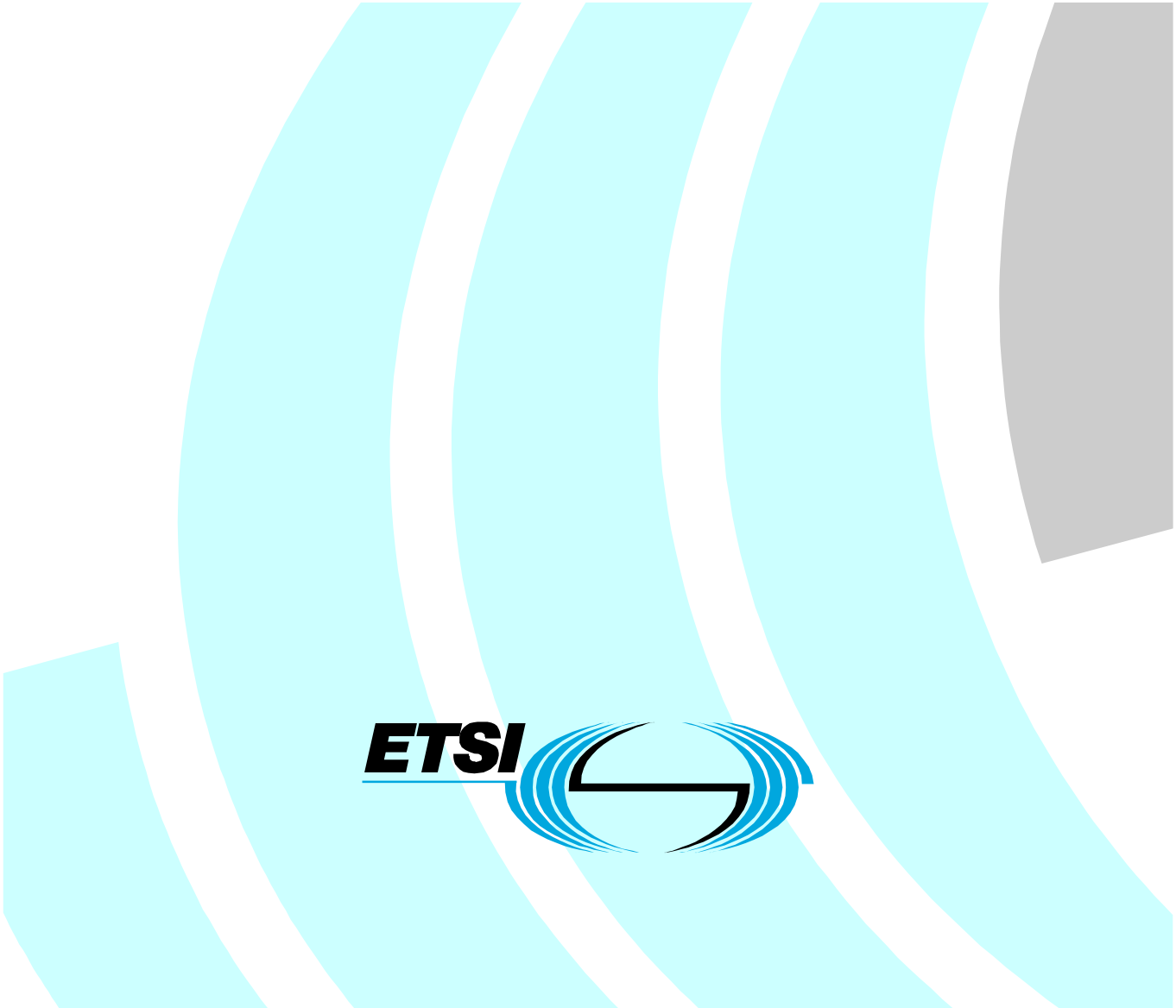
ETSI ES 202 912-6 V1.1.1 (2003-02)

ETSI Standard

Access and Terminals (AT);
Short Message Service (SMS) for PSTN/ISDN;
Test Suites for SMS User Based Solution;
Part 6: Abstract Test Suite (ATS)
user side for Data Link Layer (DLL) Protocol 2



Reference
DES/AT-030014-06

Keywords
SMS, ISDN, PSTN, PIXIT

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Sous-Préfecture de Grasse (06) N° 7803/88

Contents

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Foreword

This ETSI Standard (ES) has been produced by ETSI Technical Committee Access and Terminals (AT).

The present document is part 6 of a multi-part deliverable. Full details of the entire series can be found in part 1 [9].

Introduction

The present document is part 6 of a multi-part conformance test specification for SM-TE. The present document contains a TTCN design frame work and the detailed test specifications in TTCN for SM-TE at the user/network interface.

The reader of the present document should be aware of the fact that much of the ATS information is contained in ES 202 912-5 [5] and is therefore only referred to here, indicating the relevant clauses in ES 202 912-5 [5].

1 Scope

The present document specifies the protocol conformance testing in TTCN for the Data Link layer in a Terminal Equipment implementing the Short Message Service (SMS) for PSTN/ISDN, UBSProtocol 2, according to ES 201 912 [1] at the user/network interface.

Basic ISDN or PSTN call procedures apply in order to establish a circuit-switched band connection between such Terminal Equipment and an SM-SC. Tests for these procedures are outside the scope of the present document. UBS1 terminals send and receive Data Link messages in the voice-band connection using the FSK signalling as defined in EN 300 659-2 [2] and ES 200 778-2 [3]. Tests for the Physical Layer of the FSK signalling are also outside the scope of the present document.

Terminal Equipment implementing the Short Message Service (SMS) for PSTN/ISDN according to UBS Protocol 2 are required to implement the Transfer Layer according to ES 201 912 [1]. Using the Remote Single Layer Embedded Test Method (see ISO/IEC 9646-2 [7]) for the UBS Protocol 2 Data Link layer , Transfer Layer messages appear here only as octet string parameters of Data Link layer messages. Tests for the Transfer Layer are not within the scope of the present document.

The Abstract Test Suite designed in the present document is based on the test cases specified in tabular form combined with prose in ES 202 912-5 [5].

The following information can be found in this part, directly or by reference (mostly to ES 202 912-5 [5]):

- The overall test suite structure.
- The testing architecture.
- The test methods and PCO definitions.
- The test configuration.
- TTCN styles and conventions.
- The design principles, assumptions, and used interfaces to the TTCN tester (e.g. ASPs).
- Information about the assumed services of the Physical Layer.
- Interrelationships and dependencies between timeout values.
- The partial PIXIT proforma.
- The TTCN.MP and TTCN.GR forms for the mentioned protocols tests.

While ISO/IEC 9646-1 [6] and ISO/IEC 9646-2 [7] have been used as the basis for the test specification methodology, the ATS contained in the present document has been specified using TTCN-2++ (TR 101 666 [8]).

Two forms of the ATS are provided (see annex A):

- The TTCN Graphical form (TTCN.GR).
- The TTCN Machine Processable form (TTCN.MP).

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

Referenced documents which are not found to be publicly available in the expected location might be found at http://docbox.etsi.org/Reference.

[1] ETSI ES 201 912 (V1.1.1): "Access and Terminals (AT); Short Message Service (SMS) for PSTN/ISDN; Short Message Communication between a fixed network Short Message Terminal Equipment and a Short Message Service Centre".

[2] ETSI EN 300 659-2 (V1.3.1): "Access and Terminals (AT); Analogue access to the Public Switched Telephone Network (PSTN); Subscriber line protocol over the local loop for display (and related) services; Part 2: Off-hook data transmission".

[3] ETSI ES 200 778-2 (V1.2.2): "Access and Terminals (AT); Analogue access to the Public Switched Telephone Network (PSTN); Protocol over the local loop for display and related services; Terminal equipment requirements; Part 2: Off-hook data transmission".

[4] ETSI ES 202 912-4 (V1.1.1): "Access and Terminals (AT); Short Message Service (SMS) for PSTN/ISDN Test Suites for SMS User Based Solution; Part 4: Protocol Implementation Conformance Statement (PICS) proforma specification user side for Data Link Layer Protocol 2".

[5] ETSI ES 202 912-5 (V1.1.1): "Access and Terminals (AT); Short Message Service (SMS) for PSTN/ISDN Test Suites for SMS User Based Solution; Part 5: Test Suite Structure and Test Purposes (TSS & TP) user side for Data Link Layer (DLL) Protocol 2".

[6] ISO/IEC 9646-1: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General concepts".

[7] ISO/IEC 9646-2: "Information technology - Open systems interconnection - Conformance testing methodology and framework - Part 2: Abstract test suite specification".

[8] ETSI TR 101 666 (V1.0.0): "Information technology Open Systems Interconnection Conformance testing methodology and framework; The Tree and Tabular Combined Notation (TTCN) (Ed. 2++)".

[9] ETSI ES 202 912-1 (V1.1.1): "Access and Terminals (AT); Short Message Service (SMS) for PSTN/ISDN; Test Suites for SMS User Based Solution; Part 1: Protocol Implementation Conformance Statement (PICS) proforma specification user side for Data Link Layer (DLL) Protocol 1".

[10] ISO/IEC 9646-3: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 3: The Tree and Tabular Combined Notation (TTCN)".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in ES 202 912-5 [5] apply.

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

ASP	Abstract Service Primitive
ATS	Abstract Test Suite
CLI	Calling Line Identification (information)
DLL	Data Link Layer
FSK	Frequency Shift Keying
ISDN	Integrated Services Digital Network
ISO	International Standard Organization
IUT	Implementation Under Test
PDU	Protocol Data Unit
PICS	Implementation Conformance Statement
PICS	Protocol Implementation Conformance Statement
PIXIT	Protocol Implementation eXtra Information for Testing
PSTN	Public Switched Telephone Network
SM	Short Message(s)
SME	Short Message Entity
SMS	Short Message Service
SM-SC	Short Message Service Centre
SM-TE	Short Message Terminal Equipment
SUT	System Under Test
TL	Transfer Layer
TP	Test Purpose
TS	Test Suite
TSS	Test Suite Structure
TSS&TP	Test Suite Structure and Test Purposes
TTCN	Tree and Tabular Combined Notation
UBS	User Based Solution
VB	Voice-band

4 Test method and Testing Architecture

4.1 Test method

The test method is the **Remote Single Layer Embedded** test method (see ISO/IEC 9646-1 [6] for definitions of test methods).

The protocol layer under test is the Data Link Layer (DLL), i.e. Layer 2. Basic information about the physical transfer of DLL message units is given in clause 6.5.

Transfer layer (Layer 3) message units are treated as octet strings in the ATS.

4.2 Test configuration

Figure 1 in ES 202 912-5 [5] gives an overview of the reference architecture used for the UBS Protocol 2 operation. Figure 2 in ES 202 912-5 [5] shows the configuration used for testing. Details about the entities being part of the test configuration can be found in clause 4 of ES 202 912-5 [5].

5 Basic considerations on the TTCN development

A number of requirements are identified for the development and production of the TTCN test specifications for ES 201 912 [1]:

1) A unique testing architecture and test method for testing all protocol layers and protocol variants.

2) Uniform TTCN style and naming conventions, to improve TTCN readability.

3) Using TTCN-2++ (TR 101 666 [8]). This TTCN specification is feasible, implementable and compilable.

4) Test cases shall be designed in a way for easily adaptable, upwards compatible with the evolution of the specifications and the future releases.

5) The test declarations, data structures and data values shall be largely reusable.

6) Minimizing the requirements of intelligence on the simulators and transfer capabilities of the lower testers, giving enough design freedom to the test equipment manufacturers.

7) Considering that the TS Structure and Test Purposes in ES 202 912-5 [5] have been designed and formulated in way that supports an easy and direct transition to TTCN: follow the constructions and namings in a tight and direct way.

In order to fulfil these requirements and to ensure the investment of the test equipment manufacturers having a stable testing architecture for a relatively long period, a unique testing architecture and test method are applied to the "SMS over fixed network" protocol tests.

6 ATS information

6.1 Naming conventions

Table 1 gives information about the naming conventions used for the main TTCN objects of the ATS.

Table 1: Naming conventions

TTCN object class	Name prefix in ATS	Comment
Test Case	-	The test case identifiers are the same as the related TP identifiers in ES 202 912-5 [5]. More information about the TP identifier name composites and naming conventions can be found in ES 202 912-5 [5], clause 5.5.
Test Step	PRE_ (preambles), POST_ (postambles)	The test step identifiers are the same as the related step identifiers in ES 202 912-5 [5].
Local Tree	LTR_	
Test group	-	The test group names of ES 202 912-5 [5] have been used. See the table in ES 202 912-5 [5], clause 6.2.
Test Suite Parameter	TSPX_ (PIXIT) TSPC_ (PICS)	The "Test Parameters" in clause ES 202 912-5 [5], clause 6.7. have been defined as Test Suite Parameters, using the same name. Test Suite Parameters with prefix "TSPC_" appear in Selection expressions and Qualifiers only.
ASP	ASP_	The ASPs defined in ES 202 912-5 [5], clause 6.3 are also defined in the ATS. However the prefix "ASP_" is not used in ES 202 912-5 [5].

TTCN object class	Name prefix in ATS	Comment
PDU	PDU_	The last composite of the message type names defined of ES 201 912 [1], clause 5.3.2.1, table 1 identify the different PDUs used in the ATS. The prefix "DLL_SMS" is not used for PDU names in the ATS. EXAMPLE: "DLL_SMS_REL" is "PDU_REL" in the ATS. In addition to the message types defined in the protocol, a PDU with an unknown type has been defined in the ATS: PDU_UNKNOWN.
Timer	TIMER_	
Test Suite Constant	TSC_	
Test Case Variable	TCV_	
Test Suite Operation	TSO_	
Selection Expression	SEL_	
Constraint	C_	For PDU constraints the prefix "PDU_" in the related PDU type identifier is replaced by "C_". A postfix "_Sn" is added for constraints to be transmitted, where "n" is an appropriate digit. Similarly a postfix "_Rn" is added for constraints to be received. For ASP constraints the prefix "ASP_" in the ASP type identifier is replaced by "C_". The rest of the name is treated as for PDUs.
Alias		Aliases have been defined for ASPs carrying PDUs. The Alias identifier is derived from the PDU name, with a postfix "r" for PDUs to be received and a postfix "s" for PDUs to be sent.
Formal Parameters		The names of Formal Parameters end with a "V". Formal Parameter names associated with constraints are composed of the name of the PDU field or ASP parameter to which the Formal Parameter is passed as a value, followed by postfix "V".

6.2 Restrictions and requirements not being tested

See clause 5.3 in ES 202 912-5 [5].

6.3 Grouping of test purposes

See clauses 5.4 and 6.2 in ES 202 912-5 [5].

6.4 Abstract Service Primitives

See clause 6.3 in ES 202 912-5 [5]. Note that the prefix "ASP_" has been added in the ATS.

6.5 Information on physical layer information transfer and message encoding

There is no explicit signalling used in the ATS for establishing the VB connection between the SM-TE and the tester. There is also no explicit reference made to whether the VB connection is over PSTN or ISDN, since the SMS transfer capabilities and procedures are independent of the network type, once the VB connection is established. The VB connection is established using appropriate ASPs, and is considered to be a matter of the capabilities of the SM-TE to be tested and the implementation of the test system implementing this ATS, to perform suitable signalling to establish the VB connection.

The Physical Layer is treated according to clause 5.3.1 of ES 201 912 [1], i.e. the signalling between the SM-TE and the tester is carried out in the VB connection, using a bi-directional, half duplex 1 200 Baud FSK modulation as defined in EN 300 659-2 [2] and ES 200 778-2 [3].

There are no Physical Layer errors created by the tester.

The necessary delay of the initial FSK frame (Timer T10min) and between FSK frames, when the tester has to send a new FSK frame (Timer T11min) should be provided by the test system, i.e. when a new frame is sent in the ATS, the test system is required to delay the transmission of this frame, if necessary, such that timers T10min and T11min are respected from the tester side. This means in particular, that there is no TP verifying the IUT behaviour on violation of T10min/T11min delay by the tester.

The DLL message (frame) structure is as depicted in ES 201 912 [1] clause 6.3.2.1, figure 12. "Channel seizure", "Mark signal" and "Checksum" however, are not part of the PDU type declarations in the ATS. These message fields are treated in the ASPs used for sending and receiving messages: ASP_TRANSFER_req and ASP_TRANSFER_ind (see ES 202 912-5 [5], clause 6.3).

When separating an octet into bit fields (occurring only for the "message type octet", containing "extension bit" and "message type"), the most significant bits appear first, i.e. following the bit structure of the "message type octet".

Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
Ext	Message type						

Figure 1: Bit structure of the "message type octet"

The "Extension bit" (most significant bit) is the **first** field in the Structured Type associated with the "message type octet".

NOTE: For the order of bits transmitted see references to the Physical layer given in ES 201 912 [1], clause 6.1.

6.6 Use of timers, restrictions and interdependencies of timeout values

Protocol timers, e.g. Tm1, are implemented in the ATS as TIMER_T*nn*_<postfix>, e.g. **TIMER_Tm1_MINUS**. If the postfix is "MINUS", then the timer is started in the ATS with a timeout value slightly less than the nominal timeout value claimed to be implemented in the IUT. If the postfix is "PLUS", then the timer is started in the ATS with a timeout value slightly greater than the nominal timeout value claimed to be implemented in the IUT, i.e. for testing timeout values of protocol timers normally a "window" is defined.

The size of the window is defined by TS Parameter TSPX_TDELTA, which gives a percentage of allowed deviation from the nominal value. The calculation of the actual timeout values resulting from the nominal value and the allowed maximum deviation (lower and upper limit) are performed by TS Operations TSO_TIMEOUT_MINUS and TSO_TIMEOUT_PLUS. A typical maximum allowed deviation assumed for testing (TSPX_TDELTA) is 10 (%).

Apart from the timers used to test timeout values of protocol timers implemented in the SM-TE, the operational timers TIMER_TAC and TIMER_TWAIT are defined. For these operational timers no lower and upper limits are defined.

TIMER_TAC is used to ascertain a response from the SM-TE, which is automatically generated according to the DLL protocol, i.e. which is expected to occur without manual intervention. The timeout value of TIMER_TAC, TS Parameter TSPX_TIMEOUT_TAC, must be long enough to respect all delays being allowed by the protocol. In particular it must be greater than T10min and T11min. Note however, that a too big timeout value may increase the test execution time unnecessarily.

TIMER_TWAIT is a timer with units of seconds. It is started when the operator is requested to perform some operation at the SM-TE. The time should be long enough such that the operator can perform the requested operations within this time.

Annex A (normative): Abstract Test Suite (ATS)

This ATS has been produced using the Tree and Tabular Combined Notation (TTCN) according to ISO/IEC 9646-3.

The ATS was developed on a separate TTCN software tool and therefore the TTCN tables are not completely referenced in the table of contents. The ATS itself contains a test suite overview part which provides additional information and references.

A.1 Versions of specifications

The table A.1 shows the version of the test specifications which the delivered ATSs are referred to.

Table A.1: Versions of the related specifications

Specification type	Document ID	Version
Protocol specification	ES 201 912	V1.1.1
PICS	ES 202 912-4	V1.1.1
PIXIT	ES 202 912-6	V1.1.1

A.2 ATS

A.2.1 The TTCN Graphical form (TTCN.GR)

The TTCN.GR representation of this ATS is contained in an Adobe Portable Document Format™ file (SMSDLL2.PDF contained in archive es_20291206v010101p0.ZIP) which accompanies the present document.

A.2.2 The TTCN Machine Processable form (TTCN.MP)

The TTCN.MP representation corresponding to this ATS is contained in an ASCII file (SMSDLL2.MP contained in archive es_20291206v010101p0.ZIP) which accompanies the present document.

NOTE: Where an ETSI Abstract Test Suite (in TTCN) is published in both .GR and .MP format these two forms shall be considered equivalent. In the event that there appears to be syntactical or semantic differences between the two then the problem shall be resolved and the erroneous format (whichever it is) shall be corrected.

Annex B (normative): Partial PIXIT proforma

B.1 Introduction

This partial PIXIT proforma contained in the present document is provided for completion, when the related Abstract Test Suite is to be used against the Implementation Under Test (IUT).

Text in *italics* is comments for guidance for the production of a PIXIT, and is not to be included in the actual PIXIT.

The completed partial PIXIT will normally be used in conjunction with the completed PICS, as it adds precision to the information provided by the PICS.

B.2 PIXIT items

The table B.1 lists the PIXIT items associated with the ATS. Each PIXIT item corresponds to a TS Parameter of the ATS. Note that some TS Parameters are associated with PICS items. Default values are not provided.

Table B.1: PIXIT items

Item	Parameter Name	Description	Type	Value
1.1	TSPX_CLD_TE	Address of the destination SM-TE to be called by the SUT.	OCTETSTRING	
1.2	TSPX_SC_ADDR1	Address of the SM-SC to be called by the SUT and stored in the SUT.	OCTETSTRING	
1.3	TSPX_SC_ADDR2	Address of the SM-SC, stored in the SUT, from which the SUT can receive SMs.	OCTETSTRING	
1.4	TSPX_SME_ID	Subaddress of an SME implemented in the SUT (referred to as SME1). This is the default SME subaddress.	OCTETSTRING	
2.1	TSPX_SMS_DELIVER_S1	SMS_DELIVERY TL message of length up to 255 octets, that is used as "default" message to be delivered, and is transmitted as Payload in a DLL message.	OCTETSTRING	
2.2	TSPX_SMS_DELIVER_S2	SMS_DELIVERY TL message of length up to 255 octets, that is used as second message to be delivered on the same VB connection, and is transmitted as Payload in a DLL message.	OCTETSTRING	
2.3	TSPX_SMS_DELIVER_S3	Segment 1 of length up to 255 octets, of an SMS_DELIVERY TL message that is longer than 255 octets in total. Segment 1 is transmitted as Payload in a DLL message, where the extension bit is set to "1".	OCTETSTRING	
2.4	TSPX_SMS_DELIVER_S4	Segment 2 (second but not last segment) of length up to 255 octets, of an SMS_DELIVERY TL message that is longer than 255 octets in total. Segment 2 is transmitted as Payload in a DLL message, where the extension bit is set to "1".	OCTETSTRING	
2.5	TSPX_SMS_DELIVER_S5	Segment 2 (last segment) of length up to 255 octets, of an SMS_DELIVERY TL message that is longer than 255 octets in total and contains a TL error. Segment 2 is transmitted as Payload in a DLL message, where the extension bit is set to "0".	OCTETSTRING	

Item	Parameter Name	Description	Type	Value
2.6	TSPX_SMS_DELIVER_S6	Segment 3 (last segment) of length up to 255 octets, of an SMS_DELIVERY TL message that is longer than 255 octets in total and contains a TL error. Segment 3 is transmitted as Payload in a DLL message, where the extension bit is set to "0".	OCTETSTRING	
2.7	TSPX_SMS_STATUS_REP	SMS_STATUS_REP TL message of length up to 255 octets, which is transmitted as Payload in a DLL message.	OCTETSTRING	
2.8	TSPX_SMS_SUBMIT	Payload up to 255 octets, to be transmitted in the DLL_SMS_INFO-MO message.	OCTETSTRING	
3	TSPX_SMS_SUBMIT_REP_ CONF	SMS_SUBMIT_REP TL message of length up to 255 octets, which can be sent by the tester in a DLL_SMS_ACK1 or DLL_SMS_ACK0 message as a confirmation of a TL message submitted by the SM-TE.	OCTETSTRING	
4	TSPX_UNKNOWN_PL	Payload to be transmitted in the DLL_SMS_UNKNOWN message.	OCTETSTRING	
5.1	TSPX_TIMEOUT_T10min	Timeout value of T10min in units of milliseconds. The value is required to be n times 100 ms, where n=1..256 (see ES 201 912, 6.3.1).	INTEGER	
5.2	TSPX_TIMEOUT_Tm1	Timeout value implemented for Timer Tm1 (ms). A value between 720 and 880 is allowed (800(10%). See ES 201 912, clause 6.3.2.3, table 6.	INTEGER	
5.3	TSPX_TIMEOUT_Tm2	Timeout value implemented for Timer Tm1 (ms). A value between 6 840 and 8 360 is allowed (7 600(10%). See ES 201 912, clause 6.3.2.3, table 6.	INTEGER	
5.4	TSPX_TIMEOUT_Tm3	Timeout value implemented for Timer Tm1 (ms). A value between 6 750 and 8 250 is allowed (7 500(10%). See ES 201 912, clause 6.3.2.3, table 6.	INTEGER	
5.5	TSPX_TIMEOUT_Tm4	Timeout value implemented for Timer Tm1 (ms). A value between 3 150 and 3 850 is allowed (3 500(10%). See ES 201 912, clause 6.3.2.3, table 6.	INTEGER	
5.6	TSPX_TIMEOUT_Tm5	Timeout value implemented for Timer Tm1 (ms). A value between 720 and 880 is allowed (800(10%). See ES 201 912, clause 6.3.2.3, table 6.	INTEGER	
5.7	TSPX_TIMEOUT_Tm6	Timeout value implemented for Timer Tm1 (ms). A value between 180 and 220 is allowed (200(10%). See ES 201 912, clause 6.3.2.3, table 6.	INTEGER	
5.8	TSPX_TIMEOUT_T1	Timeout for sending an acknowledgement to a received message. See ES 201 912, clause 6.3.2.3, table 7.	INTEGER	
5.9	TSPX_TIMEOUT_T2	Timeout for sending a message. See ES 201 912, clause 6.3.2.3, table 7.	INTEGER	
5.10	TSPX_TIMEOUT_T3	Timeout for sending the "Link Established Message". See ES 201 912, clause 6.3.2.3, table 7.	INTEGER	
5.11	TSPX_TIMEOUT_TAC	Timeout value of Timer TAC, in units of milliseconds. See clause "Use of timers, restrictions and interdependencies of timeout values".	INTEGER	
5.12	TSPX_TIMEOUT_TWAIT	Timeout value of Timer TWAIT, in units of seconds. See clause "Use of timers, restrictions and interdependencies of timeout values".	INTEGER	
6	TSPX_TDELTA	Percentage value between 1 and 99, typically 10, allowing the maximum deviation from a nominal timeout value. See clause 6.6.	INTEGER	

Item	Parameter Name	Description	Type	Value
7	TSPX_AUTOMATIC_INFO_STA_CALL	The value is TRUE if the SM-TE, when leaves the "Memory Full" state following the deletion by the user of one or more SMs stored, automatically establish an outgoing call to the SM-SC sending the DLL_SMS_INFO-STA message. Otherwise, in case the SM-TE waits for an user indication before establishing such an outgoing call, the value is FALSE.	BOOLEAN	

Annex C (informative): Additional information to the PIXIT

Additional information may be provided when completing the PIXIT questions listed in annex B.

C.1 Identification Summary

Table C.1 is completed by the test laboratory. The item "Contract References" is optional.

Table C.1: Identification Summary

PIXIT Reference Number:	
Test Laboratory Name:	
Date of Issue:	
Issued to (name of client):	
Contract References:	

C.2 Abstract Test Suite Summary

In table C.2, the test laboratory provides the version number of the protocol specification and the version number of ATS which are used in the conformance testing.

Table C.2: ATS Summary

Protocol Specification:	ES 201 912
Version of Protocol Specification:	V1.1.1
Test Specification in prose (TSS&TP):	ES 202 912-5
Version of TSS & TP Specification:	V1.1.1
ATS Specification:	ES 202 912-6
Version of ATS Specification:	V1.1.1
Abstract Test Method:	Remote Single Layer Embedded

C.3 Test Laboratory

C.3.1 Test Laboratory Identification

Table C.3 provides the following information about the test laboratory.

Table C.3: Test Laboratory Identification

Name of Test Laboratory:	
Postal Address:	
Office address:	
E-mail address:	
Telephone Number:	
FAX Number:	

C.3.2 Accreditation status of the test service

Table C.4 provides the following information about the test laboratory.

Table C.4: Accreditation status of the test service

Accreditation status:	
Accreditation Reference:	

C.3.3 Manager of Test Laboratory

The test laboratory provides the information about the manager of test laboratory in table C.5.

Table C.5: Manager of Test Laboratory

Name of Manager of Test Laboratory:	
E-mail address:	
Telephone Number:	
FAX Number:	
E-mail Address:	

C.3.4 Contact person of Test Laboratory

The test laboratory provides the information about the contact person of test laboratory in table C.6.

Table C.6: Contact person of Test Laboratory

Name of Contact of Test Laboratory:	
E-mail address:	
Telephone Number:	
FAX Number:	
E-mail Address:	

C.3.5 Means of Testing

In table C.7, the test laboratory provides a statement of conformance of the Means Of Testing (MOT) to the reference standardized ATS, and identifies all restrictions for the test execution required by the MOT beyond those stated in the reference standardized ATS.

Table C.7: Means of Testing

Means of Testing

C.3.6 Instructions for Completion

In table C.8 the test laboratory provides any specific instructions necessary for completion and return of the proforma from the client.

Table C.8: Instruction for Completion

Instructions for Completion

C.4 Client

C.4.1 Client Identification

The client provides the identification in the table C.9.

Table C.9: Client Identification

Name of Client:	
Postal Address:	
Office Address:	
Telephone Number:	
FAX Number:	

C.4.2 Client Test Manager

In table C.10 the client provides information about the test manager.

Table C.10: Client Test Manager

Name of Client Test Manager:	
Telephone Number:	
FAX Number:	
E-mail Address:	

C.4.3 Client Contact person

In table C.11 the client provides information about the test contact person.

Table C.11: Client Contact person

Name of Client contact person:	
Telephone Number:	
FAX Number:	
E-mail Address:	

C.4.4 Test Facilities Required

In table C.12, the client records the particular facilities required for testing, if a range of facilities is provided by the test laboratory.

Table C.12: Test Facilities Required

Test Facilities Required

C.5 System Under Test

C.5.1 SUT Information

The client provides information about the SUT in table C.13.

Table C.13: SUT Information

System Name:	
System Version:	
SCS Reference:	
Machine Configuration:	
Operating System Identification:	
IUT Identification:	
PICS Reference for the IUT:	ES 202 912-4

C.5.2 Limitations of the SUT

In table C.14, the client provides information explaining if any of the abstract tests cannot be executed.

Table C.14: Limitation of the SUT

Limitations of the SUT

C.5.3 Environmental Conditions

In table C.15 the client provides information about any tighter environmental conditions for the correct operation of the SUT.

Table C.15: Environmental Conditions

Environmental Conditions

C.6 Ancillary Protocols

This clause is completed by the client in conjunction with the test laboratory.

In the following tables C.16 and C.17, the client identifies relevant information concerning each ancillary protocol in the SUT other than the IUT itself. One table for one ancillary protocol.

Based on the MOT the test laboratory should create question proforma for each ancillary protocol in the blank space following each table. The information required is dependent on the MOT and the SUT, and covers all the addressing, parameter values, timer values and facilities (relevant to ENs) as defined by the PICS for the ancillary protocol.

C.6.1 Ancillary Protocols 1 (Physical Layer)

Table C.16: Ancillary Protocol 1 (Physical Layer)

Protocol Name:	
Version number:	
PICS Reference (optional):	
PIXIT Reference (optional):	
PCTR Reference (optional):	

C.6.2 Ancillary Protocols 2 (Transfer Layer)

Table C.17: Ancillary Protocol 2 (Transfer Layer)

Protocol Name:	
Version number:	
PICS Reference (optional):	
PIXIT Reference (optional):	
PCTR Reference (optional):	

Annex D (informative): Bibliography

ETSI EN 300 659-1 (V1.3.1): "Access and Terminals (AT); Analogue access to the Public Switched Telephone Network (PSTN); Subscriber line protocol over the local loop for display (and related) services; Part 1: On-hook data transmission".

ETSI EN 300 659-3 (V1.3.1): "Access and Terminals (AT); Analogue access to the Public Switched Telephone Network (PSTN); Subscriber line protocol over the local loop for display (and related) services; Part 3: Data link message and parameter codings".

ETSI ES 200 778-1 (V1.2.2): "Access and Terminals (AT); Analogue access to the Public Switched Telephone Network (PSTN); Protocol over the local loop for display and related services; Terminal equipment requirements; Part 1: On-hook data transmission".

ISO/IEC 9646-7: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 7: Implementation Conformance Statements".

History

Document history			
V1.1.1	December 2002	Membership Approval Procedure	MV 20030207: 2002-12-10 to 2003-02-07
V1.1.1	February 2003	Publication	