Enabler Test Specification for Standard Transcoding Interface

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Open Mobile Alliance

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Contents

1. Scope

This document describes in detail available test cases for STI 1.0, http://www.openmobilealliance.org/.

The 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.

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

2. References

2.1 Normative References

[IOPPROC] "OMA Interoperability Policy and Process", Version 1.3, Open Mobile Alliance™, OMA-IOP-Process-V1_3, URL:http://www.openmobilealliance.org/

[MIME] MIME Part 1, Format of Internet Message Bodies – RFC 2045, http://www.ietf.org/rfc/rfc2045.txt

MIME Part 2, Media Types – RFC 2046, http://www.ietf.org/rfc/rfc2046.txt

MIME Part 3, Message Header Extensions for Non-ASCII-Text – RFC 2047, http://www.ietf.org/rfc/rfc2047.txt

MIME Part 4, Registration Procedures – RFC 2048, http://www.ietf.org/rfc/rfc2048.txt

MIME Part 5, Conformance Criteria and Examples – RFC 2047, http://www.ietf.org/rfc/rfc2049.txt

MIME Multipart/Related Content-Type – RFC 2387, http://www.ietf.org/rfc/rfc2387.txt

[OMA MWS Guidelines] "OMA Web Services Enabler (OWSER): Core Specifications", Open Mobile Alliance™, OMA-OWSER-Core-Specification-V1_0, http://www.openmobilealliance.org

[RFC2119] "Key words for use in RFCs to Indicate Requirement Levels", S. Bradner, March 1997, URL:http://www.ietf.org/rfc/rfc2119.txt

[STI 1.0] "Standard Transcoding Interface Specification", Open Mobile Alliance™, OMA-STI-V1_0, http://www.openmobilealliance.org

[STI XSD] STI 1.0 XSD schema, Open Mobile Alliance™, OMA-SCHEMA_STI-V1_0-20050120-D, http://www.openmobilealliance.org

[UAProf] WAP User Agent Profiling, http://www.openmobilealliance.org

[WSI-1] Web Services Interoperability Organization, http://www.ws-i.org/

[WS-I Attachment Profile 1.0] Web Services Interoperability, Attachment Profile, Version 1.0, http://www.ws-i.org/Profiles/AttachmentsProfile-1.0-2004-06-11.html

[WS-I Basic Profile 1.1, Draft] Web Services Interoperability, Basic Profile 1.1, http://www.ws-i.org/Profiles/BasicProfile-1.1-2004-06-11.html

[XML Schema Part 2: Datatypes] "XML Schema Part 2: Datatypes", W3C Recommendation 02 May 2001, http://www.w3.org/TR/2001/REC-xmlschema-2-20010502/

2.2 Informative References

[OMADICT] "Dictionary for OMA specifications". Open Mobile Alliance™. OMA-Dictionary-v1_0. http://www.openmobilealliance.org/

[STIETR] "STI Enabler Test Requirements", Open Mobile Alliance™. OMA-STI-ETR-1_0. http://www.openmobilealliance.org/

[STIETP] "STI Enabler Test Plan", Open Mobile Alliance™. OMA-STI-ETP. http://www.openmobilealliance.org/

[EICS-C] "Client Enabler ICS", Open Mobile Alliance™. OMA-EICS-STI-Client. http://www.openmobilealliance.org/

[EICS-S] "Server Enabler ICS", Open Mobile Alliance™. OMA-EICS-STI-Server. http://www.openmobilealliance.org/

3. Terminology and Conventions

3.1 Conventions

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

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

The following numbering scheme is used:

xxx-y.z-con-number where:

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

Or

xxx-y.z-int-number where:

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

3.2 Definitions

Application Platform	Combination of hardware and software that provide the functionality of an application. Note that rather than implementing all components to provide the functionality of an application the implementation can integrate the necessary components from other platforms.
Content	Subject matter or information that is processed, stored, or transmitted electronically. It includes such things as text, presentation, audio, images, video, etc. Content may have properties such as media type, mime type, etc.
Job Result	Part of the Transcoding Response that corresponds to one individual transcoding, i.e. one transcoded content (which may contain one or more media elements) and the parameters corresponding to the particular transcoding as returned to the Application Platform
Multipart Content	A set of media elements that can be transcoded as a whole, in a single transcoding job
Policy	A set of rules that are specified by the Application Platform to the Transcoding Platform, that can be used to give general limitations and preferences as well as specific variations of the transcoding parameters up to the transcoding job granularity.
Profile	Set of parameters and constraints that define the transcoding target. Those parameters come from the User Equipment characteristics, combined with the specific application needs and describe the format, resolution, file size…etc. that the transcoded Content should conform to.
Request Body	The SOAP body of a Transcoding Request that contains the STI parameters of the request. A Request Body may contain one or more Transcoding Jobs.
Response Body	The SOAP body of a Transcoding Response that contains details about the performed transcoding. A Response Body may contain one or more Job Results.
Transcoding Job	Part of the Transcoding Request that corresponds to one individual transcoding, i.e. one input content (which may contain more media elements in case of Multipart Content) and the parameters corresponding to the particular transcoding as given by the Application Platform.
Transcoding Platform	Combination of hardware and software that provide transcoding functionality.

Transcoding Request	A transcoding request, as issued by the Application Platform. The Transcoding Request can contain one or more Transcoding Job(s) and zero or more content attachment(s)
Transcoding Response	Transcoding Platform response that can contain the results of one or more Transcoding Job(s), and zero or more content attachment(s).
Transcoding Service	Functionality for transcoding of Content offered as a service to an application.
User Equipment	A device allowing a user access to network services. For the purpose of OMA specifications the interface between the UE and the network is the radio interface

3.3 Abbreviations

13k	or QCELP or Q13: QualComm Code Excited Linear Predictive Coding at 13k
AAC	Advanced Audio Coding
AAC-LC	Advanced Audio Coding – Low Complexity
AMR	Adaptive Multi Rate
AMR-NB	Adaptive Multi Rate - Narrow Band
AMR-WB	Adaptive Multi Rate - Wide Band
ASCII	American Standard Code for Information Interchange
BMP	Bit Map
DRM	Digital Rights Management
EVRC	Enhanced Variable Rate Coder
FTP	File Transfer Protocol
GIF	Graphics Interchange Format
GIF 87a/89a	GIF with animations
HTTP	HyperText Transfer Protocol
JPEG	Joint Photographic Experts Group
JPEG-P	Joint Photographic Experts Group – Progressive
MIDI	Musical Instrument Digital Interface
MIME	Multipurpose Internet Mail Extension
MM	Multimedia Message
MMS	Multimedia Messaging Service
MMSC	Multimedia Messaging Service Center
MPEG	Moving Picture Experts Group
MP3	MPEG-1 Audio Layer 3
OMA	Open Mobile Alliance
PC	Personal Computer
PDA	Personal Digital Assistant
PNG	Portable Network Graphics
Q13	or 13k or QCELP: QualComm Code Excited Linear Predictive Coding at 13k
QCELP	or 13k or Q13: QualComm Code Excited Linear Predictive Coding at 13k
RFC	Request For Comments
SDP	Session Description Protocol
SMIL	Synchronized Multimedia Integration Language
SMV	Selectable Mode Vocoders
SOAP	Simple Object Access Protocol
SP-MIDI	Scalable Polyphony - Musical Instrument Digital Interface
SVG	Scalable Vector Graphics
TCP	Transmission Control Protocol
URI	Uniform Resource Identifier
URL	Uniform Resource Locator

UTF	Unicode Translation Format
WAP	Wireless Application Protocol
WBMP	Wireless Bit Map
XML	eXtensible Mark-up Language

4. Introduction

The purpose of this document is to provide test cases for STI Enabler Release 1.0.

Some features in the STI enabler may optionally be implemented in clients and servers. The tests associated with these optional features are marked as [Optional] in the test specification.

The following items on an overall level are needed to adequately test the STI enabler:

- STI Client
- STI Server
- HTTP Server
- Terminal A and B
- WS-I Basic Profile tools
- Schema validator tool
- Tool that is capable to send precompiled test cases and save the responses
- Tool/s capable of presenting the adapted media (e.g. image viewer, audio player, etc.)

Detailed info is in the specific test cases description.

4.1 Test Objects

Test objects can be the following:

- STI Client, which originates messages
- STI Server, which receives messages.
- MMSC Server, STI Client which is forwarding messages from Client A to Client B(s) and/or to Email recipient(s) and Email sender to Client B. During precompiled conformance testing, the STI Client (MMSC) is not a test object.

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.

4.3 Test Prerequisites

The following items are needed to test the STI enabler.

Prerequisites for client-to-server tests:

- STI Client - MMS Relay Server (MMSC).
- STI Server – Transcouding platform

- Reference content
- A WAP 1.2.1 / WAP 2.0 Gateway, Push Proxy and SMSC (if applicable)
- Network connectivity for the types of clients being tested (e.g. GSM/GPRS or CDMA)
- Network Access Points (NAS) for data access
- IP network interconnecting the NAS, the WAP GW and the MMSC.
- Correct MMS settings in the Clients & MMSC (preconditions of individual test cases may override these settings).

4.4 Test procedures

IOP tests are always performed pair-wise between test objects (i.e. a client of implementation X is tested against a server of implementation Y).

4.4.1 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.

4.4.2 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 terminal supports loading of such content and subsequent use of it in MMS, this content SHALL be used.

In case terminal 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 terminals and email recipients beforehand. Optionally, the reference content can be provided by an external media, e.g. CD or a server.

4.4.3 Content of profiles

The content of the profiles should be as described in the table 1

Profile ID	MMS-Text	MMS-Image-Basic	MMS-Image-Rich	MMS-Video-Basic	MMS-Video-Rich
Max File size(bytes)	30720	30720	102400	102400	307200
Text	US-ASCII UTF-8 UTF-16	US-ASCII UTF-8 UTF-16	US-ASCII UTF-8 UTF-16	US-ASCII UTF-8 UTF-16	US-ASCII UTF-8 UTF-16
Still Image Bitmap		Baseline JPEG GIF87a GIF89a	Baseline JPEG GIF87a GIF89a	Baseline JPEG GIF87a GIF89a	Baseline JPEG GIF87a GIF89a

Width x Height		WBMP 160x120	WBMP 640x480	WBMP 640x480	WBMP 640x480
Video Width x Height				*.3gp: H.263 & AMR *.3g2: [H.263 and MPEG4] & 13k and/or AMR 128x96 (SQCIF)	*.3gp: H.263 & AMR *.3g2: [H.263 and MPEG4] & 13k and/or AMR 128x96 (SQCIF) & 176x144 (QCIF)
Speech Audio Synth. Audio		AMR-NB 13K	AMR-NB 13K SP-MIDI	AMR-NB 13K SP-MIDI	AMR-NB 13K SP-MIDI
PIM DRM Presentation	MMS SMIL	vCard 2.1, vCalendar 1.0 MMS SMIL	vCard 2.1, vCalendar 1.0 Fwd-Lock MMS SMIL	vCard 2.1, vCalendar 1.0 Fwd-Lock MMS SMIL with video support	vCard 2.1, vCalendar 1.0 Fwd-Lock MMS SMIL with video support

Table 1: Content of profiles

4.4.4 Possible combinations in interoperability tests requests

The STI specification provides more than one way to specify similar transcoding requests. Every IOP test case can be mapped to several STI requests, each consisting of a different combination of parameters. The possible combinations are listed in the table below.

Prior to the IOP testing, the Application Platform should declare for every row in the table below, which of the options mentioned in the different columns is to be used in every one of the transcoding jobs in its requests. The Application Platform and the Transcoding Platform should then verify that the Transcoding Platform supports the same combinations of the STI request parameters. This is what is meant by the precondition "STI Client and STI Server support the same means of transcoding instructions" that appears in many of the interoperability test cases. The verification could be done using the client and server EICS documents.

The possible combinations are as follows:

Source Content Location	Attached content (internal).	Reference to an external location (using one of the schemes: http, https, ftp, file, etc.)	
Target Location	Not specified (internal)	External Location (using a one of the schemes: http, https, ftp, file, etc.)	
Transcoding instructions	Predefined profile (profileId)	Explicit Transcoding parameters (transcodingParams)	A combination of both.
Transcoding Instructions position	Transcoding Request	Target element in Transcoding Job	
Source Media	A single media (video, image, etc.)	Within a multipart	Within a vnd.wap.multipart

The server and client should coordinate IP address, port number and the URL to which the client will send the request.

In addition to the stated above, The STI Client and STI Server should also pre-coordinate the strings that represent the media content types and codecs that are to be used in the requests according to [STI 1.0], section 5.2.4.

5. Conformance Test Cases

For STI Enabler there exists 23 conformance tests..

First part of conformance test cases test Web Services requirements e.g. SOAP envelopes. WS-I testing tools are required to use to test Web Services requirements. WS-I testing tools can be downloaded from the WS-I organization web site http://www.ws-i.org

Second part of conformance test cases test STI Server conformance to STI specifications. Requests are initiated by sending precompiled requests.

Precompiled content shall be made available with the Enabler Test Specification. Many test cases have specified the precompiled file to be used.

6. Web Services Conformance test cases (SOAP)

6.1 STI-1.0-con-001 SOAP protocol version 1.1

Test Case Id	STI-1.0-con-001
Test Object	STI client and STI server
Test Case Description	The purpose of test is to verify that messages between STI server and STI Client supports SOAP protocol version 1.1.
Specification Reference	[STI 1.0] Section 5.1.2
SCR Reference	STI-CLIENT-001, STI-SERVER-001
Tool	WS-I Basic Profile test tool
Test code	[WS-I Attachments Profile 1.0] (with [WS-I Basic Profile 1.1, Draft] and [Simple Soap Binding Profile 1.0]) Test Assertions Version 1.0 / WSI1201
Preconditions	MMSC setting: STI Content adaptation is enabled
Test Procedure	1. Start WS-I Monitor tool 2. Create a transcoding request: by sending MMS message from terminal A to terminal B. 3. The message should be received in terminal B. 4. Stop WS-I Monitor tool 5. Analyze captured log file with WS-I Analyzer tool
Pass-Criteria	Analyzer tool shows WSI1201-case passed succesfully.

6.2 STI-1.0-con-002 SOAP request sent over HTTP(S)

Test Case Id	STI-1.0-con-002
Test Object	STI client and STI server
Test Case Description	The purpose of test is to verify that messages between STI server and STI Client supports SOAP request sent over HTTP(S).
Specification Reference	[STI 1.0] Section 5.1.2
SCR Reference	STI-CLIENT-002, STI-SERVER-002
Tool	WS-I Basic Profile test tool
Test code	[WSI-I Attachments Profile 1.0] (with [WS-I Basic Profile 1.1, Draft] and [Simple Soap Binding Profile 1.0]) Test Assertions Version 1.0 / WSI1004
Preconditions	MMSC setting: STI Content adaptation is enabled
Test Procedure	1. Start WS-I Monitor tool 2. Create a transcoding request: by sending MMS message from terminal A to terminal B. 3. The message should be received in terminal B. 4. Stop WS-I Monitor tool 5. Analyze captured log file with WS-I Analyzer tool
Pass-Criteria	Analyzer tool shows WSI1004 -case passed succesfully.

6.3 STI-1.0-con-003 SOAP request sent as body of a HTTP(S) POST

Test Case Id	STI-1.0-con-003
Test Object	STI client and STI server
Test Case Description	The purpose of test is to verify that messages between STI server and STI Client supports SOAP request sent as body of a HTTP(S) POST.
Specification Reference	[STI 1.0] Section 5.1.2
SCR Reference	STI-CLIENT-003, STI-SERVER-003
Tool	WS-I Basic Profile test tool
Test code	[WS-I Attachments Profile 1.0] (with [WS-I Basic Profile 1.1, Draft] and [Simple Soap Binding Profile 1.0]) Test Assertions Version 1.0 / WSI1002, WSI1701
Preconditions	MMSC setting: STI Content adaptation is enabled
Test Procedure	1. Start WS-I Monitor tool 2. Create a transcoding request: by sending MMS message from terminal A to terminal B. 3. The message should be received in terminal B. 4. Stop WS-I Monitor tool 5. Analyze captured log file with WS-I Analyzer tool
Pass-Criteria	Analyzer tool shows WSI1002, WSI1701 -cases passed succesfully.

6.4 STI-1.0-con-004 SOAP request containing a single SOAP envelope

Test Case Id	STI-1.0-con-004
Test Object	STI client and STI server
Test Case Description	The purpose of test is to verify that messages between STI server and STI Client supports SOAP request containing a single SOAP envelope.
Specification Reference	[STI 1.0] Section 5.1.2
SCR Reference	STI-CLIENT-004, STI-SERVER-004
Tool	WS-I Basic Profile test tool
Test code	[WS-I Attachments Profile 1.0] (with [WS-I Basic Profile 1.1] and Simple [Soap Binding Profile 1.0]) Test Assertions Version 1.0 / WSI1309
Preconditions	MMSC setting: STI Content adaptation is enabled
Test Procedure	1. Start WS-I Monitor tool 2. Create a transcoding request: by sending MMS message from terminal A to terminal B. 3. The message should be received in terminal B. 4. Stop WS-I Monitor tool 5. Analyze captured log file with WS-I Analyzer tool
Pass-Criteria	Analyzer tool shows WSI1309-case passed succesfully.

6.5 STI-1.0-con-005 Attachment structure conformant with the definition of SOAP with Attachments

Test Case Id	STI-1.0-con-005
Test Object	STI client and STI server
Test Case Description	The purpose of test is to verify that attachment structure is conformant with the definition of SOAP with Attachment.
Specification Reference	[STI 1.0] Section 5.1.2
SCR Reference	STI-CLIENT-005, STI-SERVER-005
Tool	WS-I Basic Profile test tool
Test code	[WS-I Attachments Profile 1.0] (with [WS-I Basic Profile 1.1, Draft] and Simple Soap Binding Profile [1.0]) Test Assertions Version 1.0 / WSI1931, WSI1932, WSI1935, WSI1936, WSI1942, WSI1946
Preconditions	MMSC setting: STI Content adaptation is enabled
Test Procedure	1. Start WS-I Monitor tool 2. Create a transcoding request: by sending MMS message from terminal A to terminal B. 3. The message should be received in terminal B. 4. Stop WS-I Monitor tool 5. Analyze captured log file with WS-I Analyzer tool
Pass-Criteria	Analyzer tool shows WSI1931, WSI1932, WSI1935, WSI1936, WSI1942, WSI1946-cases passed succesfully.

6.6 STI-1.0-con-006 Use of the "start parameter" within SOAP protocol

Test Case Id	STI-1.0-con-006
Test Object	STI client and STI server
Test Case Description	The purpose of test is to verify use of the "start parameter" within SOAP protocol.
Specification Reference	[STI 1.0] Section 5.1.2
SCR Reference	STI-CLIENT-006, STI-SERVER-006
Tool	WS-I Basic Profile test tool
Test code	
Preconditions	MMSC setting: STI Content adaptation is enabled
Test Procedure	1. Start WS-I Monitor tool 2. Create a transcoding request: by sending MMS message from terminal A to terminal B. 3. The message should be received in terminal B. 4. Stop WS-I Monitor tool 5. Analyze captured log file manually without the WS-I Analyzer tool
Pass-Criteria	WS-I Monitor tool log file shows start parameter.

7. Precompiled conformance test cases

7.1 STI-1.0-con-101 Fault Response; Parsing Error

Test Case Id	STI-1.0-con-101
Test Object	STI Server
Test Case Description	The purpose of this test is to verify that a server properly responds to malformed request.
Specification Reference	[STI1_0] Sections 5.3.2, 5.3.4
SCR Reference	STI-SERVER-051, STI-SERVER-052, STI-SERVER-053, STI-SERVER-054, STI-SERVER-055, STI-SERVER-064
Tool	Precompiled STI request
Test code	STI-1.0-con-101a or STI-1.0-con-101-101b
Preconditions	STI server supports image/jpeg or application/vnd.wap.multipart.related content type as input
Test Procedure	Use the precompiled request that has the following properties: o <source> tag is not properly closed (i.e. missing ">") Send the precompiled request to the STI Server
Pass-Criteria	Server replies with a fault response indicating a parsing error (Client Error). The fault response includes the request identifiers (originatorId, operationId, jobId).

7.2 STI-1.0-con-102 Fault Response; Missing Mandatory Element

Test Case Id	STI-1.0-con-102
Test Object	STI Server
Test Case Description	The purpose of this test is to verify that a server properly responds to request with mandatory elements missing.
Specification Reference	[STI1_0] Sections 5.3.2, 5.3.4
SCR Reference	STI-SERVER-051, STI-SERVER-052, STI-SERVER-064
Tool	Precompiled STI request
Test code	STI-1.0-con-102a or STI-1.0-con-102b
Preconditions	STI server supports image/jpeg or application/vnd.wap.multipart.related content type as input
Test Procedure	Use the precompiled request that has the following properties: o Mandatory element <operationId> is missing Send the precompiled request to the STI Server
Pass-Criteria	Server replies with a fault response indicating a parsing error (Client Error).

7.3 STI-1.0-con-103 Support of pre-defined Profile; Request Level

Test Case Id	STI-1.0-con-103
Test Object	STI Server
Test Case Description	The purpose of this test is to verify that a pre-defined profile, sent at the request level is properly identified and handled by the STI server.
Specification Reference	[STI1_0] Section 5.1.1
SCR Reference	STI-SERVER-034, STI-SERVER-035
Tool	Precompiled STI request
Test code	STI-1.0-con-103a or STI-1.0-con-103b
Preconditions	STI Server support pre-defined Profiles. The profile reference in the precompiled STI request is accessible by the STI server. STI server supports image/jpeg or application/vnd.wap.multipart.related content type as input STI Server supports jpg image transcoding.
Test Procedure	Use the precompiled request that has the following properties: o TranscodingRequest.profileID=MMS-Image-Basic o Source content JPG1000x500.jpg is attached as part of the request Send the precompiled request to the STI Server
Pass-Criteria	The resulting output is within the limits of MMS-Image-Basic profile

7.4 STI-1.0-con-104 Support of pre-defined Profile; Job Level

Test Case Id	STI-1.0-con-104
Test Object	STI STI Server
Test Case Description	The purpose of this test is to verify that a pre-defined profile, sent in a request in the job level, is identified and handled by the STI server.
Specification Reference	[STI1_0] Section 5.1.1
SCR Reference	STI-SERVER-034, STI-SERVER-035
Tool	Precompiled STI request
Test code	STI-1.0-con-104a or STI-1.0-con-104b
Preconditions	.STI Server support pre-defined Profiles. STI server supports image/jpeg or application/vnd.wap.multipart.related content type as input. STI Server supports jpg image transcoding

Test Procedure	Use the precompiled request that has the following properties: o transcodingJob.target.profileID=MMS-Image-Basic o Source content JPG1000x500.jpg is attached as part of the request Send the precompiled request to the STI Server
Pass-Criteria	The resulting output is within the limits of MMS-Image-Basic profile

7.5 STI-1.0-con-105 Hierarchy of ProfileID Parameter

Test Case Id	STI-1.0-con-105
Test Object	STI Client and STI Server
Test Case Description	The purpose of this test is to verify that a pre-defined profile, sent in a request in the job level overrides a profileID sent in the operation level.
Specification Reference	[STI1_0] Sections 5.1.1, 5.1.3
SCR Reference	STI-SERVER-034, STI-SERVER-035, STI-SERVER-038
Tool	Precompiled STI request
Test code	STI-1.0-con-105a or STI-1.0-con-105b
Preconditions	.STI Server support pre-defined Profiles. STI server supports image/jpeg or application/vnd.wap.multipart.related content type as input. STI Server supports jpg image transcoding
Test Procedure	Use the precompiled request that has the following properties: o TranscodingRequest.profileId=MMS-Image-Rich o transcodingJob.target.profileID=MMS-Image-Basic o Source content JPG1000x500.jpg is attached as part of the request Send the precompiled request to the STI Server
Pass-Criteria	The resulting output is within the limits of MMS-Image-Basic profile

7.6 STI-1.0-con-106 Externally Referenced Source Media (HTTP)

Test Case Id	STI-1.0-con-106
Test Object	STI Server
Test Case Description	The purpose of this test is to verify that the STI Server can retrieve and handle source media that resides on an external location and is referenced by the request, using HTTP.
Specification Reference	[STI1_0] Section 5.1.6.1, 5.2.1.1
SCR Reference	STI-SERVER-033, STI-SERVER-018, STI-SERVER-025, STI-SERVER-026
Tool	Precompiled STI request
Test code	STI-1.0-con-106a, STI-1.0-con-106b
Preconditions	STI Server supports retrieval of external source media. The source media referenced in the precompiled STI request is accessible by the STI server for download. STI Server supports jpg image transcoding.
Test Procedure	1. Make sure that the URL in the reference to the source media's location in the precompiled request contains the correct IP. If not, replace it. 2. Use the precompiled request that has the following properties: o Source content girl_53x75_jpg_24bit.jpg is referenced by the request, using HTTP. o STI-1.0-con-107a - The target width and height are specified explicitly. o STI-1.0-con-107b – The MMS-Image-Basic profile is specified in the Target element. 3. Send the precompiled request to the STI Server
Pass-Criteria	The output image is returned as part of the Transcoding Response.

7.7 STI-1.0-con-107 Externally Referenced Source Media (HTTPS)

Test Case Id	STI-1.0-con-107
Test Object	STI Server
Test Case Description	The purpose of this test is to verify that the STI Server can retrieve and handle source media that resides on at external location and is referenced by the request, using HTTPS.
Specification Reference	[STI1_0] Section 5.1.6.1, 5.2.1.1
SCR Reference	STI-SERVER-033, STI-SERVER-018, STI-SERVER-025, STI-SERVER-026
Tool	Precompiled STI request
Test code	STI-1.0-con-107a, STI-1.0-con-107b
Preconditions	STI Server supports retrieval of external source media. The source media referenced in the precompiled STI request is accessible by the STI server for reading. STI Server supports jpg image transcoding.
Test Procedure	1. Make sure that the URL in the reference to the source media's location in the precompiled request contains the correct IP. If not, replace it. 2. Use the precompiled request that has the following properties: o Source content girl_53x75_jpg_24bit.jpg is referenced by the request, using HTTPS. o STI-1.0-con-108a - The target width and height are specified explicitly. o STI-1.0-con-108b - The MMS-Image-Basic profile is specified in the Target element. 3. Send the precompiled request to the STI Server
Pass-Criteria	The output image is returned as part of the Transcoding Response.

7.8 STI-1.0-con-108 External Location in Target (HTTP://)

Test Case Id	STI-1.0-con-108
Test Object	STI Server
Test Case Description	The purpose of this test is to verify that the STI Server uploads the output media to a location specified by the 'external location' parameter in the request using HTTP, and returns an appropriate response.
Specification Reference	[STI1_0] Section 5.1.6.1, 5.3.1.2
SCR Reference	STI-SERVER-033, STI-SERVER-048, STI-SERVER-049, STI-SERVER-050, STI-SERVER-060
Tool	Precompiled STI request
Test code	STI-1.0-con-108a or STI-1.0-con-108b
Preconditions	STI Server supports the externalLocation element: path and name. The target location specified in the precompiled STI request is accessible by the STI server for writing. The HTTP server specified in the externalLocation element implements the HTTP PUT method. STI Server supports source content which is attached to the request. STI Server supports jpg image transcoding.
Test Procedure	1. Make sure that the URL in the reference to the source media's location in the precompiled request contains the correct IP. If not, replace it. 2. Use the precompiled request that has the following properties: o Source content girl_53x75_jpg_24bit.jpg is attached to the request and referenced by it. o The Target element of the request contains an externalLocation element in which the path and name of the externalLocation are both specified. o The 'path' parameter in the externalLocation specifies use of the HTTP scheme. o STI-1.0-con-109a - The target width and height are specified explicitly. o STI-1.0-con-109b - The MMS-Image-Basic profile is specified in the Target element. o The target width and height are specified explicitly. 3. Send the precompiled request to the STI Server
Pass-Criteria	The output image has been uploaded to the specified location, and the Transcoding Response contains an HTTP reference to it.

7.9 STI-1.0-con-109 External Location in Target (HTTPS://)

Test Case Id	STI-1.0-con-109
Test Object	STI Server
Test Case Description	The purpose of this test is to verify that the STI Server uploads the transcoding result media at a location specified by the 'external location' parameter in the request using HTTPS, and returns an appropriate response.
Specification Reference	[STI1_0] Section 5.1.6.1, 5.3.1.2
SCR Reference	STI-SERVER-033, STI-SERVER-048, STI-SERVER-049, STI-SERVER-050, STI-SERVER-060
Tool	Precompiled STI request
Test code	STI-1.0-con-109a, STI-1.0-con-109b
Preconditions	STI Server supports the externalLocation element: path and name. The target location specified in the precompiled STI request is accessible by the STI server for writing. The HTTP server specified in the externalLocation element implements the PUT method via HTTPS. STI Server supports source content which is attached to the request. STI Server supports jpg image transcoding.
Test Procedure	1. Make sure that the URL in the reference to the target's location in the precompiled request contains the correct IP. If not, replace it. 2. Use the precompiled request that has the following properties: o Source content girl_53x75_jpg_24bit.jpg is attached to the request and referenced by it o The Target element of the request contains an externalLocation element in which the path and name of the externalLocation are both specified. o The 'path' parameter in the externalLocation specifies use of the HTTPS scheme. o STI-1.0-con-109a - The target width and height are specified explicitly. o STI-1.0-con-109b - The MMS-Image-Basic profile is specified in the Target element. 3. Send the precompiled request to the STI Server
Pass-Criteria	The output image has been uploaded to the specified location and the Transcoding Response contains an HTTPS reference to it.

7.10 STI-1.0-con-110 External Location in Target (FILE://)

Test Case Id	STI-1.0-con-110
Test Object	STI Server
Test Case Description	The purpose of this test is to verify that the STI Server uploads the transcoding result media at a location specified by the 'external location' parameter in the request using the FILE scheme, and returns an appropriate response.
Specification Reference	[STI1_0] Section 5.1.6.1, 5.3.1.2
SCR Reference	STI-SERVER-033, STI-SERVER-048, STI-SERVER-049, STI-SERVER-050, STI-SERVER-060
Tool	Precompiled STI request
Test code	STI-1.0-con-110a, STI-1.0-con-110b
Preconditions	STI Server supports the externalLocation element: path and name. The target location specified in the precompiled STI request is accessible by the STI server for writing. STI Server supports source content which is attached to the request. STI Server supports jpg image transcoding.
Test Procedure	1. Make sure that the URL in the reference to the target's location in the precompiled request contains the correct IP. If not, replace it. 2. Use the precompiled request that has the following properties: o Source content girl_53x75_jpg_24bit.jpg is attached to the request and referenced by it o The Target element of the request contains an externalLocation element in which the path and name of the externalLocation are both specified. o The 'path' parameter in the externalLocation specifies use of the FILE scheme. o STI-1.0-con-110a - The target width and height are specified explicitly. o STI-1.0-con-110b - The MMS-Image-Basic profile is specified in the Target element. 3. Send the precompiled request to the STI Server
Pass-Criteria	The output image has been uploaded to the specified location and the Transcoding Response contains a reference to it (using FILE://).

7.11 STI-1.0-con-111 Hierarchy of Transcoding Parameters: Parameters at Operation and Job Level

Test Case Id	STI-1.0-con-111
Test Object	STI Client and STI Server
Test Case Description	The purpose of this test is to verify that parameters sent in a request at the job level override parameters sent in the operation level.
Specification Reference	[STI1_0] Sections 5.1.1, 5.1.3
SCR Reference	STI-SERVER-013, STI-SERVER-034, STI-SERVER-035, STI-SERVER-038
Tool	Precompiled STI request
Test code	STI-1.0-con-111
Preconditions	STI Server support the explicit transcoding parameters used in this test case. STI Server supports 3gp the input and output media formats of this test case and the necessary transcoding between them.
Test Procedure	Use the precompiled request that has the following properties: o TranscodingRequest.transcodingParams.video .contentType = video/mp4 .videoVisual.codec = video/h263 .videoVisual.bitRate =64000 .videoVisual.frameRate= 5.0 .videoVisual.width = 176 .videoVisual.height = 144 .videoAudio.codec = audio/amr .videoAudio.bitRate = 12200 o TranscodingRequest.transcodingJob.target.transcodingParams.video .contentType = video/3gpp .videoVisual.codec = video/h263 .videoVisual.bitRate =64000 .videoVisual.frameRate= 5.0 .videoVisual.width = 128 .videoVisual.height = 96 .videoAudio.codec = audio/amr .videoAudio.bitRate = 4750 o Source content “Rich_video.3gp” is attached as part of the request Send the precompiled request to the STI Server
Pass-Criteria	The resulting output is a video in 3gp format 128x96 resolution, and AMR audio at 4.75 kbps

7.12 STI-1.0-con-112 Hierarchy of Transcoding Parameters: Profile at Operation Level and Parameters at Job Level

Test Case Id	STI-1.0-con-112
Test Object	STI Client and STI Server
Test Case Description	The purpose of this test is to verify that parameters sent in a request at the job level complement the pre-defined profile sent at the operation level
Specification Reference	[STI1_0] Sections 5.1.1, 5.1.3
SCR Reference	STI-SERVER-013, STI-SERVER-034, STI-SERVER-035, STI-SERVER-038
Tool	Precompiled STI request
Test code	STI-1.0-con-112
Preconditions	STI Server support the explicit transcoding parameters used in this test case, and pre-defined profiles and pre-defined profiles. STI Server supports the input and output media formats of this test case and the necessary transcoding between them. STI Server supports 3gp transcoding
Test Procedure	Use the precompiled request that has the following properties: o TranscodingRequest.profileId=MMS-Image-Rich o TranscodingRequest.transcodingJob.target.transcodingParams.video. .contentType = video/3gpp .videoVisual.codec = video/h263 .videoVisual.width = 128 .videoVisual.height = 96 .videoVisual.bitRate =64000 .videoVisual.frameRate= 5 .videoAudio.codec = audio/amr .videoAudio.bitRate = 4750 o Source content “Rich_video.3gp” is attached as part of the request Send the precompiled request to the STI Server
Pass-Criteria	The resulting output is a video in 3gp format 128x96 resolution, and AMR audio at 4.75 kbps.

7.13 STI-1.0-con-113 Multiple Job

Test Case Id	STI-1.0-con-1134
Test Object	STI Client and STI Server
Test Case Description	The purpose of this test is to verify that request supports multiple job results within a single transcoding response.
Specification Reference	[STI1_0] Sections 5.1.5.2
SCR Reference	STI-SERVER-010, STI-SERVER-012

Tool	Precompiled STI request
Test code	STI-1.0-con-113
Preconditions	STI Server support the explicit transcoding parameters used in this test case. STI Server supports multiple transcoding jobs. STI Server supports the input and output media formats of this test case and the necessary transcoding between them. STI Server supports Midi transcoding
Test Procedure	Use the precompiled request that has the following properties: o TranscodingRequest.transcodingJob .jobID = JOB-1 .target.transcodingParams.audio.contentType = audio/mp3 .target.transcodingParams.audio.codec = audio/mp3 .target.transcodingParams.audio.bitRate = 96000 .jobID = JOB-2 .target.transcodingParams.audio.contentType = audio/amr .target.transcodingParams.audio.codec = audio/amr .target.transcodingParams.audio.bitRate = 4750 o Source content “audio.mid” is attached as part of the request Send the precompiled request to the STI Server
Pass-Criteria	The transcoding response contains two job results.

7.14 STI-1.0-con-114 Hierarchy of ApplicationSizeLimit Parameters

Test Case Id	STI-1.0-con-114
Test Object	STI Client and STI Server
Test Case Description	The purpose of this test is to verify that responses does not exceed the maximum size specified by applicationSizeLimit specified at the Operation Level
Specification Reference	[STI1_0] Sections 5.1.7.6
SCR Reference	STI-SERVER-014, STI-SERVER-032
Tool	Precompiled STI request
Test code	STI-1.0-con-114
Preconditions	STI Server supports the explicit transcoding parameters used in this test case. STI Server supports text transcoding

Test Procedure	Use the precompiled request that has the following properties: o TranscodingRequest.applicationSizeLimit = 2048 o TranscodingRequest.transcodingParams.sizeLimit = 3072 o TranscodingRequest.transcodingJob.target.applicationSizeLimit = 1024 o TranscodingRequest.transcodingJob.target.text.sizeLimit = 4096 o Source content "5K-US-ASCII.txt" is attached as part of the request Send the precompiled request to the STI Server
Pass-Criteria	The transcoding response contains one text file smaller or equal to 1024 bytes.

7.15 STI-1.0-con-115 Hierarchy of SizeLimit Parameters

Test Case Id	STI-1.0-con-115
Test Object	STI Client and STI Server
Test Case Description	The purpose of this test is to verify that response does not exceed the maximum size specified by SizeLimit specified at the Media Level
Specification Reference	[STI1_0] Sections 5.1.7.6
SCR Reference	STI-SERVER-014, STI-SERVER-032
Tool	Precompiled STI request
Test code	STI-1.0-con-115
Preconditions	STI Server supports the explicit transcoding parameters used in this test case. STI Server supports text transcoding
Test Procedure	Use the precompiled request that has the following properties: o TranscodingRequest.applicationSizeLimit = 4096 o TranscodingRequest.transcodingParams.sizeLimit = 3072 o TranscodingRequest.transcodingJob.target.applicationSizeLimit = 2048 o TranscodingRequest.transcodingJob.target.text.sizeLimit = 1024 o Source content "5K-US-ASCII.txt" is attached as part of the request Send the precompiled request to the STI Server
Pass-Criteria	The transcoding response contains one text file smaller or equal to 1024 bytes.

7.16 STI-1.0-con-116 Multipart Adaptation

Test Case Id	STI-1.0-con-116
Test Object	STI Server
Test Case Description	The purpose of this test is to verify that the STI Server can handle a multipart source media.
Specification Reference	[STI1_0] Section 5.1.5.4
SCR Reference	STI-SERVER-015, STI-SERVER-017
Tool	Precompiled STI request
Test code	STI-1.0-con-116
Preconditions	STI Server supports application/vnd.wap.multipart.related media. STI Server supports video transcoding. STI Server supports text transcoding. STI Server supports SMIL as the presentation media. STI Server supports profileID.
Test Procedure	1. Use the precompiled request that has the following properties: o Source content wap_multipart_related (which includes a video/3gp, a text/plain, and a SMIL media), is self contained in the request. o The 'MMS-Image-Basic' profileID is given at the job level. 2. Send the precompiled request to the STI Server
Pass-Criteria	The output is of type application/vnd.wap.multipart.related, the media in it is within the capabilities of the MMS-Image-Basic profile, and the SMIL media has been modified accordingly.

8. Interoperability Test Cases

For STI Enabler there exist 9 interoperability tests.

The tests in this section are performed in order to test interoperability between STI Clients of one brand and STI Server of a different brand.

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

1. **Messages**

Terminal A → Test Environment → STI Client, MMSC → STI Server, transcouding platform → STI Client, MMSC → Test Environment → Terminal B

- Messages are always sent from Terminal A
- Test environment will deliver a notification to Terminal B.
- The Terminal B will initiate the retrival of the message from MMSC via test environment
- STI Client, MMSC will sends the message to STI Server
- STI Server process the message
- STI Client, MMSC receives the message with the adapted content
- Terminal B receives the message

8.1 STI-1.0-int-001 Image resolution reduction

Test Case Id	STI-1.0-int-001
Test Object	STI Client and STI Server
Test Case Description	The purpose is to verify that requests and responses can be sent/received between STI client and STI server for image resolution reduction
Specification Reference	
SCR Reference	STI-CLI-011, STI-CLI-013, STI-CLI-016, STI-CLI-017, STI-CLI-025, STI-CLI-049 STI-SERVER-009, STI-SERVER-011, STI-SERVER-020, STI-SERVER-033, STI-SERVER-036, STI-SERVER-041, STI-SERVER-054, STI-SERVER-056, STI-SERVER-057, STI-SERVER-058, STI-SERVER-062
Tool	
Test code	
Preconditions	Terminal A setting: - Creation Mode set to free Terminal B settings: - MMS Image Basic MMSC setting: STI Content adaptation is enabled STI Client and STI Server support the same means of transcoding instructions (see section **Error! Reference source not found.**) STI Server supports image resolution reduction for JPEG images.
Test Procedure	1. In Terminal A, create a new MM. 2. In MM header: To-field is set to Terminal B. 3. In MM content: Add image file/object JPG1000x500.jpg to the message. 4. In Terminal A, send MM to Terminal B. 5. MMSC STI Client send STI request to STI Server 6. STI Server send STI response to STI Client 7. In Terminal B, receive and open the MM. 8. Verify the pass criteria below.
Pass-Criteria	In Terminal B the received Image is less than or equal to its maximum resolution and the received image is reasonably presented.

8.2 STI-1.0-int-002 Size reduction

Test Case Id	STI-1.0-int-002
Test Object	STI Client and STI Server
Test Case Description	The purpose is to verify that requests and responses can be sent/received between STI client and STI server for image size reduction.
Specification Reference	[STI-V1_0] Section 5
SCR Reference	STI-CLI-011, STI-CLI-013, STI-CLI-016, STI-CLI-017, STI-CLI-025, STI-CLI-049 STI-SERVER-009, STI-SERVER-011, STI-SERVER-020, STI-SERVER-033, STI-SERVER-036, STI-SERVER-041, STI-SERVER-054, STI-SERVER-056, STI-SERVER-057, STI-SERVER-058, STI-SERVER-062
Tool	
Test code	
Preconditions	Terminal A support 300k jpg image. Terminal B support 100k jpg image. MMSC setting: STI Client and STI Server -to be synchronised with regards to sizeLimit parameters. -to be synchronised with regarding the input content type STI Content adaptation is enabled and Terminal B's UA Profile is added to MMSC STI Client and STI Server support the same means of transcoding instructions (see section **Error! Reference source not found.**) STI Server supports image size reduction for JPEG images.
Test Procedure	1. In Terminal A, create a new MM. 2. In MM header: To-field is set to Terminal B. 3. In MM content: Add image file/object JPG640x480K.jpg to the message. 4. In Terminal A, send MM to Terminal B. 5. MMSC STI Client send STI request to STI Server 6. STI Server send STI response to STI Client 7. In Terminal B, receive and open the MM. 8. Verify the pass criteria below
Pass-Criteria	Terminal B received an image that is less than or equal to 100kB and is reasonably presented.

8.3 STI-1.0-int-003 Video QCIF to Image reduced

Test Case Id	STI-1.0-int-003
Test Object	STI Client and STI Server
Test Case Description	The purpose is to verify that a video file is correctly sent from Terminal A to Terminal 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	
SCR Reference	STI-CLI-011, STI-CLI-013, STI-CLI-019, STI-CLI-025, STI-CLI-040,STI-CLI-047, STI-CLI-060, STI-SERVER-009, STI-SERVER-009, STI-SERVER-011, STI-SERVER-013, STI-SERVER-019, STI-SERVER-033, STI-SERVER-041,STI-SERVER-043, STI-SERVER-055, STI-SERVER-056, STI-SERVER-057, STI-SERVER-058, STI-SERVER-062
Tool	
Test code	
Preconditions	-Terminal A Capability: video basic class conformant Setting: Creation Mode set to Restricted -Terminal B Capability: image basic class conformant, max message size is 30kB and max resolution is 160x120 -MMSC setting: STI Content adaptation is enabled and Terminal B's UA Profile is added to MMSC STI Client and STI Server support the same means of transcoding instructions (see section **Error! Reference source not found.**) STI Server supports image resolution reduction for video QCIF.
Test Procedure	1. In Terminal A, create a new MM. 2. In MM header: To-field is set to Terminal B. 3. In MM content: Add image file/object sub-qcif_video.3gp to the message. 4. In Terminal A, send MM to Terminal B. 5. MMSC STI Client send STI request to STI Server 6. STI Server send STI response to STI Client 7. In Terminal B, receive and open the MM. 8. Verify the pass criteria below.
Pass-Criteria	Terminal B received an image that is less than or equal to 30kB and has a resolution of 160x120 or less.

8.4 STI-1.0-int-004 Size reduction to 100kB

Test Case Id	STI-1.0-int-004
Test Object	STI Client and STI Server
Test Case Description	The purpose is to verify that a video file larger than 100k is correctly sent from Terminal A in content class Video Rich to Terminal B in Content Class Video Basic and that the received video file is less than or equal to 100k.
Specification Reference	
SCR Reference	STI-CLI-011, STI-CLI-013, STI-CLI-019, STI-CLI-025, STI-CLI-040,STI-CLI-047, STI-CLI-060, STI-SERVER-009, STI-SERVER-009, STI-SERVER-013, STI-SERVER-019, STI-SERVER-033, STI-SERVER-041,STI-SERVER-043, STI-SERVER-055, STI-SERVER-056, STI-SERVER-057, STI-SERVER-058, STI-SERVER-062
Tool	
Test code	
Preconditions	-Terminal A Capability: Video rich class conformant Setting: Creation Mode set to Restricted -Terminal B Capability: Image rich class conformant and max message size is 100 kB -MMSC setting: STI Content adaptation is enabled and Terminal B's UA Profile is added to MMSC STI Client and STI Server support the same means of transcoding instructions (see section **Error! Reference source not found.**) STI Server supports image resolution reduction for video.
Test Procedure	1. In Terminal A, create a new MM. 2. In MM header: To-field is set to Terminal B. 3. In MM content: VideoRich300kB. 4. In Terminal A, send MM to Terminal B. 5. MMSC STI Client send STI request to STI Server 6. STI Server send STI response to STI Client 7. In Terminal B, receive and open the MM. 8. Verify the pass criteria below.
Pass-Criteria	In Terminal B the received video is less than or equal to 100kB and reasonably presented.

8.5 STI-1.0-int-005 Source Media Externally Referenced by HTTP

Test Case Id	STI-1.0-int-005
Test Object	STI Client and STI Server
Test Case Description	The purpose is to verify that requests and responses can be sent/received between STI Client and STI Server when the source media resides on an HTTP server and is referenced by the request.
Specification Reference	[STI1_0], Section 5.2.1.1
SCR Reference	STI-CLI-034, STI-CLI-035, STI-CLI-036, STI-CLI-047, STI-CLI-060, STI-SERVER-033, STI-SERVER-025, STI-SERVER-026
Tool	
Test code	
Preconditions	Terminal A setting: - Creation Mode set to free Terminal B settings: - MMS Image Basic MMSC setting: STI Content adaptation is enabled STI Client references the source media in the request using the HTTP protocol (the location parameter in the source element). STI Server supports retrieval of externally referenced source media. STI Client and STI Server support the same means of transcoding instructions (see section **Error! Reference source not found.**). STI Server supports transcoding of JPEG images.
Test Procedure	1. In Terminal A, create a new MM. 2. In MM header: To-field is set to Terminal B. 3. In MM content: Add image file/object JPG1000x500.jpg to the message. 4. In Terminal A, send MM to Terminal B. 5. MMSC STI Client send STI request to STI Server 6. STI Server send STI response to STI Client 7. In Terminal B, receive and open the MM. 8. Verify the pass criteria below.
Pass-Criteria	In Terminal B the received Image can be presented.

8.6 STI-1.0-int-006 Output Media Saved to External Location (HTTP://).

Test Case Id	STI-1.0-int-006
Test Object	STI Client and STI Server
Test Case Description	The purpose is to verify that requests and responses can be sent/received between STI Client and STI Server when the target media is to be uploaded to an HTTP server and is referenced by the response.
Specification Reference	[STI1_0], Section 5.1.6.1, 5.3.1.2
SCR Reference	STI-CLI-047, STI-CLI-055, STI-CLI-060, STI-SERVER-033, STI-SERVER-048, STI-SERVER-049, STI-SERVER-050, STI-SERVER-060
Tool	
Test code	
Preconditions	Terminal A setting: - Creation Mode set to free Terminal B settings: - MMS Image Basic MMSC setting: STI Content adaptation is enabled STI Client specifies that the target media is to be uploaded to an external location using the HTTP protocol. The HTTP server specified in the externalLocation element implements the PUT method for upload. STI Server supports upload of content to an external location. STI Client and STI Server support the same means of transcoding instructions (see section **Error! Reference source not found.**). STI Server supports transcoding of JPEG images.
Test Procedure	1. In Terminal A, create a new MM. 2. In MM header: To-field is set to Terminal B. 3. In MM content: Add image file/object JPG1000x500.jpg to the message. 4. In Terminal A, send MM to Terminal B. 5. MMSC STI Client send STI request to STI Server 6. STI Server send STI response to STI Client 7. In Terminal B, receive and open the MM. 8. Verify the pass criteria below.
Pass-Criteria	In Terminal B the received Image can be presented, either within the MM or fetched using a URL.

8.7 STI-1.0-int-007 Multipart adaptation

Test Case Id	STI-1.0-int-007
Test Object	STI Client and STI Server
Test Case Description	The purpose of this test case is to verify that requests and responses which contain multipart media can be appropriately sent, received and handled between an STI Client and an STI Server.
Specification Reference	[STI1_0], Section 5.1.5.4
SCR Reference	STI-CLI-021, STI-SERVER-015, STI-SERVER-017
Tool	
Test code	
Preconditions	Terminal A setting: - Creation Mode set to free Terminal B settings: - MMS Image Basic MMSC setting: STI Content adaptation is enabled STI Client sends the whole body of the MM for transcoding. STI Client and STI Server support the same means of transcoding instructions (see section **Error! Reference source not found.**). STI Server supports transcoding of application/vnd.wap.multipart.related.
Test Procedure	1. In Terminal A, create a new MM. 2. In MM header: To-field is set to Terminal B. 3. In MM content: Add image file/object JPG1000x500.jpg to the message. 4. In Terminal A, send MM to Terminal B. 5. MMSC STI Client send STI request to STI Server 6. STI Server send STI response to STI Client 7. In Terminal B, receive and open the MM. 8. Verify the pass criteria below.
Pass-Criteria	In Terminal B the received Image can be presented.

8.8 STI-1.0-int-008 Audio transcoding

Test Case Id	STI-1.0-int-008
Test Object	STI Client and STI Server
Test Case Description	The purpose of this test case is to verify that requests and responses which contain audio media can be appropriately sent, received and handled between an STI Client and an STI Server.
Specification Reference	[STI1_0], Section 5.2.3
SCR Reference	STI-CLI-018, STI-SERVER-012
Tool	
Test code	
Preconditions	Terminal A setting: - Creation Mode set to free Terminal B settings: - MMS Image Basic MMSC setting: STI Content adaptation is enabled STI Client and STI Server support the same means of transcoding instructions (see section **Error! Reference source not found.**). STI Server supports transcoding of audio/amr.
Test Procedure	1. In Terminal A, create a new MM. 2. In MM header: To-field is set to Terminal B. 3. In MM content: Add audio file/object big_audio.amr to the message. 4. In Terminal A, send MM to Terminal B. 5. MMSC STI Client send STI request to STI Server 6. STI Server send STI response to STI Client 7. In Terminal B, receive and open the MM. 8. Verify the pass criteria below.
Pass-Criteria	In Terminal B the received audio file can be reasonably played.

Change History (Informative)

A.1 Approved Version History

Reference	Date	Description
OMA-ETS-STI-V1_0_1	29 Nov 2005	Document approved by TP Ref TP Doc# OMA-TP-2005-0367-Updated-ETS-for-STI-1.0.doc