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**Core Network and Interoperability Testing (INT);
Anonymous Communication Rejection (ACR) and
Communication Barring (CB) using IP Multimedia (IM)
Core Network (CN) subsystem;
Conformance Test Specification (3GPP™ Release 12);
Part 1: Protocol Implementation Conformance
Statement (PICS)**

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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 the Anonymous Communication Rejection (ACR) and Communication Barring (CB) simulation services, as identified below:

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

Part 2: "Test Suite Structure and Test Purposes (TSS&TP)";

Part 3: "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification".

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the ETSI Drafting Rules (Verbal forms for the expression of provisions).

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Introduction

To evaluate conformance of a particular implementation, it is necessary to have a statement of which capabilities and options have been implemented for a telecommunication specification. Such a statement is called an Implementation Conformance Statement (PICS).

1 Scope

The present document specifies the protocol implementation conformance statement of the Anonymous Communication Rejection (ACR) and Communication Barring (CB) simulation service, based on stage three of the IMS simulation service Anonymous Call Rejection (ACR), Incoming Communication Barring (ICB) and Outgoing Communication Barring (OCB). Within the Next Generation Network (NGN) the stage 3 description is specified using the IP Multimedia Call Control Protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP), and in accordance with the relevant guidance given in ISO/IEC 9646-7 [4] and ETSI ETS 300 406 [2].

2 References

2.1 Normative 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 referenced document (including any amendments) applies.

Referenced documents which are not found to be publicly available in the expected location might be found at https://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.

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

[1] ETSI TS 124 611: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; Anonymous Communication Rejection (ACR) and Communication Barring (CB) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification (3GPP TS 24.611 Release 12)".

[2] ETSI ETS 300 406 (10-1995): "Methods for testing and Specification (MTS); Protocol and profile conformance testing specifications; Standardization methodology".

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

[4] ISO/IEC 9646-7: "Information technology - Open systems interconnection - Conformance testing methodology and framework - Part 7: Implementation Conformance Statements".

2.2 Informative 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 referenced document (including any amendments) applies.

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

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] ETSI TS 124 607: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; Originating Identification Presentation (OIP) and Originating Identification Restriction (OIR) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification (3GPP TS 24.607 Release 12)".

[i.2] ETSI TS 124 604: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; Communication Diversion (CDIV) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification (3GPP TS 24.604 Release 12)".

[i.3] ETSI TS 124 605: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; Conference (CONF) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification (3GPP TS 24.605 Release 12)".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in ETSI TS 124 611 [1], ISO/IEC 9646-1 [3], ISO/IEC 9646-7 [4] and the following apply:

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

NOTE: The ICS can take several forms: protocol ICS, profile ICS, profile specific ICS, information object ICS, etc.

ICS pro forma: document, in the form of a questionnaire, which when completed for an implementation or system becomes an ICS

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

NOTE: This may contain additional information.

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in ETSI TS 124 611 [1] and the following apply:

ICS	Implementation Conformance Statement
IUT	Implementation Under Test
PDU	Protocol Data Unit
PICS	Protocol ICS
SCC	Service Code Command
SCS	System Conformance Statement
SUT	System Under Test

4 Conformance to this PICS pro forma specification

4.0 Introduction

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

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

4.1 Guidance for completing the PICS pro forma

4.1.1 Purposes and structure

The purpose of this ICS pro forma is to provide a mechanism whereby a supplier of an implementation of the requirements defined in ETSI TS 124 611 [1] may provide information about the implementation in a standardized manner.

The ICS pro forma is subdivided into clauses for the following categories of information:

- guidance for completing the ICS pro forma;
- identification of the implementation;
- identification of the <reference specification type>;
- global statement of conformance;
- roles;
- user role:
  - major capabilities;
- network role:
  - major capabilities.

4.1.2 Abbreviations and conventions

The ICS pro forma contained in this annex is comprised of information in tabular form in accordance with the guidelines presented in ISO/IEC 9646-7 [4].

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 the requirement or option supported by the implementation?".

Status column

The following notations, defined in ISO/IEC 9646-7 [4], 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 an 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 an unique conditional status expression which is defined immediately following the table.

Reference column

The reference column makes reference to ETSI TS 124 611 [1], 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 [4], 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 ICS pro forma 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 1: ?3: IF prof1 THEN Y ELSE N

NOTE: As stated in ISO/IEC 9646-7 [4], 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.

References to items

For each possible item answer (answer in the support column) within the ICS pro forma a unique reference exists, used, for example, in the conditional expressions. It is defined as the table identifier, followed by a solidus character "/", followed by the item number in the table. If there is more than one support column in a table, the columns are discriminated by letters (a, b, etc.), respectively.

EXAMPLE 2: A.5/4 is the reference to the answer of item 4 in table 5 of annex A.

EXAMPLE 3: A.6/3b is the reference to the second answer (i.e. in the second support column) of item 3 in table 6 of annex A.

Prerequisite line

A prerequisite line takes the form: Prerequisite: Prerequisite: 4.5.1/1 -- user role.

A prerequisite line after a clause or table title indicates that the whole clause or the whole table is not required to be completed if the predicate is FALSE.

4.1.3 Instructions for completing the PICS pro forma

The supplier of the implementation shall complete the PICS pro forma in each of the spaces provided. In particular, an explicit answer shall be entered, in each of the support column boxes provided, using the notation described in clause 4.1.2.

However, the tables containing in "user role" clause shall only be completed for user implementations, and the tables containing in "network role" clause shall only be completed for network implementations.

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 pro forma.

4.2 Identification of the implementation

4.2.0 Introduction

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 PICS should be named as the contact person.

4.2.1 Date of the statement

.....

4.2.2 Implementation Under Test (IUT) identification

IUT name:

.....

.....

IUT version:

.....

4.2.3 System Under Test (SUT) identification

SUT name:

.....

.....

Hardware configuration:

.....

.....

.....

Operating system:

.....

4.2.4 Product supplier

Name:

.....

Address:

.....

.....

.....

Telephone number:

.....

Facsimile number:

.....

E-mail address:

.....

Additional information:

.....

.....

.....

4.2.5 Client (if different from product supplier)

Name:

.....

Address:

.....

.....

.....

Telephone number:

.....

Facsimile number:

.....

E-mail address:

.....

Additional information:

.....

.....

4.2.6 PICS contact person

(A person to contact if there are any queries concerning the content of the PICS)

Name:

.....

Telephone number:

.....

Facsimile number:

.....

E-mail address:

.....

Additional information:

.....

.....

.....

4.3 Identification of the Protocol specification

This PICS pro forma applies to the following standard:

ETSI TS 124 611 (2015-01) [1**]:** "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; Anonymous Communication Rejection (ACR) and Communication Barring (CB) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification (3GPP TS 24.611 version 12.4.0 Release 12)".

4.4 Global statement of conformance

Are all mandatory capabilities implemented? (Yes/No) .....

NOTE: Answering "No" to this question indicates non-conformance to the Protocol specification. Non-supported mandatory capabilities are to be identified in the PICS, with an explanation of why the implementation is non-conforming, on pages attached to the PICS pro forma.

4.5 Roles

Table 4.5.1: Roles

Item	Role	Reference	Status	Support
1	User	4.5.2.1	o.1	
2	Network	4.5.2.4, 4.5.2.6, 4.6.4, 4.6.6, 4.6.7	o.1	

o.1: It is mandatory to support exactly one of these items.

4.6 User role

4.6.0 Introduction

This clause contains the PICS pro forma tables related to the user role. They need to be completed only for user implementations:

Prerequisite: 4.5.1/1 -- user role

4.6.1 Major capabilities

Table 4.6.1: User Equipment capabilities

Item	Requirement or option	Reference	Status	Support
1	The User Equipment is able to send a 603 (Decline) response including a Reason header field containing 603 Decline when the communication status is in early dialog to indicate the barring?	4.5.2.13	o	
2	The User Equipment is able to send a BYE request including a Reason header field containing 603 Decline when the communication status is in confirmed status to indicate the barring?	4.5.2.13	o	
3	The User Equipment is able to send an initial INVITE request including an SCC command after the session is released to indicate the barring?	4.5.2.13	o	
4	The User Equipment is able to send an INVITE request including an SCC command to use using SIP based user configuration?	4.5.0	o	

4.7 Network role

4.7.0 Introduction

This clause contains the PICS pro forma tables related to the network role. They need to be completed only for network implementations:

Prerequisite: 4.5.1/2 network role

4.7.1 Major capabilities

Table 4.7.1: Network related requirements and options

Item	Requirement or option	Reference	Status	Support
1	Is the Communication Barring service provided?	4.3.1/[1]	o	
2	Is the Incoming Communications Barring (ICB) service supported?	4.3.1/[1]	c1	
3	Is the Outgoing Communications Barring (OCB) service supported?	4.3.1/[1]	c1	
4	Can an announcement be provided to the originating user before terminating the communication?	4.5.2.6/[1]	c2	

Item	Requirement or option	Reference	Status	Support
5	Is the communication forwarded to a voice message service instead of rejecting the communication?	4.5.2.6.2/[1]	c2	
6	The Network provides the service configuration via Ut interface	4.5.0/[1]	o	
7	The Network provides the service configuration via SIP based user configuration	4.5.0/[1]	o	
8	Does the network support the **outgoing communication barring** configuration for evaluating '**identity**' using the Ut interface?	4.5.0/[1]	o	
9	Does the network support the **outgoing communication barring** configuration for evaluating '**identity**' using the SIP based user configuration mechanism?	4.5.0/[1]	o	
10	Does the network support the **outgoing communication barring** configuration for evaluating '**external-list**' using the Ut interface?	4.5.0/[1]	o	
11	Does the network support the **outgoing communication barring** configuration for evaluating '**external-list**' using the SIP based user configuration mechanism?	4.5.0/[1]	o	
12	Does the network support the **incoming communication barring** configuration for evaluating '**identity**' using the Ut interface?	4.5.0/[1]	o	
13	Does the network support the **incoming communication barring** configuration for evaluating '**identity**' using the SIP based user configuration mechanism?	4.5.0/[1]	o	
14	Does the network support the **incoming communication barring** configuration for evaluating '**external-list**' using the Ut interface?	4.5.0/[1]	o	
15	Does the network support the **incoming communication barring** configuration for evaluating '**external-list**' using the SIP based user configuration mechanism?	4.5.0/[1]	o	
16	Does the network support the incoming communication barring configuration for evaluating '**anonymous**' using the Ut interface?	4.5.0/[1]	o	
17	Does the network support the incoming communication barring configuration for evaluating '**anonymous**' using the SIP based user configuration mechanism?	4.5.0/[1]	o	
18	Does the network support the incoming communication barring configuration for evaluating '**communication-diverted**' using the Ut interface?	4.5.0/[1]	o	
19	Does the network support the incoming communication barring configuration for evaluating '**communication-diverted**' using the SIP based user configuration mechanism?	4.5.0/[1]	o	

Item	Requirement or option	Reference	Status	Support
20	Does the network support the outgoing communication barring configuration for evaluating '**international-exHC**' using the Ut interface?	4.5.0/[1]	o	
21	Does the network support the outgoing communication barring configuration for evaluating '**international-exHC**' using the SIP based user configuration mechanism?	4.5.0/[1]	o	
22	Does the network support the outgoing communication barring configuration for evaluating '**international**' using the Ut interface?	4.5.0/[1]	o	
23	Does the network support the outgoing communication barring configuration for evaluating '**international**' using the SIP based user configuration mechanism?	4.5.0/[1]	o	
24	Does the network support the dynamic incoming communication barring service to extend the ICB functionality using the Ut interface?	4.5.0/[1]	o	
25	Does the network support the dynamic incoming communication barring service to extend the ICB functionality using the SIP based user configuration mechanism?	4.5.0 4.5.2.6.1/[1]	o	

c1: IF 4.7.1/1 THEN o1 ELSE n/a
c2: IF 4.7.1/1 THEN o ELSE n/a

4.7.2 Supplementary service capabilities

Table 4.7.2: Supplementary service capabilities

Item	Item description	Reference	Status	Support
1	The network supports the Originating Identification Presentation (OIP) and Originating Identification Restriction (OIR) using IP Multimedia (IM) Core Network (CN) subsystem simulation service?	[i.1]	o	
2	The network supports the Communication Diversion (CDIV) using IP Multimedia (IM) Core Network (CN) subsystem simulation service?	[i.2]	o	
3	The network supports the Conference(CONF) using IP Multimedia (IM) Core Network (CN) subsystem?	[i.3]	o	

History

Document history		
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