



Test Files Package for SUPL

Candidate Version 2.0 – 24 Jan 2012

Open Mobile Alliance
OMA-TFP-SUPL_TTCN-V2_0-20120124-C

Use of this document and all test files enumerated within is subject to all of the terms and conditions of the Use Agreement located at <http://www.openmobilealliance.org/UseAgreement.html> and the Common Public License agreement located at http://www.openmobilealliance.org/document/TTCN_Common_Public_License_V1.pdf.

Unless this document is clearly designated as an approved specification, this document is a work in process, is not an approved Open Mobile Alliance™ specification, and is subject to revision or removal without notice. Similarly, the enumerated test files are provided to support OMA testing and are subject to revision and removal without notice.

You may use this document or any part of the document or any of the enumerated test files for internal educational or commercial purposes only, provided you do not modify, edit or take out of context the information in this document or associated test files in any manner. Information contained in this document or the enumerated test files may be used, at your sole risk, for any purposes. You may not use this document or the enumerated test files in any other manner without the prior written permission of the Open Mobile Alliance. The Open Mobile Alliance authorizes you to copy this document or any of the enumerated test files, provided that you retain all copyright and other proprietary notices contained in the original materials on any copies of the materials and that you comply strictly with these terms. This copyright permission does not constitute an endorsement of the products or services. The Open Mobile Alliance assumes no responsibility for errors or omissions in this document or the enumerated test files.

Each Open Mobile Alliance member has agreed to use reasonable endeavors to inform the Open Mobile Alliance in a timely manner of Essential IPR as it becomes aware that the Essential IPR is related to the prepared or published specification. However, the members do not have an obligation to conduct IPR searches. The declared Essential IPR is publicly available to members and non-members of the Open Mobile Alliance and may be found on the “OMA IPR Declarations” list at <http://www.openmobilealliance.org/ipr.html>. The Open Mobile Alliance has not conducted an independent IPR review of this document or the enumerated test files and the information contained herein, and makes no representations or warranties regarding third party IPR, including without limitation patents, copyrights or trade secret rights. This document or the enumerated test files may contain inventions for which you must obtain licenses from third parties before making, using or selling the inventions. Defined terms above are set forth in the schedule to the Open Mobile Alliance Application Form.

NO REPRESENTATIONS OR WARRANTIES (WHETHER EXPRESS OR IMPLIED) ARE MADE BY THE OPEN MOBILE ALLIANCE OR ANY OPEN MOBILE ALLIANCE MEMBER OR ITS AFFILIATES REGARDING ANY OF THE IPR'S REPRESENTED ON THE “OMA IPR DECLARATIONS” LIST, INCLUDING, BUT NOT LIMITED TO THE ACCURACY, COMPLETENESS, VALIDITY OR RELEVANCE OF THE INFORMATION OR WHETHER OR NOT SUCH RIGHTS ARE ESSENTIAL OR NON-ESSENTIAL.

THE OPEN MOBILE ALLIANCE IS NOT LIABLE FOR AND HEREBY DISCLAIMS ANY DIRECT, INDIRECT, PUNITIVE, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE USE OF DOCUMENTS AND THE INFORMATION CONTAINED IN THE DOCUMENTS.

© 2012 Open Mobile Alliance Ltd. All Rights Reserved.

Used with the permission of the Open Mobile Alliance Ltd. under the terms set forth above.

Contents

1. SCOPE.....	4
2. REFERENCES.....	5
3. TERMINOLOGY AND CONVENTIONS.....	6
3.1 CONVENTIONS.....	6
3.2 DEFINITIONS.....	6
3.3 ABBREVIATIONS.....	6
4. INTRODUCTION.....	7
4.1 DESCRIPTION OF DIRECTORY HIERARCHY.....	7
4.2 DESCRIPTION OF FILE DISTRIBUTION AND VERSIONING FOR TESTING.....	7
5. SCRIPT FILES FOR CLIENT CONFORMANCE.....	8
5.1 SCRIPT GROUP – TYPES_VALUES.....	8
5.2 SCRIPT GROUP – TEMPLATES.....	8
5.3 SCRIPT GROUP – BEHAVIOURS.....	9
5.4 TEST CASE STATUS.....	9
6. OMA SUPL CONFORMANCE TESTING FRAMEWORK.....	15
6.1 TTCN-3 TEST SYSTEM ARCHITECTURE.....	15
6.1.1 SUPL Protocol Data Units and Service Primitives.....	15
6.1.2 PDUs.....	15
6.1.3 Service Primitives.....	16
6.1.4 Upper Tester Primitives.....	16
6.2 PLATFORM ADAPTER REQUIREMENTS.....	16
6.3 TTCN-3 COMPILER REQUIREMENTS.....	17
7. TEST SUITE EXECUTION.....	18
7.1 GENERAL.....	18
7.2 PIXIT.....	18
CHANGE HISTORY.....	19
APPROVED VERSION HISTORY.....	19
DRAFT/CANDIDATE VERSION 2.0 HISTORY.....	19

Figures

Figure 1: Directory Hierarchy for the SUPL 2.0 Enabler Test Files.....	7
Figure 2: Conceptual SUPL CON Test Architecture.....	15

Tables

Table 1: Listing of unchanged versions of TTCN-3.....	7
Table 2: Listing of Scripts of types_values.....	8
Table 3: Listing of Scripts of templates.....	9
Table 4: Listing of Scripts of behaviour.....	9
Table 5: Listing of Test Case Status.....	14
Table 6: Synchronization Primitives.....	16
Table 7: Upper Tester Primitives.....	16
Table 8: TTCN-3 External Functions.....	17

1. Scope

This document describes in detail the structure of TTCN-3 files in the SUPL 2.0 Client Conformance Abstract Test Suite (ATS).

2. References

- [RFC2119] “Key words for use in RFCs to Indicate Requirement Levels”, S. Bradner, March 1997, [URL:http://www.ietf.org/rfc/rfc2119.txt](http://www.ietf.org/rfc/rfc2119.txt)
- [IOPPROC] “OMA Interoperability Policy and Process”, Version 1.11, Open Mobile Alliance™, OMA-ORG-IOP_Process-V1_11, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [RFC2234] “Augmented BNF for Syntax Specifications: ABNF”. D. Crocker, Ed., P. Overell. November 1997, [URL:http://www.ietf.org/rfc/rfc2234.txt](http://www.ietf.org/rfc/rfc2234.txt)
- [ERELED] “Enabler Release Document for SUPL”, Version 2.0, Open Mobile Alliance™, OMA-ERELED-SUPL-V2_0, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [OMA-ULP] “UserPlane for Location Protocol”, Version 2.0, Open Mobile Alliance™, OMA-TS-ULP-Spec-V2.0, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [OMADICT] “Dictionary for OMA Specifications”, Version 2.8, Open Mobile Alliance™, OMA-ORG-Dictionary-V2_8, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)

3. Terminology and Conventions

3.1 Conventions

This is an informative document, which is not intended to provide testable requirements for implementations.

3.2 Definitions

Network Initiated SUPL Services	Network Initiated SUPL Services are services which originate from within the SUPL network as opposed to the SET. For these services, the SUPL Agent resides in the Network.
SET Initiated SUPL Services	SET Initiated SUPL Services are services which originate from the SET. For these services, the SUPL Agent resides within the SET.
SUPL Enabled Terminal (SET)	A device that is capable of communicating with a SUPL network. Examples of this could be a UE in UMTS, a MS in GSM or IS-95, or a PC over an IP-based transport.

3.3 Abbreviations

ATS	Abstract Test Suite
OMA	Open Mobile Alliance
RRC	Radio Resource Control (protocol)
RRLP	Radio Resource LCS Protocol
LPP	LTE Positioning Protocol

4. Introduction

This document provides details of the files needed to support Client Conformance testing of the SUPL Enabler Release version 2.0.

4.1 Description of Directory Hierarchy

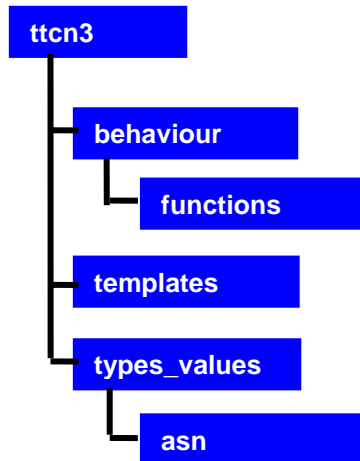


Figure 1: Directory Hierarchy for the SUPL 2.0 Enabler Test Files

4.2 Description of File Distribution and Versioning for Testing

The complete ATS will be made available on the OMA portal in the zip file containing this document.

The version of the TTCN-3 script files is identified by the date in the TFP document name. Thus the version of TTCN-3 script files contained in OMA-TFP-SUPL_TTCN-V2_0-20110216-D is “20110216”. Any version of TTCN-3 that remains unchanged from a previous version is noted in the table below.

New unchanged version of TTCN-3	Old version of TTCN-3
20110216	20110201
20110706	20110623

Table 1: Listing of unchanged versions of TTCN-3

5. Script Files for Client Conformance

This section describes the script files for Client Conformance testing included in the zip package.

5.1 Script Group – types_values

The script files in the subsection cover the type definitions.

Script File Path	Script Description	Comments
types_values\asn\RRCTypes.asn	RRC Types	
types_values\asn\v5\RRLPV5Types.asn	RRLP Types	
types_values\asn\v10\RRLPV10Types.asn	RRLP Types	Also other .asn files
types_values\asn\SUPLTypes.asn	SUPL Types	Modified in version 20110623
types_values\BSF_XML_TypeDefinitions.ttcn3		
types_values\GeoInformation_TypeDefinitions.ttcn3		
types_values\HTTP_TypeDefinitions.ttcn3		
types_values\LibCommon_BasicTypesAndValues.ttcn3		
types_values\LibCommon_DataStrings.ttcn3		
types_values\LibSip_SIPTypesAndValues.ttcn		
types_values\OMA_SUPL_V2_CDMA_Types.ttcn		
types_values\OMA_SUPL_V2_UDP_Types.ttcn		
types_values\SMS_TypeDefinitions.ttcn3		
types_values\SUPL_Configuration.ttcn3		Modified in version 20110623, 20111125
types_values\SUPL_Parameters.ttcn3		
types_values\SUPL_SMS_TypeDefinitions.ttcn3		
types_values\SUPL_TypeDefinitions.ttcn3		
types_values\SUPL_V2_Parameters.ttcn3		Modified in version 20110623, 20111125
types_values\SUPL_V2_TypeDefinitions.ttcn3		Modified in version 20111125
types_values\TIA_IS_801_Types.ttcn3		
types_values\Tokyo_TypesDefinitions.ttcn3		

Table 2: Listing of Scripts of types_values

5.2 Script Group – Templates

The script files in the subsection cover the templates of the SUPL ATS.

Script File Path	Script Description	Comments
templates\Tokyo_Templates_RRLP.ttcn3		
templates\LibSip_Templates.ttcn		Modified in version 20110623, 20111125
templates\RRLP_CommonTypes.ttcn3		Modified in version 20111125
templates\RRLP_Templates.ttcn3		Modified in version 20111125
templates\SUPL_HTTP_Templates.ttcn3		
templates\SUPL_Templates.ttcn3		Modified in version 20111125
templates\SUPL_V2_Templates.ttcn3		Modified in version 20110623, 20111125
templates\Tokyo_Templates_RRLP.ttcn3		

Table 3: Listing of Scripts of templates

5.3 Script Group – Behaviours

The script files in the subsection cover the behaviours of the SUPL ATS.

Script File Path	Script Description	Comments
behaviour\Make_all.ttcn3		
behaviour\SUPL_V2_SET_INITIATED_Tests.ttcn3		Modified in version 20110401, 20111125
behaviour\SUPL_V2_SLP_INITIATED_Tests.ttcn3		Modified in version 20110401, 20110623, 20111125
behaviour\SUPL_V2_COMMON_Tests.ttcn3		Modified in version 20110623, 20110815, 20111125
behaviour\functions\SUPL_CommonSteps.ttcn3		Modified in version 20110623
behaviour\functions\SUPL_DHCP_DNS_Steps.ttcn3		Modified in version 20110401, 20111125
behaviour\functions\SUPL_ExternalSteps.ttcn3		Modified in version 20111125
behaviour\functions\SUPL_HTTP_Steps.ttcn3		
behaviour\functions\SUPL_Postambles.ttcn3		
behaviour\functions\SUPL_Preambles.ttcn3		
behaviour\functions\SUPL_V2_CommonSteps.ttcn3		Modified in version 20110401, 20111125
behaviour\functions\SUPL_V2_DHCP_DNS_Steps.ttcn3		
behaviour\functions\SUPL_V2_ExternalSteps.ttcn3		
behaviour\functions\SUPL_V2_TCFfunctions.ttcn3		Modified in version 20110623, 20111125
behaviour\functions\Tokyo_Steps.ttcn3		

Table 4: Listing of Scripts of behaviour

5.4 Test Case Status

This section describes the current status of the ETS Test Cases in the script files including the current status of Verification.

SUPL 2.0 ETS TC number	TC Title	PT CR B	GC F	TTC N	Verified in Version	Outstanding CRs	Comments
Common							
SUPL-2.0-con-007 Test 1	Alternative H-SLP Addresses - H-SLP address stored on UICC	Yes		Yes			
SUPL-2.0-con-007 Test 2	Alternative H-SLP Addresses - H-SLP address stored on SET	Yes	Yes	Yes	20110815		
SUPL-2.0-con-007 Test 3	Alternative H-SLP Addresses - Auto configuration of H-SLP address	Yes		Yes			
SUPL-2.0-con-007 Test 4	Alternative H-SLP Addresses - Auto configuration of H-SLP address following authentication failure	Yes		Yes		2010-0055R02	TTCN update required
SUPL-2.0-con-007 Test 5	Alternative H-SLP Addresses - Clearing of old H-SLP address following change of IMSI	Yes		Yes			

SUPL 2.0 ETS TC number	TC Title	PT CR B	GC F	TTC N	Verified in Version	Outstanding CRs	Comments
SUPL-2.0-con-008 Test 1	Optional Ciphering Suites - TLS_RSA_WITH_3DES_EDE_CBC_SHA	Yes		Yes			
SUPL-2.0-con-008 Test 2	Optional Ciphering Suites - TLS_PSK_WITH_3DES_EDE_CBC_SHA	Yes		Yes			
Network Initiated							
SUPL-2.0-con-000 Test 1	SUPL INIT delivery - OMA Push	Yes		Yes	20110401		
SUPL-2.0-con-000 Test 2	SUPL INIT delivery - MT SMS	Yes	Yes	Yes			
SUPL-2.0-con-000 Test 3	SUPL INIT delivery - SIP Push	Yes		Yes			
SUPL-2.0-con-000 Test 4	SUPL INIT delivery - UDP	Yes	Yes	Yes			
SUPL-2.0-con-001	Incorrect OMA Push message content	Yes		Yes			
SUPL-2.0-con-002	Incorrect MT SMS message content	Yes	Yes	Yes	20110815		
SUPL-2.0-con-003	Incorrect SIP Push message content	Yes		Yes			
SUPL-2.0-con-004	Correct Session ID	Yes	Yes	Yes	20110401		
SUPL-2.0-con-005	Invalid SET Session ID	Yes	Yes	Yes	20110401		
SUPL-2.0-con-006	Missing or invalid SLP Session ID	Yes	Yes	Yes	20110401		
SUPL-2.0-con-009	Basic SUPL INIT protection	Yes	Yes	Yes			
SUPL-2.0-con-010 Test 1	Compatible Versions - Support for higher versions of SUPL 2.X.X	Yes	Yes	Yes	20110401		
SUPL-2.0-con-010 Test 2	Compatible Versions - Support for lower versions of SUPL 2.X.X	Yes		Yes	20110401		
SUPL-2.0-con-010 Test 3	Compatible Versions - Correct support with SLP supporting SUPL V3.0 and V2.0	Yes	Yes	Yes	20110815		
SUPL-2.0-con-010 Test 4	Compatible Versions - Correct support with SLP supporting SUPL V1.0 only. SUPL V1.0 supported by SET	Yes		Yes	20110201		
SUPL-2.0-con-011 Test 1	Unsupported Versions. - Higher Version not supported	Yes	Yes	Yes	20110401		
SUPL-2.0-con-011 Test 2	Unsupported Versions. - Lower Version not supported. SUPL V1.0 not supported by SET	Yes	Yes	Yes	20110815		
SUPL-2.0-con-012	Incorrect UDP message content	Yes	Yes	Yes			
SUPL-2.0-con-020	No notification & no verification	Yes	Yes	Yes	20110401		
SUPL-2.0-con-021	Notification only	Yes	Yes	Yes	20110401		
SUPL-2.0-con-022	Notification and verification	Yes	Yes	Yes	20110815		
SUPL-2.0-con-023	Privacy override	Yes	Yes	Yes	20110401		

SUPL 2.0 ETS TC number	TC Title	PT CR B	GC F	TTC N	Verified in Version	Outstanding CRs	Comments
SUPL-2.0-con-024	Requestor ID and Client Name	Yes	Yes	Yes	20110401		
SUPL-2.0-con-025 Test 1	Notification and verification based on current location - User accepts the verification			Yes			
SUPL-2.0-con-025 Test 2	Notification and verification based on current location - User denies the verification			Yes			
SUPL-2.0-con-030 Test 1	Positioning method - A-GPS SET assisted	Yes	Yes	Yes	20110401		
SUPL-2.0-con-030 Test 2	Positioning method - A-GPS SET based	Yes		Yes	20110401		
SUPL-2.0-con-030 Test 3	Positioning method - Autonomous GPS	Yes		Yes	20110401		
SUPL-2.0-con-030 Test 4	Positioning method - Enhanced Cell ID	Yes	Yes	Yes	20110401		
SUPL-2.0-con-030 Test 5	Positioning method - Cell ID	Yes	Yes	Yes			
SUPL-2.0-con-030 Test 6	Positioning method - A-GANSS SET assisted – Galileo			No			
SUPL-2.0-con-030 Test 7	Positioning method - A-GANSS SET assisted – GLONASS	Yes	Yes	Yes			
SUPL-2.0-con-030 Test 8	Positioning method - A-GANSS SET based – Galileo			No			
SUPL-2.0-con-030 Test 9	Positioning method - A-GANSS SET based – GLONASS	Yes		Yes			
SUPL-2.0-con-030 Test 10	Positioning method - Autonomous GANSS			Yes			
SUPL-2.0-con-030 Test 11	Positioning method - A-GPS Preferred methods	Yes	Yes	Yes	20110815		
SUPL-2.0-con-030 Test 12	Positioning method - A-GANSS Preferred methods		Yes	Yes			
SUPL-2.0-con-030 Test 13	Positioning method - OTDOA		Yes	No			New TTCN required
SUPL-2.0-con-031	No Position	Yes	Yes	Yes	20110401		
SUPL-2.0-con-033	Emergency Services Location Requests	Yes	Yes	Yes			
SUPL-2.0-con-034	Emergency Services Locations Request - Interaction with normal SUPL session	Yes	Yes	Yes			
SUPL-2.0-con-035	Retrieval of historical positions			No			
SUPL-2.0-con-040 Test 1	Real Time reporting - A-GPS SET assisted	Yes	Yes	Yes			
SUPL-2.0-con-040 Test 2	Real Time reporting - A-GPS SET based	Yes	Yes	Yes			
SUPL-2.0-con-041 Test 1	Basic Quasi Real Time reporting - A-GPS SET assisted			No		2010-0066, 2010-0121, 2011-0007,	

SUPL 2.0 ETS TC number	TC Title	PT CR B	GC F	TTC N	Verified in Version	Outstanding CRs	Comments
						2011-0021	
SUPL-2.0-con-041 Test 2	Basic Quasi Real Time reporting - A-GPS SET based		Yes	No		2010-0066, 2011-0007, 2011-0021	New TTCN required
SUPL-2.0-con-042 Test 1	Basic Batch reporting - A-GPS SET assisted			No		2010-0121, 2011-0007, 2011-0021	
SUPL-2.0-con-042 Test 2	Basic Batch reporting - A-GPS SET based		Yes	Yes		2011-0081	
SUPL-2.0-con-050 Test 1	Geographic Target Area - A-GPS SET assisted	Yes		Yes			
SUPL-2.0-con-050 Test 2	Geographic Target Area - A-GPS SET based	Yes	Yes	Yes		2011-0081	
SUPL-2.0-con-051 Test 1	Area ID - A-GPS SET assisted	Yes		Yes			
SUPL-2.0-con-051 Test 2	Area ID - A-GPS SET based	Yes	Yes	Yes		2011-0081	
SUPL-2.0-con-060	Network capabilities change			No		2010-0066	
SUPL-2.0-con-061	Network cancels Triggered Location Request	Yes	Yes	Yes		2010-0029R01	TTCN update required
SUPL-2.0-con-062	V-SLP to V-SLP Handover			No			
SUPL-2.0-con-070 Test 1	Timeout UT2 - SUPL POS session (Immediate session)	Yes	Yes	Yes	20110815		
SUPL-2.0-con-070 Test 2	Timeout UT2 - SUPL POS session (Triggered session)	Yes	Yes	Yes			
SUPL-2.0-con-070 Test 3	Timeout UT2 - No SUPL POS session (Immediate session)	Yes	Yes	Yes	20110815		
SUPL-2.0-con-070 Test 4	Timeout UT2 - No SUPL POS session (Triggered session)	Yes	Yes	Yes			
SUPL-2.0-con-071 Test 1	Timeout UT3 - Immediate session	Yes	Yes	Yes	20110815		
SUPL-2.0-con-071 Test 2	Timeout UT3 - Triggered session	Yes	Yes	Yes			
SUPL-2.0-con-072	Timeout UT5		Yes	Yes			
SUPL-2.0-con-073	Timeout UT7	Yes	Yes	Yes			
SUPL-2.0-con-074	Timeout UT8	Yes	Yes	Yes			
SET Initiated							
SUPL-2.0-con-100	Correct Session ID	Yes	Yes	Yes	20110706		
SUPL-2.0-con-101	Invalid SET Session ID	Yes	Yes	Yes	20110706		
SUPL-2.0-con-102	Invalid SLP Session ID	Yes	Yes	Yes	20110706		
SUPL-2.0-con-103 Test 1	Compatible versions - Support for higher versions of SUPL 2.X.X	Yes	Yes	Yes	20110706		
SUPL-2.0-con-103 Test 2	Compatible versions - Support for lower versions of SUPL 2.X.X	Yes		Yes			
SUPL-2.0-con-110 Test 1	Positioning method - A-GPS SET assisted	Yes	Yes	Yes	20110815		

SUPL 2.0 ETS TC number	TC Title	PT CR B	GC F	TTC N	Verified in Version	Outstanding CRs	Comments
SUPL-2.0-con-110 Test 2	Positioning method - A-GPS SET based	Yes	Yes	Yes	20110706		
SUPL-2.0-con-110 Test 3	Positioning method - Autonomous GPS	Yes		Yes			
SUPL-2.0-con-110 Test 4	Positioning method - Enhanced Cell ID	Yes	Yes	Yes			
SUPL-2.0-con-110 Test 5	Positioning method - Cell ID	Yes	Yes	Yes			
SUPL-2.0-con-110 Test 6	Positioning method - A-GANSS SET assisted – Galileo			No			
SUPL-2.0-con-110 Test 7	Positioning method - A-GANSS SET assisted – GLONASS	Yes	Yes	Yes			
SUPL-2.0-con-110 Test 8	Positioning method - A-GANSS SET based – Galileo			No			
SUPL-2.0-con-110 Test 9	Positioning method - A-GANSS SET based – GLONASS	Yes	Yes	Yes			
SUPL-2.0-con-110 Test 10	Positioning method - Autonomous GANSS			Yes			
SUPL-2.0-con-110 Test 11	Positioning method - SET declares A-GNSS SET-assisted Preferred method		Yes	No		2010-0060	New TTCN required
SUPL-2.0-con-110 Test 12	Positioning method - SET declares A-GNSS SET-based Preferred method		Yes	No		2010-0060	New TTCN required
SUPL-2.0-con-110 Test 13	Positioning method - OTDOA		Yes	No			New TTCN required
SUPL-2.0-con-111	SET Initiated Location Request of another SET			No			
SUPL-2.0-con-113	Transfer Location to Third Party			No		2010-0055R02	
SUPL-2.0-con-120 Test 1	Periodic reporting - A-GPS SET assisted			No		2010-0121	
SUPL-2.0-con-120 Test 2	Periodic reporting - A-GPS SET based			No		2011-0081	
SUPL-2.0-con-130 Test 1	Geographic Target Area - A-GPS SET assisted	Yes		Yes		2010-0066, 2011-0005R01, 2011-0039, 2011-0044	TTCN update required
SUPL-2.0-con-130 Test 2	Geographic Target Area - A-GPS SET based	Yes	Yes	Yes		2010-0066, 2011-0005R01, 2011-0039, 2011-0044, 2011-0081	TTCN update required
SUPL-2.0-con-131 Test 1	Area ID - A-GPS SET assisted	Yes		Yes		2010-0066, 2011-0005R01, 2011-0039, 2011-0044, 2011-0081	TTCN update required
SUPL-2.0-con-131 Test 2	Area ID -A-GPS SET based	Yes	Yes	Yes		2010-0066, 2011-0005R01, 2011-0039, 2011-0044	TTCN update required

SUPL 2.0 ETS TC number	TC Title	PT CR B	GC F	TTC N	Verified in Version	Outstanding CRs	Comments
SUPL-2.0-con-135	Network cancels Triggered Location Request			No		2010-0029R01	
SUPL-2.0-con-140 Test 1	Timeout UT1 - Immediate session	Yes	Yes	Yes	20110815		
SUPL-2.0-con-140 Test 2	Timeout UT1 - Triggered session	Yes	Yes	Yes			
SUPL-2.0-con-141 Test 1	Timeout UT2 - SUPL POS session (Immediate session)	Yes	Yes	Yes	20110815		
SUPL-2.0-con-141 Test 2	Timeout UT2 - SUPL POS session (Triggered session)	Yes	Yes	Yes			
SUPL-2.0-con-141 Test 3	Timeout UT2 - No SUPL POS session (Immediate session)	Yes	Yes	Yes			
SUPL-2.0-con-141 Test 4	Timeout UT2 - No SUPL POS session (Triggered session)	Yes	Yes	Yes			
SUPL-2.0-con-142 Test 1	Timeout UT3 - Immediate session	Yes	Yes	Yes	20110815		
SUPL-2.0-con-142 Test 2	Timeout UT3 - Triggered session	Yes	Yes	Yes			
SUPL-2.0-con-143	Timeout UT7	Yes		Yes			
SUPL-2.0-con-144	Timeout UT9			No			
Other							
ICS/IXIT						2010-0055R02, 2010-0060, 2011-0006, 2011-0044	TTCN update required
Add LPP to SUPL POS							TTCN update required
Allow GLONASS Assistance Data							TTCN update required

Table 5: Listing of Test Case Status

6. OMA SUPL Conformance Testing Framework

6.1 TTCN-3 test system architecture

Figure 1 illustrates the SUPL test system architecture used for testing a real terminal implementing the OMA SUPL standards. It is based on the general TTCN test system architecture specified in [T3TRI, T3TCI].

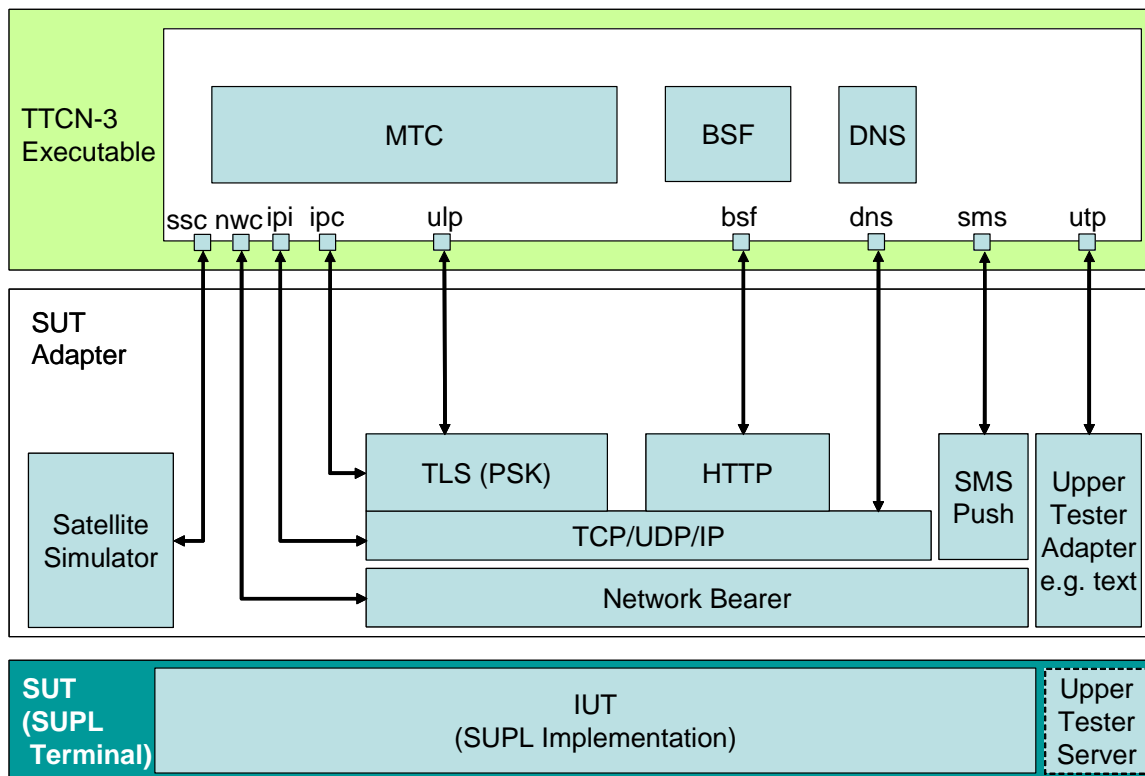


Figure 2: Conceptual SUPL CON Test Architecture

The TTCN-3 SUT Adapter (SA) shown in Figure 1 realizes the transport of SUPL data, DNS messages, SMS notifications, HTTP BSF communication, and controls the satellite simulator. Note that this is only a conceptual model for a SA implementation. Individual components of this test architecture may or even should be (for performance reasons) implemented as separate executables from the TTCN-3 test system executable. Note that the TTCN-3 Platform Adapter (PA) is not shown in Figure 1 to simplify the test architecture illustration. For more details on PA requirements see Clause 5.2.

Tbd done describe ports

The port names associated with interfaces of the upper transport layers in Figure 1 are related as follows to OMA SUPL architecture reference points:

- tbd

The tasks of the different TTCN-3 components in Figure 1 are:

- The Main Test Component (MTC) plays the role of a test coordinator, i.e., creating, synchronizing, coordinating, and terminating DNS and BSF test components used in the test cases.

6.1.1 SUPL Protocol Data Units and Service Primitives

6.1.2 PDUs

A TTCN-3 SUPL test system shall support the encoding of following SUPL PDUs: ULP, DNS, and BSF messages.

6.1.3 Service Primitives

The SUPL test cases use a number of different SA service primitives for controlling different combinations of transport layers that shall be supported by the test system. Service primitives for each component include configuration information needed for all SA layers which may need to be changed for the execution of a test in the TTCN-3 test suite.

The following tables summarize all of these service primitives. Appendix B provides a reference to detailed TTCN-3 type definitions for all service primitives and their information elements. The relevant TTCN-3 modules are `AtsSUPL_Test Configuration_TypesAndValues` and `...`. This document imposes no restrictions on the encoding of service primitives, i.e., it is left open to SA developers. PDUs carried within the service primitives shall however comply with the encoding requirements specified in the SUPL standards (see Section 5.1.2).

TBD

Service Primitive Type(s)	Parameters	Purpose
SyncPort	Sync Message	Synchronizes DNS/BSF/BSM as parallel componenets

Table 6: Synchronization Primitives

6.1.4 Upper Tester Primitives

The primitives used by the upper tester reflect commands and observations that are either to be issued or checked by a human during the execution of a test based on textual instructions or directly performed on the IUT by the UTS, i.e., a special software application on top of the SUPL implementation user interface and integrated in the terminal. If there is no UTS implementation available the command should result in the posing of a question and three answers to a human terminal operator, i.e., the correct observation was made, an incorrect observation was made, and no change was observed in the terminal user interface.

Table 6 lists the collection of upper test primitives and the questions they represent. Note that that this document leaves the encoding of upper tester primitives (also for the case that a UTS is used) in the test system intentionally open. It is recommended however to choose a textual encoding of primitives to ease readability of messages sent between UTC and UTS.

Service Primitive Type(s)	Parameters	Example Command/Question to human user
PowerOnTerminalRequest/Response	-	Power on the terminal! Does is start up correctly?
PowerOffTerminalRequest/Response	-	Power off the terminal! Does is close down correctly?
RunSUPLApplicationRequest/Response	-	Run the SUPL application on the terminal.

Table 7: Upper Tester Primitives

6.2 Platform Adapter Requirements

TBD

Name	Parameters	Return Value

Table 8: TTCN-3 External Functions

6.3 TTCN-3 Compiler Requirements

The SUPL CON test suite has been implemented and analyzed with two independent TTCN-3 Edition 3.2.1 compliant TTCN-3 compilers: Telelogic Tau 2.6 and Testing Technologies TTworkbench 1.1.1. Support of version 3.2.1 of the TTCN-3 standards is needed since the test suite uses component type extension and keep-alive component concepts.

7. Test suite execution

7.1 General

There are three means how this test suite can be executed:

1. By using the TTCN-3 control part specified in the TTCN-3 TestControl module. By default all tests part of this test suite will be executed. Relevant PIXITs defined clause 7.2 should be used to narrow the selection of tests to a desired group of tests. At this point this mode of execution does not allow to run an individual test
2. By using a TTCN-3 tool proprietary means to execute one or more tests at a time based on the interface provided by the tool provider. In this case the TTCN-3 TestControl module should be excluded from the test suite compilation.
3. By integrating your own TTCN-3 Test Management (TM) entity implementation that is integrated with the TTCN-3 test system via the TCI-TM interface [T3TCI]. In this case the TTCN-3 TestControl module should be excluded from the test suite compilation. The operation of such a TM implementation, e.g., to select execution of specific tests, is beyond the scope of this document.

7.2 PIXIT

TTCN-3 allows fixing of some test suite information without recompilation of TTCN-3 code, e.g., just prior to test execution. This information is referred to as module parameters in TTCN-3 or more generally PIXIT (Partial Protocol Implementation Extra Information for Testing). This clause discusses all such parameters relevant for the SUPL ATS.

Note that TTCN-3 test systems are likely to require configuration beyond the setting of TTCN-3 module parameters, e.g., configuration specific to a test tool or SUT Adapter, prior to a test execution. Such configuration is however beyond the scope of this document. It is the responsibility of TTCN-3 SUPL test tool providers to document such configuration needs.

The following module parameters configure test case selection in the TTCN-3 control part:

- **PX_ALL_TCS**
Specifies to execute all the SUPL test cases

The following module parameters are related to SUPL Subscription Management (BSM):

- **PX_BSM_FQDN**
Specifies the SUPL Subscription Management (BSM) Server FQDN
- **PX_MCC**
Specifies the Mobile Country Code
- **PX_MNC**
Specifies the Mobile Network Code
- **PX_KEY_GROUP**
Specifies the a group of SEK/PEKs that are identified by the same Key group part of the SEK/PEK ID
- **PX_KEY_NUMBER**
Specifies within a key group, which SEK/PEK is used

Change History

Approved Version History

Reference	Date	Description

Draft/Candidate Version 2.0 History

Document Identifier	Date	Sections	Description
Draft Versions OMA-TFP-SUPL_TTCN-V2_0	24 Oct 2010	all	Initial version
	01 Feb 2011	ToC 4.1	Editorial. New version of TTCN-3 code. Incorporated CR: OMA-IOP-TTCN-2010-0043-CR_SUPL_2.0_additional_test_cases
	16 Feb 2011	5.1.4	Incorporated CR: OMA-IOP-TTCN-2011-0003R02- CR_SUPL_TFP_Add_Test_Case_status OMA-IOP-TTCN-2011-0005- CR_SUPL_V2.0_con_010_Test_4_TTCN_3_verification
	24 Feb 2011	All	Incorporated CR: OMA-IOP-TTCN-2011-0006-CR_SUPL_V2.0_TFP_editorial_updates. New version of TTCN-3 code to support two RRLP versions
	01 Apr 2011	5.3, 5.4	Identified changed scripts. Corrected Test Case Status list. New version of TTCN-3 code from OMA-IOP-TTCN-2011-0012R02- CR_DNS_IPv6_addition and OMA-IOP-TTCN-2011-0014- CR_SUPL_2.0_TFP_fix_two_ETS_CRs
	23 Jun 2011	5	Incorporated CR: OMA-IOP-TTCN-2011-0028R01- CR_SUPL_V2.0_TTCN_3_verifications. New version of TTCN-3 code with additional test cases and changes from OMA-IOP-TTCN-2011-0024-CR_SUPL_ASN.1_Update and OMA-IOP-TTCN-2011-0025-CR_SUPL_2.0_TFP_fix_DNS_error
	06 Jul 2011	6, 7	Incorporated CR: OMA-IOP-TTCN-2011-0037-CR_Adding_framework_info_to_TFP
	15 Aug 2011	5.3, 5.4	Incorporated CR: OMA-IOP-TTCN-2011-0038- CR_Update_testcase_table_in_SUPL_TFP OMA-IOP-TTCN-2011-0039R01-CR_Addition_of_SUPL_TC_007_2 OMA-IOP-TTCN-2011-0040-CR_SUPL_V2.0_TTCN_3_verifications
	25 Nov 2011	5.4	Incorporated CR: OMA-IOP-TTCN-2011-0041R01- CR_SUPL_2.0_positioning_robustness OMA-IOP-TTCN-2011-0045-CR_Correction_to_SUPL_TC009 OMA-IOP-TTCN-2011-0047R01- CR_SUPL_V2.0_TTCN_3_verifications_10.3_and_11.2 OMA-IOP-TTCN-2011-0048R01- CR_SUPL_V2.0_TTCN_3_bug_fixes OMA-IOP-TTCN-2011-0049- CR_SUPL_V2.0_TTCN_3_verifications_30_11 OMA-IOP-TTCN-2011-0052- CR_SUPL_V2.0_TTCN_3_verifications_002_and_007_2 OMA-IOP-TTCN-2011-0055- CR_Updates_to_SUPL_2.0_TFP_Cover_document OMA-IOP-TTCN-2011-0056- CR_SUPL_2.0_verification_TCs_022_070_071_110_14x OMA-IOP-TTCN-2011-0060-CR_SUPL_utcPort_correction Including Minor editorial changes

Document Identifier	Date	Sections	Description
	16 Dec 2011	3.3, 4.2, 5.1, 5.2, 5.3, 5.4	Incorporated CR: OMA-IOP-TTCN-2011-0062R02- CR_SUPL_UDP_Push_type_correction OMA-IOP-TTCN-2011-0063- CR_Donation_of_SUPL_2.0_TTCN_3_test_cases OMA-IOP-TTCN-2011-0065-CR_SUPL_2.0_correction_con_072 OMA-IOP-TTCN-2011-0067- CR_Update_of_SUPL_2.0_TFP_cover_document
Candidate Versions OMA-TFP-SUPL_TTCN-V2_0	24 Jan 2012	n/a	Candidate approved by TP : OMA-TP-2012-0013-INP_SUPL_2.0_TFP_for_Candidate_approval