MMSC2  
Capability:  
Capable of answering the Read Report Requests  

-Client D; subscriber of MMSC2  
Capability:  
Capable of answering the Read Report Requests  

MMSC1 and MMSC2 configured to communicate over MM4

Test Procedure:
1. In Client A, create a new MM.
2. In MM header: Read-Reply Report Request-Field is set to ON.
3. In MM header: To-field is set to: Client B, Client C and to Client D
4. In MM content: In the message text part, enter the text “Hello World”.
5. In Client A, send the MM
6. In Client B, C and D receive the message in MMSC2
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.
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.
9. Verify the pass criteria below.

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-

Test Procedure:

1. In Client A, create a new MM with text only. Use UTF-8 characters only.
2. In MM header: To-field is set to Client B.
3. In subject field enter text to “Shô?t Téxt- üëä”
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”.
5. From Client A, send MM to Client B
6. In Client B, receive and open the MM.
7. Verify the pass criteria below.

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              7. In Client A, create a new MM.
                            8. In MM header: Priority-Field is set to Normal.
                            9. In message text part, enter the text “Hello World”.
                            10. In Client A, send the MM to Client B.
                            11. Go through steps 1 to 4 with the remaining priority settings, first Low and
                                then High
                            12. In Client B, receive and open the three MMs.
                            13. Verify the pass criteria below.

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:
7. In Client A, create a new MM.
8. In MM header: Add following 40 chars to subject field: “abcdefghijklmnopqrstuvwxyz0123456789/-+@”.
9. In MM content: In the message text part, enter the text “Hello World”.
10. In Client A, send MM to Client B via the MM4.
11. In Client B, receive and open the MM.
12. Verify the pass criteria below.

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

<table>
<thead>
<tr>
<th>Test Case Id</th>
<th>MMS-1.3-int-830</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Object</td>
<td>MMSC1 and MMSC2</td>
</tr>
<tr>
<td>Test Case Description</td>
<td>The purpose is to verify that a message with the maximum size claimed to be supported by both MMSCs is successfully delivered through MM4.</td>
</tr>
<tr>
<td>Specification Reference</td>
<td>[MMSCONF] Chapter</td>
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<td>SCR Reference</td>
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<tr>
<td>Tool</td>
<td></td>
</tr>
<tr>
<td>Test Code</td>
<td></td>
</tr>
<tr>
<td>Preconditions</td>
<td>-MMSC 1 and MMSC 2 configured to communicate to each other through MM4</td>
</tr>
<tr>
<td></td>
<td>- No content adaptations are used during the test case</td>
</tr>
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<td>-Client A Configured to send/receive MMS through MMSC1</td>
</tr>
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<td>-Client B Configured to send/receive MMS through MMSC2</td>
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<table>
<thead>
<tr>
<th>Test Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
</tr>
<tr>
<td>2. In MM header: To-field is set to Client B.</td>
</tr>
<tr>
<td>3. From Client A, send MM to Client B</td>
</tr>
<tr>
<td>4. In Client B, receive and open the MM.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pass Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>The message is successfully received in Client B and the message details are the same as in the original message.</td>
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</table>
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
-MMSC 1 and MMSC 2 configured to communicate to each other through MM4
- MMSC1 is set to support bigger message size than MMSC2
-Client A
  Configured to send/receive MMS through MMSC1
-Client B
  Configured to send/receive MMS through MMSC2

Test Procedure
1. In Client A, create a new MM. The size is to be bigger than MMSC2 is set to support
2. In MM header: To-field is set to Client B.
3. From Client A, send MM to Client B
4. Verify the result according the pass criteria.

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          MMSC 1 and MMSC 2 configured to communicate with each other through MM4

-Client A (test tool); subscriber of MMSC1
  Configured to send/receive MMS through MMSC1
  Client is capable of setting the priority to Personal, Advertisement, Informational and Auto

-Client B; subscriber of MMSC2
  Configured to send/receive MMS through MMSC2
  Capable of displaying the different message classes

Test Procedure

1. In Client A, create a new MM.
2. In MM header: Priority-Field is set to Personal (default setting of a basic message).
3. In message text part, enter the text “Hello World”.
4. In Client A, send the MM to Client B.
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
6. In Client B, receive and open the four MMs.
7. Verify the pass criteria below.

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. Change History

### A.1 Approved Version History

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<th>Date</th>
<th>Description</th>
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### A.2 Draft/Candidate Version 1.3 History

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<td>The initial version of this document. Changed the ETS 1.2 to a first draft version of the ETS 1.3</td>
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### Appendix B. OBSOLETE TESTS

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.

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<th>Title</th>
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<tr>
<td>MMS-1.2-int-101</td>
<td>Client A, Client B</td>
<td>Empty Message</td>
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<tr>
<td>MMS-1.2-int-110</td>
<td>Client A, Client B</td>
<td>Long Filename</td>
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<td>MMS-1.2-int-114</td>
<td>Client A, Client B</td>
<td>Text with UTF-16 encoding</td>
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<tr>
<td>MMS-1.2-int-115</td>
<td>Client A, Client B</td>
<td>JPG image size 80x60</td>
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<tr>
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<td>Client A, Client B</td>
<td>JPG image size 60x80</td>
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<tr>
<td>MMS-1.2-int-119</td>
<td>Client A, Client B</td>
<td>GIF image size 80x60</td>
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<td>MMS-1.2-int-121</td>
<td>Client A, Client B</td>
<td>GIF image size 60x80</td>
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<tr>
<td>MMS-1.2-int-123</td>
<td>Client A, Client B</td>
<td>Animated GIF image size 80x60</td>
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<td>Client A</td>
<td>Creation mode - Restricted - inclusion of non core domain content</td>
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<td>Client A</td>
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<td>Client A</td>
<td>Creation mode - Restricted – forwarding oversize</td>
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<td>Client A</td>
<td>Creation mode - Restricted - forwarding oversize image resolution</td>
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<td>MMS-1.3-int-212</td>
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<td>Text with US-ASCII encoding</td>
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