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Technical Specification

Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); Terminating Identification Presentation (TIP) and Terminating Identification Restriction (TIR); Part 2: Test Suite Structure and Test Purposes (TSS&TP)

ETSI

Reference

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Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN).

The present document is part 2 of a multi-part deliverable covering Terminating Identification Presentation (TIP) and Terminating Identification Restriction (TIR) 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".

The present document updates the references to the basic call specifications.

NOTE: Some new parts will be developed in the future.

1   Scope

The present document specifies the Test Suite Structure and Test Purposes (TSS&TP) of the Terminating Identification Presentation (TIP) and Terminating Identification Restriction (TIR) services. Within the TISPAN NGN Release 2 Next Generation Network (NGN) the TS 183 008 [3] Terminating Identification Presentation (TIP) and Terminating Identification Restriction (TIR) PSTN/ISDN simulation services is specified.

A further part of the present document specifies the Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma based on the present document.

2   References

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.

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2.1   Normative references

The following referenced documents are indispensable for the application of the present document. For dated references, only the edition cited applies. For non-specific references, the latest edition of the referenced document (including any amendments) applies.

[1]   IETF RFC 2396: "Uniform Resource Identifiers (URI): Generic Syntax".

[2]   IETF RFC 3261: "SIP: Session Initiation Protocol".

[3]   ETSI TS 183 008 (V2.8.0): "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN) PSTN/ISDN simulation services Terminating Identification Presentation (TIP) and Terminating Identification Restriction (TIR) Protocol specification".

[4]   ITU-T Recommendation E.164: "The international public telecommunication numbering plan".

[5]   IETF RFC 2806: "URLs for Telephone Calls".

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

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

[8]   ETSI TS 186 005-1: "Telecommunications and Internet Converged Services and Protocols for Advanced Networking (TISPAN); Terminating Identification Presentation (TIP) and Terminating Identification Restriction (TIR); Part 1: Protocol Implementation Conformance Statement (PICS)".

[9]   ISO/IEC 9646-2: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 2: Abstract Test Suite specification".

[10]   ITU-T Recommendation Q.9: "Vocabulary of switching and signalling terms".

2.2   Informative references

The following referenced documents are not essential to the use of the present document but they assist the user with regard to a particular subject area**.** For non-specific references, the latest version of the referenced document (including any amendments) applies.

[i.1]   ETSI TS 186 009-2: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); SIP-ISUP Interworking between the IP Multimedia (IM) Core Network (CN) subsystem and Circuit Switched (CS) networks; Part 2: Test Suite Structure and Test Purposes (TSS&TP)".

3   Definitions and abbreviations

3.1   Definitions

For the purposes of the present document, the following terms and definitions apply:

abstract test case: Refer to ISO/IEC 9646-1 [6].

Abstract Test Suite (ATS): Refer to ISO/IEC 9646-1 [6].

address identity: See Recommendation E.164 or/and RFC 2806 [5].

call: See ITU-T Recommendation Q.9 [10], definition 2201.

dialog: Refer to RFC 3261 [2].

final response: Refer to RFC 3261 [2].

header: Refer to RFC 3261 [2].

header field: Refer to RFC 3261 [2].

identity information: includes all the information (RFC 2806 [5]/RFC 2396 [1]/E.164 [4]) identifying a user, including trusted (network generated) and/or untrusted (user generated) addresses

Implementation Under Test (IUT): Refer to ISO/IEC 9646-1 [6].

implicit send event: Refer to ISO/IEC 9646-3 [7].

lower tester: Refer to ISO/IEC 9646-1 [6].

method: Refer to RFC 3261 [2].

option-tag: Refer to RFC 3261 [2].

PICS proforma: Refer to ISO/IEC 9646-1 [6].

PIXIT proforma: Refer to ISO/IEC 9646-1 [6].

point of control and observation: Refer to ISO/IEC 9646-1 [6].

Protocol Implementation Conformance Statement (PICS): Refer to ISO/IEC 9646-1 [6].

Protocol Implementation eXtra Information for Testing (PIXIT): Refer to ISO/IEC 9646-1 [6].

provisional response: Refer to RFC 3261 [2].

proxy, proxy server: Refer to RFC 3261 [2].

request: Refer to RFC 3261 [2].

response: Refer to RFC 3261 [2].

session: Refer to RFC 3261 [2].

(SIP) transaction: Refer to RFC 3261 [2].

system under test: Refer to ISO/IEC 9646-1 [6].

tag: Refer to RFC 3261 [2].

Test Purpose (TP): Refer to ISO/IEC 9646-1 [6].

trusted identity: network generated user address information

untrusted identity: user generated user address information

voice session: existing voice connection between two terminal equipments

NOTE: example via RTP.

3.2 Abbreviations

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

AS	Application Server
ATM	Abstract Test Method
ATS	Abstract Test Suite
CDIV	Communication DIVersion
CN	Core Network
CSCF	Call Session Control Function
IBCF	Interconnection Border Control Function
IM	IP Multimedia
IP	Internet Protocol
ISDN	Integrated Service Data Network
NGN	Next Generation Network
P-CSCF	Proxy - CSCF
PSTN	Public Switched Telephone Network
RTP	Real time Transport Protocol
SDP	Session Description Protocol
SIP	Session Initiation Protocol
TIP	Terminating Identification Presentation
TIR	Terminating Identification Restriction
TP	Test Purposes
TSS	Test Suite Structure
UA	User Agent
UE	User Equipment
URI	Universal Resource Identifier

4 Test Suite Structure (TSS)

User		
	TermUserE	**TIP_U01_xxx**
	OrigUserE	**TIP_U02_xxx**
Network entity		
	DestAS	**TIP_N01_xxx**
	OrigAS	**TIP_N02_xxx**
	CDIV	**TIP_N03_xxx**
	OtherNetw	**TIP_N04_xxx**

Figure 1: Test suite structure

4.1 Configuration

The scope of the current specification is to test the signalling and procedural aspects of the stage 3 requirements as described in TS 183 008 [3]. The stage 3 description describes the requirements for several network entities and also the requirements regarding for terminal devices. Therefore several interfaces (reference points) are addressed to satisfy the test of the different entities.

Therefore to test the appropriate entities the configurations below are applicable:

4.1.1 Testing of the AS

The AS entity is responsible for performing and managing services. The ISC interface is the appropriate access point for testing.

Figure 2: Applicable interface to test AS functionalities

If the ISC interface is not accessible it is also possible to perform the test of the AS using any NNI (Mw, Mg, Mx) interface (see figure 3). In case only the Gm interface is accessible this interface can be used instead for testing, but the verification of all requirements may not be possible.
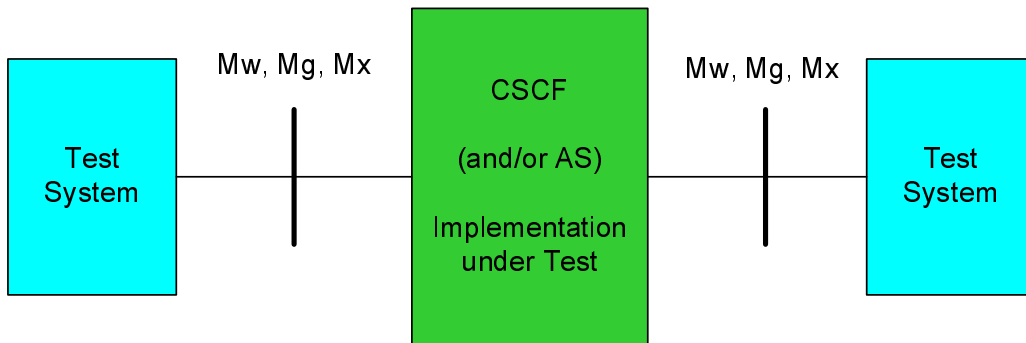
Figure 3: Applicable interfaces for tests using a (generic) NNI interface

4.1.2   Testing of the UE

There are special clauses in the protocol standard describing the procedures that apply at the originating and terminating user equipment. Therefore the test configuration in figure 4 has been chosen.
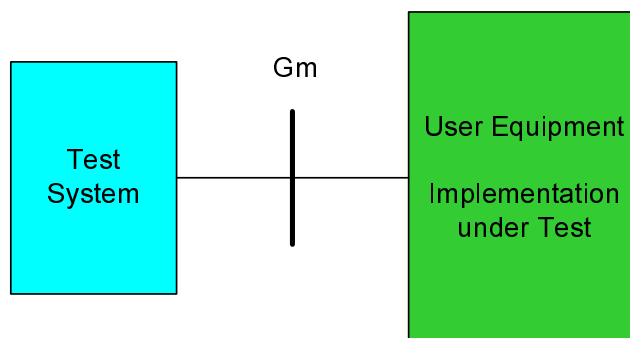
Figure 4: Applicable configuration to test UE functionalities

4.1.3   Testing of the IBCF

The IBCF is the separation point between trusted and entrusted IMS networks and can be tested with the test configuration in figure 5.
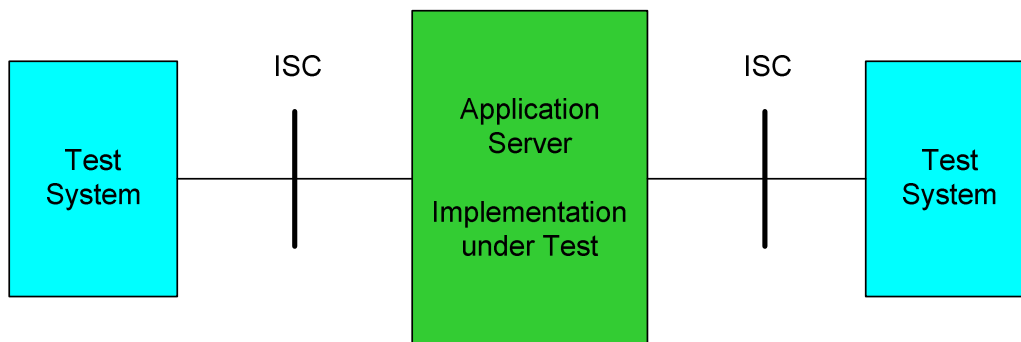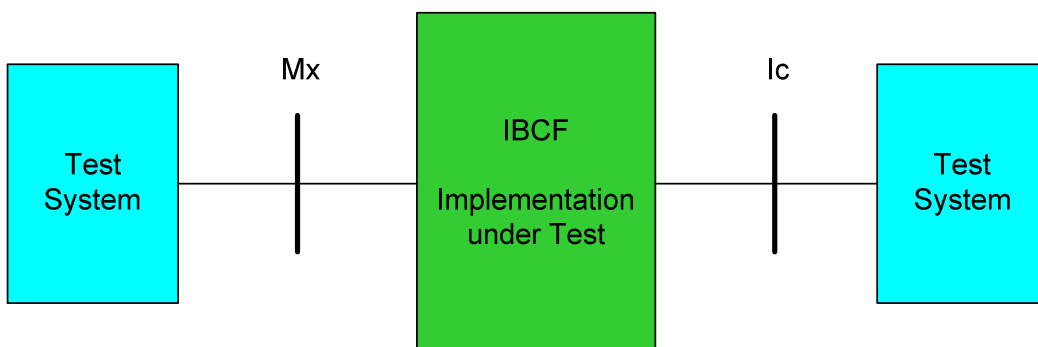
Figure 5: Applicable configuration to test IBCF functionalities

If the ISC interface is not accessible it is also possible to perform the test of the AS using any NNI (Mw, Mg, Mx) interface (see figure 3). In case only the Gm interface is accessible this interface can be used instead for testing, but the verification of all requirements may not be possible.

5   Test Purposes (TP)

5.1   Introduction

For each test requirement a TP is defined.

All PICS items referred to in this clause are as specified in TS 186 005-1 [8] unless indicated otherwise by another numbered reference.

5.1.1   TP naming convention

TPs are numbered, starting at 001, within each group. Groups are organized according to the TSS. Additional references are added to identify the actual test suite and whether it applies to the network or the user (see table 1).

Table 1: TP identifier naming convention scheme

Identifier: **<ss>_<iut><group>_<nnn>**	
<ss> **= supplementary service:**	**e.g. "TIP"**
<iut> **= type of IUT:**	**U** **User** **N** **Network entity, e.g. P-CSCF**
<group> = group	**2 digit field representing group reference according to TSS**
<nnn> = sequential number	**(001-999)**

5.2   User TPs for TIP

5.2.1   Terminating user equipment

Selection expression for group U01: PICS 1/2.

TSS User/TermUserE	TP TIP_U01_001	TIP/TIR reference 4.5.2.12	Selection expression PICS 2/6, 1/2
Test purpose: *The Terminating UE supports the "from-change" tag in the Supported header.* Ensure that the Terminating UE supports the "from-change" tag in the Supported header. If the UE receives a "from-change" tag in a Supported header in an initial INVITE, the UE sends the "from-change" tag in the Supported header in any provisional or final response message (e.g. 180, 183, 200).			
SIP messages: INVITE: Supported: from-change 18x/200: Supported: from-change			
Comments: **Test equipment** **User equipment** INVITE with "from-change" tag → Provisional or final response ← with "from-change" tag			

TSS User/TermUserE	TP TIP_U01_002	TIP/TIR reference 4.5.2.12	Selection expression PICS 2/6, 1/2, 2/7
Test purpose: *The Terminating UE sends an UPDATE request with an updated From and To header.* Ensure that the Terminating UE supports the "from-change" tag in the Supported header. If the UE receives a "from-change" tag in a Supported header in an initial INVITE, the user equipment sends an UPDATE request after the ACK for the 200 OK INVITE was received containing a connected identity in the From header.			
SIP messages: INVITE: Supported: from-change 18x/200: Supported: from-change UPDATE: From <identity user equipment>			
Comments: **Test equipment** **User equipment**			

INVITE with "from-change" tag   →
180 Ringing   ←
200 OK INVITE   ←
ACK   →
UPDATE   ←
with updated From and To header
200 OK UPDATE   →

TSS User/TermUserE	TP TIP_U01_003	TIP/TIR reference 4.5.2.12	Selection expression PICS 2/3, 1/2
Test purpose: *The Terminating UE overrides a default "Presentation not restricted" by sending Privacy "id".* Ensure that the Terminating UE having subscribed to TIR temporary mode, default value "presentation not restricted", to override the default TIR setting, sends a Privacy header with value "id" in any non 100 response message (e.g. 180, 183, 200).			
SIP messages: 18x/200: Privacy: "id"			
Comments: **Test equipment** **User equipment**			

INVITE   →
Non 100 response   ←
wit Privacy "id"

TSS User/TermUserE	TP TIP_U01_004	TIP/TIR reference 4.5.2.12	Selection expression PICS 2/4, 1/2
Test purpose: *The Terminating UE overrides a default "Presentation restricted" by sending Privacy "none".* Ensure that the Terminating UE having subscribed to TIR temporary mode, default value "presentation restricted", to override the default TIR setting, sends a Privacy header with value "none" in any non 100 response message (e.g. 180, 183, 200).			
SIP messages: 18x/200: Privacy: "none"			
Comments: **Test equipment** **User equipment**			

INVITE   →
Non 100 response   ←
wit Privacy "none"

5.2.2 Originating user equipment

Selection expression for group U01: PICS 1/1 and 2/1.

TSS User/OrigUserE	TP TIP_U02_001	TIP/TIR reference 4.5.2.1	Selection expression PICS 1/1
Test purpose: *The originating UE receives one P-Asserted-Identity in a sip URI.* Ensure that the Originating UE, receiving any non 100 response message defined as SIP_MESSAGE_VA containing a P-Asserted-Identity heeder with a valid **sip URI** accepts the call following the basic request handling procedures.			

Comments:
User equipment   **Test equipment**
 	
                      →   INVITE
                      ←   SIP_MESSAGE_VA
                                With one P-Asserted-Identity			

TSS User/OrigUserE	TP TIP_U02_002	TIP/TIR reference 4.5.2.1	Selection expression PICS 1/1
Test purpose: *The originating UE receives one P-Asserted-Identity in a tel URI.* Ensure that the Originating UE, receiving any non 100 response message defined as SIP_MESSAGE_VA containing a P-Asserted-Identity heeder with a valid **tel URI**, accepts the call following the basic request handling procedures.			

Comments:
User equipment   **Test equipment**
 	
                      →   INVITE
                      ←   SIP_MESSAGE_VA
                                With one P-Asserted-Identity			

TSS User/OrigUserE	TP TIP_U02_003	TIP/TIR reference 4.5.2.1	Selection expression PICS 1/1
Test purpose: *The originating UE receives two P-Asserted-Identity headers in a sip URI and a tel URI.* Ensure that the Originating UE, receiving any non 100 response message defined as SIP_MESSAGE_VA containing one P-Asserted-Identity header with a valid sip URI and one P-Asserted-Identity header with a valid tel URI, accepts the call following the basic request handling procedures.			

Comments:
User equipment   **UA S**
 	
                      →   INVITE
                      ←   SIP_MESSAGE_VA
                                with two P-Asserted-Identity			

TSS User/OrigUserE	TP TIP_U02_004	TIP/TIR reference 4.5.2.1	Selection expression PICS 1/1
Test purpose: *The originating UE receives a Privacy header field value 'id' indicating the TIR service.* Ensure that the Originating UE, receiving any non 100 response message defined as SIP_MESSAGE_VA with a Privacy header with privacy type of "id" and without P-Asserted-Identity headers, accepts the call following the basic request handling procedures.			

Comments:
User equipment   **Test equipment**
 	
                      →   INVITE
                      ←   SIP_MESSAGE_VA
                                with Privacy 'id'
                                without P-Asserted-Identity			

Values for tests purposes TIP_U02_001 to TIP_U02_004	
VA_01	180 Ringing
VA_02	183 Session progress
VA_03	200 OK

TSS User/OrigUserE	TP TIP_U02_005	TIP/TIR reference 4.5.2.1	Selection expression PICS 1/1,2/6
Test purpose: *The originating user is able to send the "from-change" tag in the Supported header in the initial INVITE.* Ensure that the Originating UE sends a "from-change" tag in the Supported header in the initial INVITE.			
SIP message: INVITE Supported "from-change"			
Comments: **User equipment** **Test equipment** ➔ INVITE with "from-change" tag			

TSS Syntax/OrigUserE	TP TIP_U02_006	TIP/TIR reference 4.5.2.1	Selection expression PICS 1/1,2/1 AND PICS 2/6
Test purpose: *The originating user is able to receive a connected identity in the From header of an UPDATE request.* Ensure that the Originating UE is able to receive a second identity in the From header of an UPDATE request if the UE indicates the support of this procedure by sending the "from-change" tag in the Supported header in the initial INVITE and this identity is displayed to the user.			
SIP message: INVITE Supported "from-change" UPDATE From <second identity>			

Comments:
User equipment   **SUT**   **Test equipment**
 	
                                        ➔   INVITE with "from-change" tag
                                        ⬅   180 Ringing
                                        ⬅   200 OK INVITE
                                        ➔   ACK
 	
                                        ⬅   UPDATE with new URI in From header
                                        ➔ 200 OK UPDATE			

5.3   Network entity TPs for TIP

5.3.1   Requirements on the AS serving the terminating UE

TSS Network entity/DestAS	TP TIP_N01_001	TIP/TIR reference 4.5.2.9	Selection expression
Test purpose: *The AS inserts the Privacy id value in the response if the response does not contain any Privacy. The terminating user subscribes to TIR in permanent mode.* Ensure that the IUT acting as AS serving the terminating user that subscribes to TIR in "permanent mode", receiving a 1xx or 2xx response message defined as SIP_MESSAGE_VA without a Privacy header, the AS shall insert a Privacy header with privacy value "id" before forwarding the response.			
Comments: **Test equipment** **AS** **Test equipment** INVITE ➔ ➔ INVITE SIP_MESSAGE_VA ⬅ ⬅ SIP_MESSAGE_VA with Privacy header "id" without Privacy header			

TSS Network entity/DestAS	TP TIP_N01_002	TIP/TIR reference 4.5.2.9	Selection expression
Test purpose: *The AS inserts the Privacy id value in the response if the response contains Privacy "none". The terminating user subscribes to TIR in permanent mode.* Ensure that the IUT acting as AS serving the terminating user that subscribes to TIR in "permanent mode", receiving a 1xx or 2xx response message defined as SIP_MESSAGE_VA with a Privacy header "none", the AS shall remove the "none" and insert a Privacy header with privacy value "id" before forwarding the response.			

Comments:

Test equipment		AS		Test equipment
INVITE	➔		➔	INVITE
SIP_MESSAGE_VA	⬅		⬅	SIP_MESSAGE_VA
without Privacy header "id"				with Privacy header "none"

TSS Network entity/DestAS	TP TIP_N01_003	TIP/TIR reference 4.5.2.9	Selection expression
Test purpose: *The AS inserts the Privacy id value in the response if the response does not contain any Privacy. The user subscribes TIR temporary mode with default "presentation restricted".* Ensure that the IUT acting as AS serving the terminating user that subscribes to TIR in "temporary mode" with default value "presentation restricted", receiving a 1xx or 2xx response message defined as SIP_MESSAGE_VA without a Privacy header, the AS shall insert a Privacy header with privacy value "id" before forwarding the response.			

Comments:

Test equipment		AS		Test equipment
INVITE	➔		➔	INVITE
SIP_MESSAGE_VA	⬅		⬅	SIP_MESSAGE_VA

Values for tests purposes TIP_N01_001 to TIP_N01_003	
VA_01	180 Ringing
VA_02	183 Session progress
VA_03	200 OK

TSS Network entity/DestNetw	TP TIP_N01_004	TIP/TIR reference 4.5.2.9	Selection expression
Test purpose: *The AS remove the "from-change" tag from the Supported header. The user subscribes TIR in permanent mode.* Ensure that the IUT acting as AS serving the terminating user that subscribes to the TIR service in "permanent mode" removes the "from-change" tag from the Supported header in a received initial INVITE request before forwarding the request.			
SIP messages: INVITE1 Supported: "from-change" INVITE2 Supported without "from-change"			

Comments:

Test equipment		AS		Test equipment
INVITE1 with "from-change" tag	➔		➔	INVITE2 without "from-change" tag

TSS Signalling/DestNetw	TP TIP_N01_005	TIP/TIR reference 4.5.2.9	Selection expression
Test purpose: *The terminating user is not subscribed to the "no screening" special arrangement.* Ensure that, if the IUT attempt to match the information in the From header with the set of registered public user identities for the served user and if no match is found, the AS changes the value of the From header in the UPDATE to the public user identity of the served user if the terminating user is not subscribed to the "no screening" special arrangement.			
SIP messages: UPDATE1: From <connected user identity> UPDATE2: From <public user identity>			
Precondition: The AS attempts to match the information in the From header fields of UPDATE messages and changes the value, if no match is found with any of the registered public user identities of the served user.			
Comments:			

Test equipment	AS		Test equipment
INVITE	→	→	INVITE
180 Ringing	←	←	180 Ringing
200 OK INVITE	←	←	200 OK INVITE
ACK	→	→	ACK
UPDATE2	←	←	UPDATE1
200 OK UPDATE	→	→	200 OK UPDATE

5.3.2 Requirements on the AS serving the originating UE

TSS Signalling/OrigNetw	TP TIP_N02_001	TIP/TIR reference 4.3.2	Selection expression
Test purpose: *The originating user subscribes to the TIP service.* Ensure that for originating users that subscribe to TIP simulation service, if network provided identity information about the terminator is available, and if presentation is not restricted, the AS shall pass that information in any non 100 response message defined as SIP_MESSAGE_VA.			
Comments:			

Test equipment	AS		Test equipment
INVITE	→	→	INVITE
SIP_MESSAGE_VA	←	←	SIP_MESSAGE_VA
with P-Asserted_Identity			with P-Asserted_Identity

TSS Network entity/OrigNetw	TP TIP_N02_002	TIP/TIR reference 4.5.2.4	Selection expression
Test purpose: *The originating user does not subscribe to the TIP service.* Ensure that the IUT acting as AS serving the originating user that does not subscribe to the TIP service removes any P-Asserted-Identity header fields or Privacy header fields included in the SIP response defined as SIP_MESSAGE_VA before forwarding the response.			
Comments:			

Test equipment	AS		Test equipment
INVITE	→	→	INVITE
SIP_MESSAGE_VA	←	←	SIP_MESSAGE_VA
without P-Asserted_Identity and Privacy headers			with P-Asserted_Identity and Privacy headers

TSS **Signalling/TIR**	TP **TIP_N02_003**	TIP/TIR reference **4.6.3**	**Selection expression**
Test purpose: *The originating user has TIR override category* Ensure that, if the originating user has the override category, the AS will remove Privacy header fields restricting the presentation of the terminating identity and will keep the P-Asserted-Identity header in the SIP response defined as SIP_MESSAGE_VA before forwarding the response.			
Precondition: Originating user has the override category			
SIP messages: SIP_MESSAGE_VA1: P-Asserted-Identity, Privacy = id SIP_MESSAGE_VA2: P-Asserted-Identity, no Privacy header or Privacy = none			
Comments: **Test equipment** AS **Test equipment** INVITE → → INVITE SIP_MESSAGE_VA2 ← ← SIP_MESSAGE_VA1			

Values for tests purposes TIP_N02_001 to TIP_N02_003	
VA_01	180 Ringing
VA_02	183 Session progress
VA_03	200 OK

TSS **Network entity/OrigAS**	TP **TIP_N02_004**	TIP/TIR reference **4.5.2.4**	**Selection expression**
Test purpose: *The originating user subscribes to the TIP service. The "from-change" tag is passed on.* Ensure that the IUT acting as AS serving the originating user that subscribes to the TIP service passes on the "from change" tag from the Supported header in a received initial INVITE request before forwarding the request.			
SIP message: INVITE1 Supported "from-change" INVITE2 Supported "from-change"			
Comments: **Test equipment** AS **Test equipment** INVITE1 with "from-change" tag → → INVITE2 with "from-change" tag			

TSS **Network entity/OrigAS**	TP **TIP_N02_005**	TIP/TIR reference **4.5.2.4**	**Selection expression**
Test purpose: *The originating user subscribes to the TIP service. The "from-change" tag is not received.* Ensure that the IUT acting as AS serving the originating user that subscribes to the TIP service, receiving an initial INVITE request without the "from-change" tag into the Supported header, inserts the "from-change" tag into the Supported header before forwarding the request.			
SIP message: INVITE1 Supported "from-change" not included INVITE2 Supported "from-change"			
Comments: **Test equipment** AS **Test equipment** INVITE1 without "from-change" tag → → INVITE2 with "from-change" tag			

TSS **Network entity/OrigAS**	TP **TIP_N02_006**	TIP/TIR reference **4.5.2.4**	**Selection expression**
Test purpose: *The originating user does not subscribe to the TIR service. The "from-change" tag is removed from the Supported header.* Ensure that the IUT acting as AS serving the originating user that does not subscribe to the TIP service removes the "from-change" tag from the Supported header in a received initial INVITE request before forwarding the request.			
SIP message: INVITE1 Supported "from-change" INVITE2 Supported "from-change" not included			
Comments: **Test equipment** AS **Test equipment** INVITE → → INVITE			

5.3.3   Communication diversion services

TSS Network entity/CDIV		TP TIP_N03_001	TIP/TIR reference 4.6.7	Selection expression
Test purpose: Ensure that if the served (diverting) user of the communication diversion service selects the option that the originating user is notified of diversion with the diverted-to address and the diverted-to user has subscribed to the **TIR service in permanent mode** and the originating user has subscribed to the TIP service, no P-Asserted-Identity header including the URI of the diverted-to user is sent within the SIP_MESSAGE_VA response to the originating user. The History-Info Header entry identifying the diverted-to user is removed from the History -Info header.				
Precondition: Test equipment (Diverting user) activates Communication diversion unconditional with option "originating user is notified of diversion with the diverted-to address".				
Comments:				
Test equipment (Originating user)		**SUT**	**Test equipment (Diverted-to user)**	
INVITE	→		→	INVITE
181 Call is being forwarded History-Info header without URI of the diverted-to user	←			
SIP_MESSAGE_VA without P-Asserted-Identity	←		←	SIP_MESSAGE_VA

TSS Network entity/CDIV		TP TIP_N03_002	TIP/TIR reference 4.6.7	Selection expression
Test purpose: Ensure that if the served (diverting) user of the communication diversion service selects the option that **the originating user is notified of diversion with the diverted-to address** and the diverted-to user has subscribed to **the TIR service in temporary mode default "presentation restricted"** and the originating user has subscribed to the TIP service, when the diverted-to user has send no Privacy header within the SIP_MESSAGE_VA response, no P-Asserted-Identity header including the URI of the diverted-to user is sent within the SIP_MESSAGE_VA response to the originating user. The History-Info Header entry identifying the diverted-to user is removed from the History -Info header.				
Precondition: Test equipment (Diverting user) activates Communication diversion unconditional with option "originating user is notified of diversion with the diverted-to address".				
Comments:				
Test equipment (Originating user)		**SUT**	**Test equipment (Diverted-to user)**	
INVITE	→		→	INVITE
181 Call is being forwarded History-Info header without URI of the diverted-to user	←			
SIP_MESSAGE_VA without P-Asserted-Identity	←		←	SIP_MESSAGE_VA

TSS Network entity/CDIV		TP TIP_N03_003	TIP/TIR reference 4.6.7	Selection expression
Test purpose: Ensure that if the served (diverting) user of the communication diversion service selects the option that **the originating user is notified of diversion with the diverted-to address** and the diverted-to user has subscribed to the **TIR service in temporary mode default "presentation not restricted"** and the originating user has subscribed to the TIP service, when the diverted-to user has send a **Privacy header with value "id"** within the SIP_MESSAGE_VA response, no P-Asserted-Identity header including the URI of the diverted-to user is sent within the SIP_MESSAGE_VA response to the originating user. The History-Info Header entry identifying the diverted-to user is removed from the History -Info header.				
Precondition: Test equipment (Diverting user) activates Communication diversion unconditional with option "originating user is notified of diversion with the diverted-to address".				
Comments:				
Test equipment (Originating user)		**SUT**	**Test equipment (Diverted-to user)**	
INVITE	→		→	INVITE
181 Call is being forwarded History-Info header without URI of the diverted-to user	←			
SIP_MESSAGE_VA without P-Asserted-Identity	←		←	SIP_MESSAGE_VA with Privacy "id"

TSS Network entity/CDIV	TP TIP_N03_004	TIP/TIR reference 4.6.7	Selection expression
Test purpose: Ensure that if the served (diverting) user of the communication diversion service selects the option that the originating user is notified of diversion with the diverted-to address and the diverted-to user has subscribed to the **TIR service in temporary mode default "presentation restricted"** and the originating user has subscribed to the TIP service, when the diverted-to user has send a **Privacy header with value "none"** within the SIP_MESSAGE_VA response, the P-Asserted-Identity header including the URI of the diverted-to user is sent within the SIP_MESSAGE_VA response to the originating user.			
Precondition: Test equipment (Diverting user) activates Communication diversion unconditional with option "originating user is notified of diversion with the diverted-to address".			
Comments:			

Test equipment (Originating user)		SUT		Test equipment (Diverted-to user)
INVITE	→		→	INVITE
181 Call is being forwarded	←			
SIP_MESSAGE_VA	←		←	SIP_MESSAGE_VA
with P-Asserted-Identity				with Privacy "none"

Values for tests purposes TIP_N03_001 to TIP_N03_004	
VA_01	180 Ringing
VA_02	183 Session progress
VA_03	200 OK

5.3.4 Requirements on the interconnection with other IP network

TSS Network entity/OtherNetw	TP TIP_N04_001	TIP/TIR reference 4.7.3	Selection expression
Test purpose: *Interworking with a trusted network; SUT is call destination* Ensure that a SIP response defined as SIP_MESSAGE_VA including P-Asserted-Identity header fields for a request from a trusted network is received; the outgoing IBCF shall retain the P-Asserted-Identity header fields in the response.			
Comments:			

Test equipment (Ic)		IBCF		Test equipment (Mx)
INVITE	→		→	INVITE
SIP_MESSAGE_VA	←		←	SIP_MESSAGE_VA
with P-Asserted-Identity header				with P-Asserted-Identity header

TSS Network entity/OtherNetw	TP TIP_N04_002	TIP/TIR reference 4. .37	Selection expression
Test purpose: *Interworking with an un-trusted network; SUT is call destination* Ensure that a SIP response defined as SIP_MESSAGE_VA including P-Asserted-Identity header fields for a request from an un-trusted network is received; the outgoing IBCF shall remove the P-Asserted-Identity header fields from the response.			
Comments:			

Test equipment (Ic)		IBCF		Test equipment (Mx)
INVITE	→		→	INVITE
SIP_MESSAGE_VA	←		←	SIP_MESSAGE_VA
without P-Asserted-Identity header				with P-Asserted-Identity header

TSS Network entity/OtherNetw	TP TIP_N04_003	TIP/TIR reference 4.7.3	Selection expression
Test purpose: *Interworking with a trusted network; SUT is call origination* Ensure that a communication is established to a trusted network and P-Asserted-Identity header fields are included in SIP responses from the other IP network defined as SIP_MESSAGE_VA, the incoming IBCF shall retain the P-Asserted-Identity header fields.			

Comments: **Test equipment (Mx)**		**IBCF**	**Test equipment (Ic)**
INVITE SIP_MESSAGE_VA with P-Asserted-Identity header	→ ←	→ ←	INVITE SIP_MESSAGE_VA with P-Asserted-Identity header

TSS Network entity/OtherNetw	TP TIP_N04_004	TIP/TIR reference 4.7.3	Selection expression
Test purpose: *Interworking with an un-trusted network; SUT is call origination* Ensure that a communication is established to an un-trusted network and P-Asserted-Identity header fields are included in SIP responses from the other IP network defined as SIP_MESSAGE_VA, the incoming IBCF shall remove the P-Asserted-Identity header fields from the SIP response.			

Comments: **Test equipment (Mx)**		**IBCF**	**Test equipment (Ic)**
INVITE SIP_MESSAGE_VA without P-Asserted-Identity header	→ ←	→ ←	INVITE SIP_MESSAGE_VA with P-Asserted-Identity header

Values for tests purposes TIP_N04_001 to TIP_N04_004	
VA_01	180 Ringing
VA_02	183 Session progress
VA_03	200 OK

6   Compliance

An ATS which complies with the present document shall:

  a)   consist of a set of test cases corresponding to the set or to a subset of the TPs specified in clause 5;

  b)   use a TSS which is an appropriate subset of the whole of the TSS specified in clause 4;

  c)   use the same naming conventions for the test groups and test cases;

  d)   maintain the relationship specified in clause 5 between the test groups and TPs and the entries in the PICS proforma to be used for test case deselection;

  e)   comply with ISO/IEC 9646-2 [9].

In the case of a) or b) above, a subset shall be used only where a particular Abstract Test Method (ATM) makes some TPs untestable. All testable TPs from clause 5 shall be included in a compliant ATS.

Annex A (informative): Bibliography

- ETSI TS 122 228: "Service requirements for the IP multimedia core network subsystem; Stage 1".

- ETSI TS 123 002: "Network architecture".

- ETSI TS 123 003: "Numbering, addressing and identification".

- ETSI TS 123 228: "IP multimedia subsystem; Stage 2".

- ETSI TS 124 229: "IP Multimedia Call Control Protocol based on Session Initiation Protocol (SIP)and Session Description Protocol (SDP);Stage 3".

- IETF RFC 3966: "The tel URI for Telephone Numbers".

- ETSI ES 283 003: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); IP Multimedia Call Control Protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP) Stage 3 [3GPP TS 24.229 [Release 7], modified]".

- IETF RFC 3323: "A Privacy Mechanism for the Session Initiation Protocol (SIP)".

- IETF RFC 3325: "Private Extensions to the Session Initiation Protocol (SIP) for Asserted Identity within Trusted Networks".

Annex B (informative): Change history

Date	WG Doc.	CR	Rev	CAT	Title / Comment	Current Version	New Version
10-06-09	21PTD088	001		F	Update of complete document during STF368's first work session	2.1.1	2.1.2
					Publication	2.1.2	2.2.1

History

Document history		
V2.1.1	February 2009	Publication
V2.2.1	July 2009	Publication