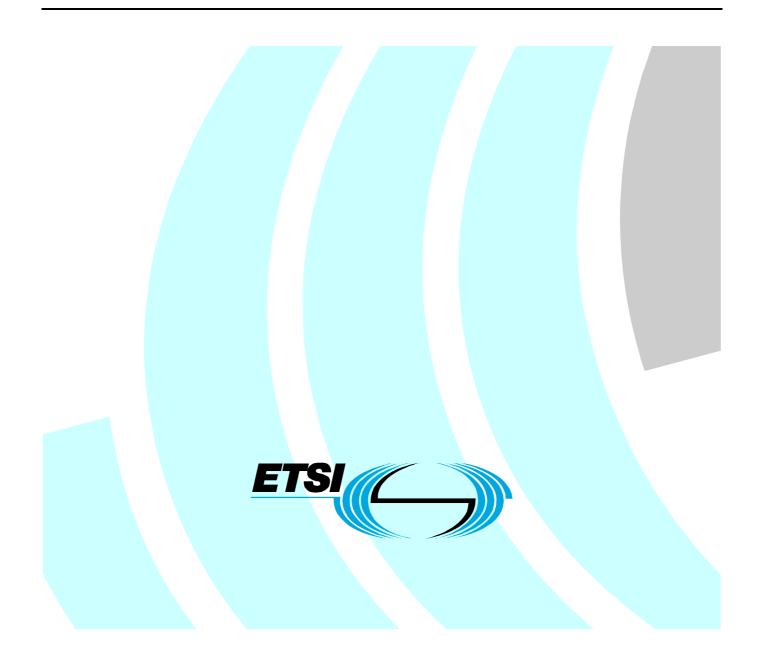
# ETSI TS 186 005-2 V2.2.1 (2009-07)

**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)



Reference RTS/TISPAN-06055-2-NGN-R2

Keywords

TIP, TIR, testing, TSS&TP

#### 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

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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 (TIP) and Terminating Identification 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.

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  - if it is accepted that it will be possible to use all future changes of the referenced document for the purposes of the referring document;
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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".

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[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.

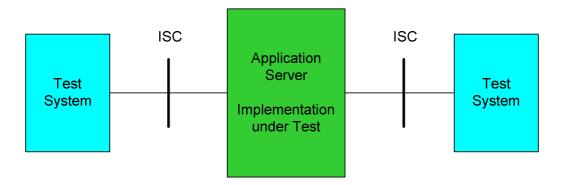
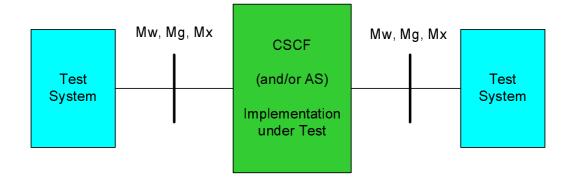


Figure 2: Applicable interface to test AS functionalities

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.

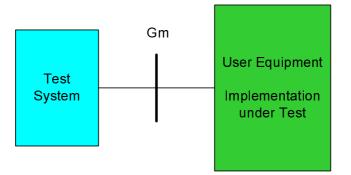
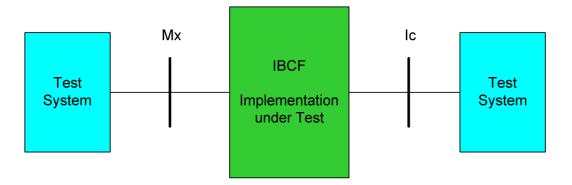


Figure 4: Applicable configuration to test UE functionalities

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

## 5.2 User TPs for TIP

### 5.2.1 Terminating user equipment

Selection expression for group U01: PICS 1/2.

TSS	TP	TIP/TIR reference	Selection expression
User/TermUserE	TIP_U01_001	4.5.2.12	PICS 2/6, 1/2
Test purpose:			
The Terminating UE supports the "from-cha	ange" tag in the Supported	header.	
Ensure that the Terminating UE supports the	ne "from-change" tag in the	Supported header. If th	e UE receives a
"from-change" tag in a Supported header ir	າ an initial INVITE, the UE ຮ	sends the "from-change'	' tag in the Supported
header in any provisional or final response	message (e.g. 180, 183, 20	00).	
SIP messages: INVITE: Supported: from-	-change		
18x/200: Supported: from	n-change		
Comments:			
Test equipment		User equipmer	t
INVITE with "from-change" tag	<b>→</b>		
Provisional or final response	÷		
with "from-change" tag	-		

TSS	TP	TIP/TIR reference	Selection expression
User/TermUserE	TIP_U01_002	4.5.2.12	PICS 2/6, 1/2, 2/7
Test purpose:			
The Terminating UE sends an UPDATE requ	uest with an updated Fron	n and To header.	
Ensure that the Terminating UE supports the			
change" tag in a Supported header in an initi			E request after the ACK
for the 200 OK INVITE was received contain	ing a connected identity ir	the From header.	
SIP messages: INVITE: Supported: from-c	hange		
18x/200: Supported: from-	change		
UPDATE: From <identity td="" u<=""><td>ser equipment&gt;</td><td></td><td></td></identity>	ser equipment>		
Comments:	•••		
Test equipment		User equipmer	nt
INVITE with "from-change" tag	<b>→</b>		
180 Ringing	<del>~</del>		
200 OK INVITE	+		
ACK	<b>→</b>		
UPDATE	<del>~</del>		
with updated From and To header			
200 OK UPDATE	<b>→</b>		
TSS	TP	TIP/TIR reference	Selection expression
User/TermUserE	TIP_U01_003	4.5.2.12	PICS 2/3, 1/2
Test purpose:			
The Terminating UE overrides a default "Pre			
Ensure that the Terminating UE having subs			
to override the default TIR setting, sends a F	rivacy header with value	"id" in any non-100 resp	onse message (e.g. 180
183, 200).			
SIP messages: 18x/200: Privacy: "id"			
Comments:			
Test equipment		User equipmer	It
INVITE	<b>→</b>		
Non 100 response	÷		
wit Privacy "id"	-		
TSS User/TermUserF	TP TIP U01 004	TIP/TIR reference	Selection expression
User/TermUserE	THP U01 004	4.5.2.12	PICS 2/4, 1/2

User/TermUserE		4 5 2 4 2	
	TIP_U01_004	4.5.2.12	PICS 2/4, 1/2
Test purpose:			
The Terminating UE overrides a default "P	resentation restricted" by s	ending Privacy "none".	
Ensure that the Terminating UE having sul	oscribed to TIR temporary	node. default value "pre	sentation restricted". to
override the default TIR setting, sends a P		· · · ·	
183, 200).			
SIP messages: 18x/200: Privacy: "none"			
Comments:			
Test equipment		User equipmer	nt
	_		
INVITE	<b>→</b>		
Non 100 response	+		
wit Privacy "none"			

## 5.2.2 Originating user equipment

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

With one P-Asserted-Identity

without P-Asserted-Identity

TSS	ТР	TIP/TIR reference	Selection expression		
User/OrigUserE	TIP_U02_001	4.5.2.1	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		
	<b>→</b>	INVITE		
	+	SIP_MESSAGE_VA		

TSS	TP	TIP/TIR reference	Selection expression
User/OrigUserE	TIP U02 002	4.5.2.1	PICS 1/1
User/OngoserL		4.3.2.1	
Test nurnese			

#### 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 <b>tel URI</b> , accepts the call following the basic request handling procedures.			
Comments:	· ·		
User equipment		Test equipment	
	<b>→</b>	INVITE	
	+	SIP_MESSAGE_VA	
		With one P-Asserted-Identity	

TSS User/OrigUserE		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		UAS
	<b>→</b>	INVITE
	+	SIP_MESSAGE_VA
		with two P-Asserted-Identity

TSS		ТР		TIP/TIR reference	Selection expression
User/OrigUserE		TIP_U02_	004	4.5.2.1	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

 INVITE
 SIP\_MESSAGE\_VA with Privacy 'id'

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	TP	TIP/TIR reference	Selection expression
User/OrigUserE	TIP_U02_005	4.5.2.1	PICS 1/1,2/6
Test purpose:	• <u> </u>		
The originating user is able to send the			
Ensure that the Originating UE sends a		ported header in the initi	al INVITE.
SIP message: INVITE Supported "from	n-change"		
Comments:			
User equipment		Test equipmen	it
	→	INVITE with "fro	om-change" tag
TSS	TP	TIP/TIR reference	Selection expression
Syntax/OrigUserE	TIP_U02_006	4.5.2.1	PICS 1/1,2/1 AND PICS 2/6
Test purpose:			
The originating user is able to receive a	connected identity in the From	m header of an UPDATE	erequest.
Ensure that the Originating UE is able to			
indicates the support of this procedure I and this identity is displayed to the user		tag in the Supported hea	ader in the initial INVITE
SIP message: INVITE Supported "fro			
UPDATE From <seco< td=""><td>nd identity&gt;</td><td></td><td></td></seco<>	nd identity>		
Comments:			
User equipment	SUT	Test equipmen	ıt
	<b>→</b>	INVITE with "fro	m-change" tag
	÷	180 Ringing	in-change tag
	÷	200 OK INVITE	
	<b>→</b>	ACK	
	+	UPDATE with n	ew URI in From header
	→	200 OK UPDAT	E

## 5.3 Network entity TPs for TIP

## 5.3.1 Requirements on the AS serving the terminating UE

TSS		TP	Т	IP/TIR reference	Selection expression
Network entity/DestAS		TIP_N01_001	4	.5.2.9	-
Test purpose:					
The AS inserts the Privacy id value	e in the response if	the response	does n	ot contain any Priva	acy. The terminating user
subscribes to TIR in permanent me	ode.				
Ensure that the IUT acting as AS s	erving the termina	ting user that s	ubscrib	bes to TIR in "perma	anent mode", receiving a
1xx or 2xx response message defined	ned as SIP_MESS	AGE_VA with	out a Pi	rivacy header, the A	AS shall insert a Privacy
header with privacy value "id" befo	re forwarding the r	esponse.		-	-
Comments:		-			
Test equipment		AS		Test equipmen	t
INVITE	<b>→</b>		→	INVITE	
SIP_MESSAGE_VA	÷		←	SIP_MESSAGE	_VA
with Privacy header "id"				without Privacy	header

TSS	TP		T	IP/TIR reference	Selection expression
Network entity/DestAS	TIP_	N01_002	4.	.5.2.9	-
Test purpose:					
The AS inserts the Privacy id value	in the response if the <i>i</i>	esponse co	ntain	s Privacy "none". T	he terminating user
subscribes to TIR in permanent mod	de.	•		•	-
Ensure that the IUT acting as AS se	rving the terminating u	ser that sub	scrib	es to TIR in "perma	anent mode", receiving a
1xx or 2xx response message define					
"none" and insert a Privacy header v					
Comments:				0	
Test equipment	A	S		Test equipmen	t
INVITE	<b>→</b>		→	INVITE	
SIP_MESSAGE_VA	÷		÷	SIP MESSAGE	VA
without Privacy header "id"	-		•	with Privacy hea	

TSS	ТР	TIP/TIR reference	Selection expression
Network entity/DestAS	TIP_N01_003	4.5.2.9	
Test purpose:			

**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 SIP_MESSAGE_VA	→ ←	→ ←	INVITE 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	TP	TIP/TIR reference	Selection expression		
Network entity/DestNetw	TIP_N01_004	4.5.2.9	-		
Test purpose:			-		
The AS remove the "from-change" tag from the Sup	ported header. Th	e user subscribes TIR i	n permanent mode.		
Ensure that the IUT acting as AS serving the termina removes the "from-change" tag from the Supported l request.					
SIP messages: INVITE1 Supported: "from-change"	1				
INVITE2 Supported without "from-o					
Comments:					
Test equipment	AS	Test equipmen	t		

TSS	TP	TIP/TIR reference	Selection expression
Signalling/DestNetw	TIP N01 005	4.5.2.9	
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:	SIP messages: UPDATE1: From <connected identity="" user=""></connected>						
	UPDATE2: From <public identity="" user=""></public>						
Precondition:	The AS attempts to match the information in the From header fields of UPDATE messages and						
changes the valu	ue, if no match is found with any of the re	egistered public use	er identities of the served user.				
Comments:		·					
Test equipment	1	AS	Test equipment				
INVITE	<b>→</b>	→	INVITE				
180 Ringing	+	+	180 Ringing				
200 OK INVITE	+	+	200 OK INVITE				
ACK	→	→	ACK				
UPDATE2	+	+	UPDATE1				
200 OK UPDATE	<b>→</b>	→	200 OK UPDATE				

## 5.3.2 Requirements on the AS serving the originating UE

TSS	TP		T	IP/TIR reference	Selection expression
Signalling/OrigNetw	TIF	_N02_001	4.	.3.2	-
Test purpose:					-
The originating user subscribes to	the TIP service.				
Ensure that for originating users th	at subscribe to TIP sir	nulation servio	ce, if	network provided i	dentity information about
the terminator is available, and if p					
100 response message defined as					•
Comments:					
Test equipment		AS		Test equipmen	t
INVITE	<b>→</b>		→	INVITE	
SIP MESSAGE VA	+		←	SIP_MESSAGE	VA
with P-Asserted_Identity				with P-Asserted	

TSS	TP	Т	IP/TIR reference	Selection expression
Network entity/OrigNetw	TIP_N02	2_002 4	.5.2.4	
Test purpose:	·	<u>.</u>		
The originating user does not subscribe to	the TIP service.			
Ensure that the IUT acting as AS serving the	ne originating user t	hat does not	t subscribe to the TI	P service removes any
P-Asserted-Identity header fields or Privacy	y header fields inclu	ided in the S	SIP response defined	d as SIP_MESSAGE_VA
before forwarding the response.				
Comments:				
Test equipment	AS		Test equipment	t
INVITE	<b>→</b>	→	INVITE	
SIP_MESSAGE_VA	÷	÷	SIP_MESSAGE	VA
without P-Asserted_Identity and Privacy			with P-Asserted	Identity and Privacy
headers			headers	•

TSS	TP	Т	IP/TIR reference	Selection expression
Signalling/TIR	TIP_N02_003	4	.6.3	
Test purpose:				
The originating user has TIR override of	category			
Ensure that, if the originating user has presentation of the terminating identity SIP_MESSAGE_VA before forwarding	and will keep the P-Asserted-lo			
Precondition: Originating user has the				
SIP messages: SIP_MESSAGE_VA1	: P-Asserted-Identity, Privacy =	id		
SIP_MESSAGE_VA2	2: P-Asserted-Identity, no Privac	y he	ader or Privacy = no	one
Comments:	<b>x</b> :			
Test equipment	AS		Test equipment	t
INVITE	<b>→</b>	→	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	TP	TIP/TIR	reference Selection expressior
Network entity/OrigAS	TIP_N02_004	4.5.2.4	
Test purpose:		·	· · · · · · · · · · · · · · · · · · ·
The originating user subscribes to the TII	P service. The "from-chang	e" tag is pass	ed on.
Ensure that the IUT acting as AS serving	the originating user that su	bscribes to th	e TIP service passes on the
"from change" tag from the Supported he			
SIP message: INVITE1 Supported "fro	m-change"		× .
INVITE2 Supported "fro	m-change"		
Comments:			
Test equipment	AS	Test	t equipment
INIVITE 1 with "from change" tog	د		ITE2 with "from change" tog
INVITE1 with "from-change" tag	<b>→</b>		ITE2 with "from-change" tag

TSS	TP	TIP/TIR reference	Selection expression
Network entity/OrigAS	TIP_N02_005	4.5.2.4	
Test purpose:			
The originating user subscribes to the TIP s			
Ensure that the IUT acting as AS serving the			
INVITE request without the "from-change" t	ag into the Supported head	der, inserts the "from-cha	ange" tag into the
Supported header before forwarding the re-	quest.		
SIP message: INVITE1 Supported "from-	-change" not included		
INVITE2 Supported "from-	-change"		
Comments:			
Test equipment	AS	Test equipment	
INVITE1 without "from-change" tag	<b>→</b>	→ INVITE2 with "fro	om-change" tag
¥			
TSS	ТР	TIP/TIR reference	Selection expression
TSS Network entity/OrigAS	TP TIP_N02_006	TIP/TIR reference 4.5.2.4	Selection expression
			Selection expression
Network entity/OrigAS	TIP_N02_006	4.5.2.4	
Network entity/OrigAS Test purpose:	TIP_N02_006	4.5.2.4	
Network entity/OrigAS Test purpose: The originating user does not subscribe to a	TIP_N02_006	4.5.2.4 change" tag is removed	from the Supported
Network entity/OrigAS Test purpose: The originating user does not subscribe to header. Ensure that the IUT acting as AS serving th "from-change" tag from the Supported head	TIP_N02_006 the TIR service. The "from- be originating user that doe der in a received initial INV	4.5.2.4 change" tag is removed s not subscribe to the TIF	from the Supported
Network entity/OrigAS Test purpose: The originating user does not subscribe to a header. Ensure that the IUT acting as AS serving the	TIP_N02_006 the TIR service. The "from- be originating user that doe der in a received initial INV	4.5.2.4 change" tag is removed s not subscribe to the TIF	from the Supported
Network entity/OrigAS Test purpose: The originating user does not subscribe to header. Ensure that the IUT acting as AS serving th "from-change" tag from the Supported head	TIP_N02_006 the TIR service. The "from- the originating user that doe der in a received initial INV -change"	4.5.2.4 change" tag is removed s not subscribe to the TIF	from the Supported
Network entity/OrigAS Test purpose: The originating user does not subscribe to a header. Ensure that the IUT acting as AS serving the "from-change" tag from the Supported head SIP message: INVITE1 Supported "from-	TIP_N02_006 the TIR service. The "from- the originating user that doe der in a received initial INV -change"	4.5.2.4 change" tag is removed s not subscribe to the TIF	from the Supported
Network entity/OrigAS Test purpose: The originating user does not subscribe to a header. Ensure that the IUT acting as AS serving th "from-change" tag from the Supported head SIP message: INVITE1 Supported "from- INVITE2 Supported "from-	TIP_N02_006 the TIR service. The "from- the originating user that doe der in a received initial INV -change"	4.5.2.4 change" tag is removed s not subscribe to the TIF	from the Supported P service removes the rding the request.

## 5.3.3 Communication diversion services

TSS		TP	Т	IP/TIR reference	Selection expression
Network entity/CDIV		TIP_N03_001	4.	.6.7	
Test purpose:					
Ensure that if the served (diverting) user of					
user is notified of diversion with the diverte					
permanent mode and the originating user	r has subs	cribed to the TIP s	ervi	ce, no P-Asserted-Ic	lentity header including
the URI of the diverted-to user is sent within	in the SIP	_MESSAGE_VA re	espo	onse to the originatin	g user. The History-Info
Header entry identifying the diverted-to use					
Precondition: Test equipment (Diverting u					al with option
"originating user is notified of diversion with			011 0		
Comments:					
Test equipment (Originating user)		SUT		Test equipment	(Diverted-to user)
INVITE	<b>→</b>		→	INVITE	
181 Call is being forwarded	÷		-		
History-Info header without URI of the	<b>V</b>				
diverted-to user					
SIP_MESSAGE_VA	÷	·	←	SIP_MESSAGE_	_VA
without P-Asserted-Identity					
TSS		TP		IP/TIR reference	Selection expression
Network entity/CDIV		TIP_N03_002	4.	.6.7	
Test purpose:					
Ensure that if the served (diverting) user of	f the comr	nunication diversio	on se	ervice selects the op	tion that the originating
user is notified of diversion with the div					
service in temporary mode default "pres					
service, when the diverted-to user has sen					
					rom the History Info
Asserted-Identity header including the URI the originating user. The History-Info Head					rom the History -Info
the originating user. The History-Info Head header.	ler entry io	lentifying the diver	ted-	to user is removed f	-
the originating user. The History-Info Head header. <b>Precondition:</b> Test equipment (Diverting u	ler entry ic user) activ	dentifying the diver	ted-	to user is removed f	-
the originating user. The History-Info Head header. <b>Precondition:</b> Test equipment (Diverting u "originating user is notified of diversion with	ler entry ic user) activ	dentifying the diver	ted-	to user is removed f	-
the originating user. The History-Info Head header. Precondition: Test equipment (Diverting u "originating user is notified of diversion with Comments:	ler entry ic user) activ	dentifying the diver ates Communication rted-to address".	ted-	to user is removed find	al with option
the originating user. The History-Info Head header. <b>Precondition:</b> Test equipment (Diverting u "originating user is notified of diversion with	ler entry ic user) activ	dentifying the diver	ted-	to user is removed find	-
the originating user. The History-Info Head header. Precondition: Test equipment (Diverting u "originating user is notified of diversion with Comments:	ler entry ic user) activ	dentifying the diver ates Communication rted-to address".	ted-	to user is removed find the second se	al with option
the originating user. The History-Info Head header. Precondition: Test equipment (Diverting u "originating user is notified of diversion with Comments:	der entry id user) activ h the dive	dentifying the diver ates Communication tred-to address". SUT	ted-	to user is removed find	al with option
the originating user. The History-Info Head header. Precondition: Test equipment (Diverting u "originating user is notified of diversion with Comments: Test equipment (Originating user)	der entry id user) activ h the dive	dentifying the diver ates Communication tred-to address". SUT	ted-f	to user is removed find the second se	al with option
the originating user. The History-Info Head header. <b>Precondition:</b> Test equipment (Diverting u "originating user is notified of diversion with <b>Comments:</b> <b>Test equipment (Originating user)</b> INVITE 181 Call is being forwarded	der entry id user) activ h the dive	dentifying the diver ates Communication tred-to address". SUT	ted-f	to user is removed find the second se	al with option
the originating user. The History-Info Head header. <b>Precondition:</b> Test equipment (Diverting u "originating user is notified of diversion with <b>Comments:</b> <b>Test equipment (Originating user)</b> INVITE 181 Call is being forwarded History-Info header without URI of the	der entry id user) activ h the dive	dentifying the diver ates Communication tred-to address". SUT	ted-f	to user is removed find the second se	al with option
the originating user. The History-Info Head header. <b>Precondition:</b> Test equipment (Diverting u "originating user is notified of diversion with <b>Comments:</b> <b>Test equipment (Originating user)</b> INVITE 181 Call is being forwarded History-Info header without URI of the diverted-to user	der entry id user) activ h the diver → ←	dentifying the diver ates Communication ted-to address". SUT	ted-i	to user is removed fr diversion uncondition <b>Test equipment</b> INVITE	al with option (Diverted-to user)
the originating user. The History-Info Head header. <b>Precondition:</b> Test equipment (Diverting u "originating user is notified of diversion with <b>Comments:</b> <b>Test equipment (Originating user)</b> INVITE 181 Call is being forwarded History-Info header without URI of the diverted-to user SIP_MESSAGE_VA	der entry id user) activ h the diver	dentifying the diver ates Communication ted-to address". SUT	ted-f	to user is removed find the second se	al with option (Diverted-to user)
the originating user. The History-Info Head header. <b>Precondition:</b> Test equipment (Diverting u "originating user is notified of diversion with <b>Comments:</b> <b>Test equipment (Originating user)</b> INVITE 181 Call is being forwarded History-Info header without URI of the diverted-to user	der entry id user) activ h the diver → ←	dentifying the diver ates Communication ted-to address". SUT	ted-i	to user is removed fr diversion uncondition <b>Test equipment</b> INVITE	al with option (Diverted-to user)
the originating user. The History-Info Head header. <b>Precondition:</b> Test equipment (Diverting u "originating user is notified of diversion with <b>Comments:</b> <b>Test equipment (Originating user)</b> INVITE 181 Call is being forwarded History-Info header without URI of the diverted-to user SIP_MESSAGE_VA without P-Asserted-Identity	der entry id user) activ h the diver → ←	dentifying the diver ates Communication ted-to address". SUT	ted- on d	to user is removed finder	Diverted-to user)
the originating user. The History-Info Head header. <b>Precondition:</b> Test equipment (Diverting u "originating user is notified of diversion with <b>Comments:</b> <b>Test equipment (Originating user)</b> INVITE 181 Call is being forwarded History-Info header without URI of the diverted-to user SIP_MESSAGE_VA without P-Asserted-Identity <b>TSS</b>	der entry id user) activ h the diver → ←	dentifying the diver ates Communication ted-to address". SUT	ted- on d → ←	to user is removed findersion uncondition <b>Test equipment</b> INVITE SIP_MESSAGE_	al with option (Diverted-to user)
the originating user. The History-Info Head header. <b>Precondition:</b> Test equipment (Diverting u "originating user is notified of diversion with <b>Comments:</b> <b>Test equipment (Originating user)</b> INVITE 181 Call is being forwarded History-Info header without URI of the diverted-to user SIP_MESSAGE_VA without P-Asserted-Identity <b>TSS</b> <b>Network entity/CDIV</b>	der entry id user) activ h the diver → ←	dentifying the diver ates Communication ted-to address". SUT	ted- on d → ←	to user is removed finder	Diverted-to user)
the originating user. The History-Info Head header. <b>Precondition:</b> Test equipment (Diverting u "originating user is notified of diversion with <b>Comments:</b> <b>Test equipment (Originating user)</b> INVITE 181 Call is being forwarded History-Info header without URI of the diverted-to user SIP_MESSAGE_VA without P-Asserted-Identity <b>TSS</b> Network entity/CDIV	der entry id user) activ h the diver → ←	dentifying the diver ates Communication ted-to address". SUT	ted- on d → ←	to user is removed findersion uncondition <b>Test equipment</b> INVITE SIP_MESSAGE_	Diverted-to user)
the originating user. The History-Info Head header. Precondition: Test equipment (Diverting u "originating user is notified of diversion with Comments: Test equipment (Originating user) INVITE 181 Call is being forwarded History-Info header without URI of the diverted-to user SIP_MESSAGE_VA without P-Asserted-Identity TSS Network entity/CDIV Test purpose:	der entry id user) activ h the diver ✦ ✦	tentifying the diver ates Communication ted-to address". SUT	ted-i on d → ←	to user is removed finite strema to user is removed finite strengther to uncondition <b>Test equipment</b> INVITE SIP_MESSAGE_	Image: selection expression
the originating user. The History-Info Head header. <b>Precondition:</b> Test equipment (Diverting u "originating user is notified of diversion with <b>Comments:</b> <b>Test equipment (Originating user)</b> INVITE 181 Call is being forwarded History-Info header without URI of the diverted-to user SIP_MESSAGE_VA without P-Asserted-Identity <b>TSS</b> <b>Network entity/CDIV</b> <b>Test purpose:</b> Ensure that if the served (diverting) user of	der entry id user) activ h the diver ✦ ✦ ✦	tentifying the diver ates Communication ted-to address". SUT SUT	ted-⊡ on d → ← T 4. on se	to user is removed findersion uncondition Test equipment INVITE SIP_MESSAGE_ TP/TIR reference .6.7 ervice selects the op	<pre>Interpretation Interpretation I</pre>
the originating user. The History-Info Head header. Precondition: Test equipment (Diverting u "originating user is notified of diversion with Comments: Test equipment (Originating user) INVITE 181 Call is being forwarded History-Info header without URI of the diverted-to user SIP_MESSAGE_VA without P-Asserted-Identity TSS Network entity/CDIV Test purpose: Ensure that if the served (diverting) user of user is notified of diversion with the div	der entry id user) activ h the diver ★ ★ f the comr rerted-to a	TP TIP_N03_003 nunication diversion	ted-ited-ited-ited-ited-ited-ited-ited-i	to user is removed findersion uncondition Test equipment INVITE SIP_MESSAGE_ TP/TIR reference .6.7 ervice selects the op ted-to user has subs	VA Selection expression tion that the originating cribed to the TIR
the originating user. The History-Info Head header. Precondition: Test equipment (Diverting u "originating user is notified of diversion with Comments: Test equipment (Originating user) INVITE 181 Call is being forwarded History-Info header without URI of the diverted-to user SIP_MESSAGE_VA without P-Asserted-Identity TSS Network entity/CDIV Test purpose: Ensure that if the served (diverting) user of user is notified of diversion with the div service in temporary mode default "pres-	der entry id user) activ h the diver → ← ← f the comr verted-to a sentation	TP TIP_N03_003 nunication diversion address and the d not restricted" and	ted-i on d → ← T 4. von se ivert	to user is removed finite sector of the sect	<b>(Diverted-to user)</b> VA         Selection expression         tion that the originating cribed to the TIR as subscribed to the TIP
the originating user. The History-Info Head header. Precondition: Test equipment (Diverting u "originating user is notified of diversion with Comments: Test equipment (Originating user) INVITE 181 Call is being forwarded History-Info header without URI of the diverted-to user SIP_MESSAGE_VA without P-Asserted-Identity TSS Network entity/CDIV Test purpose: Ensure that if the served (diverting) user of user is notified of diversion with the div service in temporary mode default "pre- service, when the diverted-to user has sen	ter entry ic user) activ h the diver ★ € f the comr verted-to a sentation id a Privac	TP TIP_N03_003 nunication diversion address and the d not restricted" and cy header with va	ted-⊡ on d → ← T 4. on se ivert nd th	to user is removed findersion uncondition <b>Test equipment</b> INVITE SIP_MESSAGE_ <b>TP/TIR reference</b> .6.7 ervice selects the op ted-to user has subs he originating user h "id" within the SIP_	<pre>val with option (Diverted-to user) VA VA Selection expression tion that the originating cribed to the TIR as subscribed to the TIP MESSAGE_VA</pre>
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TSS	TP	1	TIP/TIR reference	Selection expression
Network entity/CDIV	TIP_N03	_004 4	1.6.7	
Test purpose:				
Ensure that if the served (diverting) user user is notified of diversion with the diver temporary mode default "presentation the diverted-to user has send a <b>Privacy</b> Asserted-Identity header including the UI	ted-to address and th restricted" and the header with value "r	e diverted-te originating u one" within	o user has subscrib user has subscribed the SIP_MESSAG	ed to the <b>TIR service in</b> to the TIP service, when E_VA response, the P-
he originating user.	<b>.</b>	·		
Precondition: Test equipment (Diverting "originating user is notified of diversion w			diversion unconditio	nal with option
"originating user is notitied of diversion w	/ith the diverted-to add			
		iress.		
Comments:		iress.		
Comments:	SUT	iress .	Test equipmen	t (Diverted-to user)
		ness . →	Test equipmen	t (Diverted-to user)
Comments: Test equipment (Originating user)	SUT			t (Diverted-to user)
Comments: Test equipment (Originating user) INVITE	SUT →			

	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	TP	Т	IP/TIR reference	Selection expression
Network entity/OtherNetw	TIP_N04_00	)1 4	.7.3	
Test purpose:				
Interworking with a trusted network; S	UT is call destination			
Ensure that a SIP response defined as		ding P-As	sserted-Identity hea	der fields for a request
from a trusted network is received; the				
Comments:			•	·
Test equipment (Ic)	IBCF		Test equipmen	t (Mx)
INVITE	<b>→</b>	→	INVITE	
SIP_MESSAGE_VA	+	←	SIP_MESSAGE	_VA
with P-Asserted-Identity header			with P-Asserted	Identity header

TSS	TP	TIF	P/TIR reference	Selection expression
Network entity/OtherNetw	TIP_N04_002	4	37	-
Test purpose:				
Interworking with an un-trusted network,	SUT is call destination			
Ensure that a SIP response defined as	SIP_MESSAGE_VA includin	g P-Ass	erted-Identity hea	der fields for a request
from an un-trusted network is received;				
response.	0 0			-
Comments:				
Comments.				
	IBCF		Test equipmen	t (Mx)
Test equipment (Ic)	IBCF →	<b>→</b>	<b>Test equipmen</b> INVITE	t (Mx)
Test equipment (Ic)		<b>→</b> ←	• •	

TSS	TP	Т	IP/TIR reference	Selection expression
Network entity/OtherNetw	TIP_N04_	003 4	.7.3	
Test purpose:	•	- -		
Interworking with a trusted network; S	UT is call origination			
Ensure that a communication is establ	lished to a trusted network	k and P-As	serted-Identity head	ler fields are included in
SIP responses from the other IP netwo	ork defined as SIP_MESS	AGE_VA, 1	the incoming IBCF	shall retain the
P-Asserted-Identity header fields.			C C	
Comments:				
Test equipment (Mx)	IBCF		Test equipment	t (Ic)
INVITE	<b>→</b>	<b>→</b>	INVITE	
	→ ←	→ ←	INVITE SIP_MESSAGE	VA

TSS	ТР	TIP/T	IR reference	Selection expression	
Network entity/OtherNetw	TIP_N04_004	4.7.3			
Test purpose:					
Interworking with an un-trusted network;	SUT is call origination				
Ensure that a communication is establish included in SIP responses from the other	r IP network defined as SIF				
the P-Asserted-Identity header fields from	m the SIP response.				
Comments:					
Test equipment (Mx)	IBCF	ſ	Test equipment (Ic)		
INVITE	<b>→</b>	→	NVITE		
SIP_MESSAGE_VA	+	← 8	SIP_MESSAGE	_VA	
without P-Asserted-Identity header		v	vith 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		