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# Q.3942.1

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SERIES Q: SWITCHING AND SIGNALLING

Signalling requirements and protocols for the NGN –  
Testing for next generation networks

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## **Conformance test specification for the terminating identification restriction using IP multimedia core network subsystem – Part 1: Protocol implementation conformance statement**

Recommendation ITU-T Q.3942.1

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# **Recommendation ITU-T Q.3942.1**

## **Conformance test specification for the terminating identification restriction using IP multimedia core network subsystem – Part 1: Protocol implementation conformance statement**

### **Summary**

Recommendation ITU-T Q.3942.1 specifies the conformance test specification (applicable for network side and user side) for the protocol implementation conformance statement (PICS) for the terminating identification restriction (TIR) using IP multimedia (IM) core network (CN) subsystem.

### **History**

Edition	Recommendation	Approval	Study Group
1.0	ITU-T Q.3942.1	2013-04-29	11

### **Keywords**

PICS, TEST, TIP, TIR.

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# Recommendation ITU-T Q.3942.1

## Conformance test specification for the terminating identification restriction using IP multimedia core network subsystem – Part 1: Protocol implementation conformance statement

### 1 Scope

This Recommendation provides the protocol implementation conformance statement (PICS) proforma for the digital cellular telecommunications system (Phase 2+), the universal mobile telecommunications system (UMTS), LTE, terminating identification presentation (TIP) and terminating identification restriction (TIR) using IP multimedia (IM) core network (CN) subsystem and Protocol specification as defined in [ETSI TS 124 608] in compliance with the relevant requirements and in accordance with the relevant guidance given in [ITU-T X.296].

### 2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

- [ITU-T X.290] Recommendation ITU-T X.290 (1995), *OSI conformance testing methodology and framework for protocol Recommendations for ITU-T applications – General concepts* (twinned with ISO/IEC 9646-1).
- [ITU-T X.296] Recommendation ITU-T X.296 (1995), *OSI conformance testing methodology and framework for protocol Recommendations for ITU-T applications – Implementation conformance statements* (twinned with ISO/IEC 9646-7).
- [ETSI TS 124 604] ETSI TS 124 604 (2012-07), *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 10)*.
- [ETSI TS 124 608] ETSI TS 124 608 (2011-05), *Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; Terminating Identification Presentation (TIP) and Terminating Identification Restriction (TIR) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification (3GPP TS 24.608 Release 10)*.

### 3 Definitions

#### 3.1 Terms defined elsewhere

This Recommendation uses the following terms defined elsewhere:

- 3.1.1 abstract test suite (ATS):** [ITU-T X.290].
- 3.1.2 implementation under test (IUT):** [ITU-T X.290].
- 3.1.3 PICS proforma:** [ITU-T X.290].

- 3.1.4 point of control and observation (PCO):** [ITU-T X.290].
- 3.1.5 protocol implementation conformance statement (PICS):** [ITU-T X.296].
- 3.1.6 system under test (SUT):** [ITU-T X.290].
- 3.1.7 test purpose (TP):** [ITU-T X.290].

## **4 Abbreviations and acronyms**

This Recommendation uses the following abbreviations and acronyms:

AS	Application Server
ATS	Abstract Test Suite
CSCF	Call Session Control Function
IUT	Implementation Under Test
NNI	Network-Network Interface
PICS	Protocol Implementation Conformance Statement
S-CSCF	Serving CSCF
SUT	System Under Test
TIP	Terminating Identification Presentation
TIR	Terminating Identification Restriction
TP	Test Purpose
TSS	Test Suite Structure

## **5 Conventions**

- <reference specification type> is "protocol";
- <reference specification id> is "ETSI TS 124 608";
- <reference specification title> is "*Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; Terminating Identification Presentation (TIP) and Terminating Identification Restriction (TIR) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification (3GPP TS 24.608 Release 10)*";
- <reference specification description> is "*Terminating Identification Presentation (TIP) and Terminating Identification Restriction (TIR) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification*".

## **6 Guidance for completing the PICS proforma**

### **6.1 Purposes and structure**

The purpose of this PICS proforma is to provide a mechanism whereby a supplier of an implementation of the requirements defined in [ETSI TS 124 608] 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 [ETSI TS 124 608];



- global statement of conformance;
- roles;
- user role;
- major capabilities;
- network role;
- major capabilities;
- CDIV capabilities.

### **6.1.1 Abbreviations and conventions**

The PICS proforma contained in this clause is comprised of information in tabular form in accordance with the guidelines presented in [ITU-T X.296].

#### **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 [ITU-T X.296], are used for the status column:

- o optional – the capability may be supported or not.
- 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.
- n/a not applicable – in the given context, it is impossible to use the capability.

#### **Reference column**

The reference column makes reference to [ETSI TS 124 608], 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 [ITU-T X.296], 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.

### 6.1.2 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 supported column boxes provided, using the notation described in clause 6.1.1.

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.

## 6.2 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 PICS should be named as the contact person.

### 6.2.1 Date of the statement

<b>Date of the statement:</b>	
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### 6.2.2 Implementation under test (IUT) identification

<b>IUT name:</b>	
<b>IUT version:</b>	

### 6.2.3 System under test (SUT) identification

<b>SUT name:</b>	
<b>Hardware configuration:</b>	
<b>Operating system:</b>	

### 6.2.4 Product supplier

<b>Name:</b>	
<b>Address:</b>	
<b>Telephone number:</b>	
<b>Facsimile number:</b>	
<b>E-mail address</b>	
<b>Additional information:</b>	

### 6.2.5 Client (if different from product supplier)

<b>Name:</b>	
<b>Address:</b>	
<b>Telephone number:</b>	
<b>Facsimile number:</b>	
<b>E-mail address</b>	
<b>Additional information:</b>	

### 6.2.6 PICS contact person

A person to be contacted if there are any queries concerning the content of the PICS.

<b>Name:</b>	
<b>Address:</b>	
<b>Telephone number:</b>	
<b>Facsimile number:</b>	
<b>E-mail address</b>	
<b>Additional information:</b>	

### 6.3 Identification of ETSI TS 124 608

This PICS proforma applies to the following standard:

ETSI TS 124 608 (2011-05): *Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; Terminating Identification Presentation (TIP) and Terminating Identification Restriction (TIR) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification (3GPP TS 24.608 Release 10).*

### 6.4 Global statement of conformance

	<b>(Yes/No)</b>
<b>Are all mandatory capabilities implemented?</b>	

NOTE – Answering "No" to this question indicates non-conformance to the 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 proforma.

## 6.5 Roles

**Table 6.5-1 – Roles**

Item	Role	Reference	Status	Support
1	Is the implementation an originating user equipment?	4.5.2.1	o	
2	Is the implementation a terminating user equipment?	4.5.2.12	o	
3	Is the implementation an application server (AS) serving the terminating identification presentation (TIP) and terminating identification restriction (TIR)	4.5.2.9	o	
Comments:				

## 6.6 User role

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

Prerequisite: 6.5.1/1 – user role

### 6.6.1 Major capabilities

**Table 6.6-1 – User Equipment capabilities**

Item	Call direction	Reference	Status	Support
1	Does the user equipment support the "from-change" tag in the supported header?	4.5.2.12	c21	
2	[2/6] Does the terminating user equipment send an UPDATE request if a "from-change" tag was received in the initial INVITE?	4.5.2.12	c22	
c21: IF 6.5.1/1 THEN o ELSE n/a. c22: IF 6.5.1/2 THEN o ELSE n/a.				
Comments:				

## 6.7 Network role

This clause contains the PICS proforma tables related to the network role. They need to be completed only for application server implementations:

Prerequisite: 6.5.1/2 – user role

### 6.7.1 Major capabilities

**Table 6.7-1 – Network capabilities**

Item	Call direction	Reference	Status	Support
1	Is the network able to divert a call?	[ETSI TS 124 604]	o	
2	Does the network support the "special arrangement" for the terminating user?	4.5.2.9	o	
3	Does the network support the terminating identification presentation (TIP) service?	4.3.1.1	o	

**Table 6.7-1 – Network capabilities**

Item	Call direction	Reference	Status	Support
4	Does the network support the terminating identification restriction (TIR) service?	4.3.1.2	o	
5	Does the network support the "TIR service in temporary mode"?	4.3.1.2	o	
6	Does the network support the "TIR service in permanent mode"?	4.3.1.2	o	
7	Does the network support the "override category for the TIR service"?	4.6.3	o	
8	Does the network support the "special arrangement" for the terminating user?	4.5.2.9	o	
Comments:				

Prerequisite: 6.7.1/4 – Major capabilities

## 6.7.2 CDIV capabilities

**Table 6.7-2 – CDIV network capabilities**

Item	Call direction	Reference	Status	Support
1	Is the subscription option " <i>Originating</i> user receives notification that his communication has been diverted (forwarded or deflected)" supported?	4.3.1 [ETSI TS 124 604]	c31	
2	Is the subscription option "Served user allows the presentation of diverted to URI to <i>originating</i> user in diversion notification" supported?	4.3.1 [ETSI TS 124 604]	c32	
c31: IF 6.7.1/4 THEN o ELSE n/a.				
c32: IF 6.7.1/4 AND 6.7.2/1 THEN o ELSE n/a.				
Comments:				





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