ETSI TS 101 572-1 V1.1.1 (2013-10)

Technical Specification

**Core Network and Interoperability Testing (INT);
Conformance tests according to 3GPP™ 29.235 Release 10;
Interworking between SIP-I based circuit-switched core
network and other networks;
Part 1: Protocol Implementation Conformance
Statement (PICS)**

Reference

DTS/INT-00055-1

Keywords

ISUP, PICS, SIP, testing

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00   Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

Important notice

Individual copies of the present document can be downloaded from:
http://www.etsi.org

The present document may be made available in more than one electronic version or in print. In any case of existing or
perceived difference in contents between such versions, the reference version is the Portable Document Format (PDF).
In case of dispute, the reference shall be the printing on ETSI printers of the PDF version kept on a specific network drive
within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status.
Information on the current status of this and other ETSI documents is available at
http://portal.etsi.org/tb/status/status.asp

If you find errors in the present document, please send your comment to one of the following services:
http://portal.etsi.org/chaircor/ETSI_support.asp

Copyright Notification

ETSI

Contents

Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: *"Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards"*, which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (http://ipr.etsi.org).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Core Network and Interoperability Testing (INT).

The present document is part 1 of a multi-part deliverable covering SIP NNI - SIP-I Interworking described in the clauses 7.2 and 7.3 of TS 129 235 (Release 10) [1], as identified below:

Part 1:   "Protocol Implementation Conformance Statement (PICS)";

Part 2:   " SIP-I / SIP NNI Test Suite Structure and Test Purposes (TSS&TP)".

1 Scope

The present document specifies the Test Suite Structure and Test Purposes for SIP NNI - SIP-I Interworking described in the clauses 7.2 and 7.3 of TS 129 235 (Release 10) [1].

2 References

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the reference document (including any amendments) applies.

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

NOTE: While any hyperlinks included in this clause were valid at the time of publication ETSI cannot guarantee their long term validity.

2.1 Normative references

The following referenced documents are necessary for the application of the present document.

[1] ETSI TS 129 235: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; Interworking between SIP-I based circuit-switched core network and other networks (3GPP TS 29.235 version 10.1.0 Release 10)".

[2] ETSI TS 129 163: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; Interworking between the IP Multimedia (IM) Core Network (CN) subsystem and Circuit Switched (CS) networks (3GPP TS 29.163 Release 8)".

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

2.2 Informative references

The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

[i.1] Recommendation ITU-T Q.730: "ISDN User Part supplementary services".

[i.2] Recommendations ITU-T Q.731.1 to Q.731.8: "Stage 3 description for number identification supplementary services using Signalling System No. 7".

[i.3] Recommendations ITU-T Q.732.2 to Q.732.7: "Stage 3 description for call offering supplementary services using Signalling System No. 7".

[i.4] Recommendations ITU-T Q.733.1 to Q.733.5: "Stage 3 description for call completion supplementary services using Signalling System No. 7".

[i.5] Recommendations ITU-T Q.734.1 to Q.734.2: "Stage 3 description for multiparty supplementary services using Signalling System No. 7".

[i.6] Recommendations ITU-T Q.735.1 to Q.735.6: "Stage 3 description for community of interest supplementary services using Signalling System No. 7".

[i.7] Recommendations ITU-T Q.736.1 to Q.736.3: "Stage 3 description for charging supplementary services using Signalling System No. 7".

[i.8] Recommendation ITU-T Q.737.1: "Stage 3 description for additional information transfer supplementary services using Signalling System No. 7 : User-to-user signalling (UUS)".

[i.9]   ISO/IEC 9646-7: "Information technology -- Open Systems Interconnection -- Conformance testing methodology and framework -- Part 7: Implementation Conformance Statements".

[i.10]   ETSI TS 124 229: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; IP multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3 (3GPP TS 24.229)".

3   Definitions, symbols and abbreviations

3.1   Definitions

For the purposes of the present document, the terms and definitions given in [2], [3], [i.9] and the following apply:

PICS proforma: document, in the form of a questionnaire, which when completed for an implementation or system becomes a PICS

Protocol ICS (PICS): ICS for an implementation or system claimed to conform to a given protocol specification

Protocol Implementation Conformance Statement (PICS): statement made by the supplier of an implementation or system claimed to conform to a given protocol specification, stating which capabilities have been implemented

NOTE: This may contain additional information.

3.2   Symbols

For the purposes of the present document, the symbols given in [2] apply.

3.3   Abbreviations

For the purposes of the present document, the abbreviations given in [2] and the following apply:

ACR	Anonymous Call Rejection
APRI	Address Presentation Restriction Indicator
BICC	Bearer Independent Call Control
CB	Call Barring
CCBS	Call Completion on Busy Subscriber
CCNR	Call Completion No Reply supplementary service
CD	Call Diversion
CDIV	Call DIVersion

NOTE: This is used to refer collectively to the CD, CFB, CFNR and CFU services.

COLP	Called Line Identification Presentation
CONF	Conference (as in Conference; Add on or 3-Party) (Supplementary Service)
COT	Continuity message
CPG	Call Progress message (ISUP)
CUG	Closed User Group
CW	Call Waiting
ECT	Explicit Call Tranfer
GVNS	Global Virtual Network Service
ICS	Implementation Conformance Statement
IM-MGW	IP Multimedia - Media GateWay
IMS	IP Multimedia Subsystem
INF	Information
INR	Information Request
ISDN	Integrated Service Data Network
IUT	Implementation Under Test
MCID	Malicious Call Identification
MGCF	Media Gateway Control Function

MGW	Media Gateway
MLPP	Multi Level Precedence and Preemption
MTAS	Multimedia Telephony Application Server
MWI	Message Wait Indication
NNI	Network - Network - Interface
OIP	Originating Identification Presentation
OIR	Originating Identification Restriction
PDU	Protocol Data Unit
PICS	Protocol ICS
PSTN	Public Switch Telephone Network
REV	REVerse charging supplementary service
SCS	System Conformance Statement
SIP	Session Initiated Protocol
SIP-I	Session Initiation Protocol with encapsulated ISDN User Part
SUB	Subaddressing
SUT	System Under Test
TIP	Terminating Identification Presentation
TIR	Terminating Identification Restriction
TMR	Transmission Medium Requirement
URL	Unified Resource Locator
UUS	User to User Supplementary service
XML	eXtended Markup Language

3.4   Conformance to this PICS proforma specification

If it claims to conform to the present document, the actual PICS proforma to be filled in by a supplier shall be technically equivalent to the text of the PICS proforma given in clause 4, and shall preserve the numbering/naming and ordering of the proforma items.

A PICS which conforms to the present document shall be a conforming PICS proforma completed in accordance with the guidance for completion given in clause 4.1.

4   PICS proforma for clauses 7.2 and 7.3 of TS 129 235

Notwithstanding the provisions of the copyright clause related to the text of the present document, ETSI grants that users of the present document may freely reproduce the PICS proforma in this clause so that it can be used for its intended purposes and may further publish the completed PICS.

4.1   Guidance for completing the PICS proforma (purposes and structure)

The purpose of this ICS proforma is to provide a mechanism whereby a supplier of an implementation of the requirements defined in clauses 7.2 and 7.3 of TS 129 235 [1] may provide information about the implementation in a standardized manner.

The PICS proforma is subdivided into clauses for the following categories of information:

-    guidance for completing the PICS proforma;

-    identification of the implementation;

-    identification of the <reference specification type>;

-    global statement of conformance;

-    roles.

4.2 Abbreviations and conventions

The PICS proforma contained in this clause is comprised of information in tabular form in accordance with the guidelines presented in ISO/IEC 9646-7 [i.9].

Item column

The item column contains a number which identifies the item in the table.

Item description column

The item description column describes in free text each respective item (e.g. parameters, timers, etc.). It implicitly means "is <item description> supported by the implementation?".

Status column

The following notations, defined in ISO/IEC 9646-7 [i.9], are used for the status column:

m   mandatory - the capability is required to be supported.

o   optional - the capability may be supported or not.

n/a   not applicable - in the given context, it is impossible to use the capability.

x   prohibited (excluded) - there is a requirement not to use this capability in the given context.

o.i   qualified optional - for mutually exclusive or selectable options from a set. "i" is an integer which identifies a unique group of related optional items and the logic of their selection which is defined immediately following the table.

ci   conditional - the requirement on the capability ("m", "o", "x" or "n/a") depends on the support of other optional or conditional items. "i" is an integer identifying a unique conditional status expression which is defined immediately following the table.

Reference column

The reference column makes reference to TS 129 163 [2], except where explicitly stated otherwise.

Support column

The support column shall be filled in by the supplier of the implementation. The following common notations, defined in ISO/IEC 9646-7 [i.9], are used for the support column:

Y or y   supported by the implementation.

N or n   not supported by the implementation.

N/A, n/a or -   no answer required (allowed only if the status is n/a, directly or after evaluation of a conditional status).

If this PICS proforma is completed in order to describe a multiple-profile support in a system, it is necessary to be able to answer that a capability is supported for one profile and not supported for another. In that case, the supplier shall enter the unique reference to a conditional expression, preceded by "?" (e.g. ?3). This expression shall be given in the space for comments provided at the bottom of the table. It uses predicates defined in the SCS, each of which refers to a single profile and which takes the value TRUE if and only if that profile is to be used.

EXAMPLE: ?3:   IF prof1 THEN Y ELSE N

In case of protocol, the following text should be added:

NOTE: As stated in ISO/IEC 9646-7 [i.9], support for a received PDU requires the ability to parse all valid parameters of that PDU. Supporting a PDU while having no ability to parse a valid parameter is non-conformant. Support for a parameter on a PDU means that the semantics of that parameter are supported.

If the ICS proforma does not contain tables with "values allowed" columns and "values supported" columns, the two following column descriptions shall be removed.

Values allowed column

The values allowed column contains the type, the list, the range, or the length of values allowed. The following notations are used:

- range of values: <min value> .. <max value>
  example: 5 .. 20

- list of values: <value1>, <value2>, ..., <valueN>
  example: 2, 4, 6, 8, 9
  example: '1101'B, '1011'B, '1111'B
  example: '0A'H, '34'H, '2F'H

- list of named values: <name1>(<val1>), <name2>(<val2>), ..., <nameN>(<valN>)
  example: reject(1), accept(2)

- length: size (<min size> .. <max size>)
  example: size (1 .. 8)

Values supported column

The values supported column shall be filled in by the supplier of the implementation. In this column, the values or the ranges of values supported by the implementation shall be indicated.

4.3   Instructions for completing the PICS proforma

The supplier of the implementation shall complete the PICS proforma in each of the spaces provided. In particular, an explicit answer shall be entered, in each of the support or supported column boxes provided, using the notation described in clause 4.2.

If necessary, the supplier may provide additional comments in space at the bottom of the tables or separately.

More detailed instructions are given at the beginning of the different clauses of the PICS proforma.

5   Identification of the implementation

Identification of the Implementation Under Test (IUT) and the system in which it resides (the System Under Test (SUT)) should be filled in so as to provide as much detail as possible regarding version numbers and configuration options.

The product supplier information and client information should both be filled in if they are different.

A person who can answer queries regarding information supplied in the ICS should be named as the contact person.

5.1   Date of the statement

....

5.2   Implementation Under Test (IUT) identification

IUT name:

....

....